

TRIPHASIC TRAINING

Football Speed
and
Strength Manual



Written By Chris Korfist and
Cal Dietz

Triphasic Training

Football Speed and
Strength Manual

Chris Korfist and
Cal Dietz

BYE DIETZ SPORT ENTERPRISE

P.O. Box 512

Hudson, WI 54016

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For information regarding permission to reproduce selections from this book, contact Bye Dietz Sport Enterprise at

triphastictrainings@gmail.com.

triphastictraining.com

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Triphasic High School Speed Manual

Introduction

This High School Training Manual has been expanded to include training methods specifically designed to enhance the development of speed capabilities in the maturing athlete to the highest extent. This does not mean elite level runners will not benefit from the program, exercises, and/or progressions laid out in this manual as the methods implemented throughout it are extremely advanced. This speed manual has been created to take every coach step-by-step through an 18 week progressive program, from warm-up to ankle rocker drills, to specific speed training and agility, and finally a lifting progression, which will all be covered in great detail and must occur in order for maximal performance to be achieved. This manual ultimately leads to dramatic increases in speed for any athlete truly implementing the progressions laid out in the pages to follow.

Example Daily Training Schedule

Each training week will be laid out in succession in the upcoming section. However, it is important every coach know and understand the training scheduled followed within each workout. The workouts shown throughout this manual consist of six main components in which every drill can be placed. These six components are listed below:

1. The Warm-Up
2. Ankle Rocker
3. Slow Run/Progression Drills
4. Speed
5. Agility
6. Lifting

If a coach is required to do so, typically due to lack of available equipment, the team can be broken into groups to relieve this common issue. If possible this order should be utilized whenever possible by coaches as it elicits an optimal training response by the athlete.

Training Components

Warm-Up - 5 - 15 Minutes

The Warm-up is consistently implemented to ensure athletes are prepared appropriately for the training they will be asked to complete. The warm-up options presented in this manual allow for variability for athletes while priming each individual for the specific requirements of the following sections of training.

Ankle Rocker - 5 Minutes

The ankle rocker program in this manual is designed to develop and improve an athlete's ability to utilize one of the main joints involved in extension. The ankle joint's importance in this process is often the missing link in maximizing performance. Only when the function of the ankles and feet occur at the highest levels can all the strength and explosive power you've created in your hip and knee joint be transferred into the ground, leading to increased running speeds and maximized performance capabilities. There is a section dedicated to why this skill is vital for speed training and running mechanics after the 18 week program is demonstrated.

Slow Running/Progression Drills – 5-7 Minutes

By slowing down various drills that have been selected and are running program your athletes will be forced to read pattern there current movements and as the movement speed up right motor patterns will be in place for optimal human performance.

Speed - 25 - 30 Minutes

Speed training is implemented in this manual with one goal, enhance running speed. From the use of appropriate rest times to specific drill work to improve this skill, this manual utilizes drills designed specifically for speed in the developing athlete.

Agility - 25 - 30 Minutes

The agility drills selected and utilized in this manual function optimally so that the majority of movements experienced in play are covered in training. These are progressed throughout the training blocks, along with the ankle rocker and slow running drills, so that the optimization of human performance is achieved at the completion of the 18 week program.

Lifting - 25 - 30 Minutes

This program in this manual is designed to increase an athlete's abilities in the weight room, which when periodized in this manner will transfer to their sporting event. This training will increase strength, power, and rate of force development. Each of these are necessary to increase the efficient and performance of athletes.

Weekly Progression

Listed below is the entire 18 week speed progression. Every training component is implemented on a daily basis for maximal improvements to be realized. All repetitions, sets, rest times, and a page number for each drill is listed for every prescribed exercise, along with hyperlinks for simplicity and quick understanding. After the lift sheet is shown each exercise is described on the following page. Each exercise is only described in the first week it is implemented to continue to increase simplicity of this speed training manual.

Training Progression Week 1					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	As Directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	Wipers	25	1	20 - 40 Seconds	12
	Toes Up	25	1	20 - 40 Seconds	12

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Hurdle walks	3	1-4	20 to 40 Seconds	12
	Hurdle Overhead Walk	3	1-4	20 to 40 Seconds	12
	Crane walks	2	1-4	20 to 40 Seconds	13
	Boom Speed Development	5	1-4	20 to 40 Seconds	13
	Boom Boom Speed Development	5	1-4	20 to 40 Seconds	13
	Boom Boom Boom Speed Development	5	1-4	20 to 40 Seconds	13
Speed					
Speed	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Flying 10	3-4 Reps	1 Set	30 to 90 Seconds	14
	Stance Start, 1st Step	3-4 Reps	1 Set	20 to 40 Seconds	14
Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	2 leg lateral line hop with knees bent	30 Seconds	2 (1 Clock, and 1 Counter-clockwise)	20 to 40 Seconds	14
Lifting					
Lifting					6-11

Eccentric Block Monday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	X	5,3,3	50-80%	
B1	External Band Rotation	3	X	6ea		
B2	Ankle Band Work	3	X	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	3	X	4	85-87.5%	6 Second Eccentric-Partner Help Up
B	Hurdle Hop	3	X	5		Pull Down
C	1/2 Squat Weighted Jump	3	X	4		Pause at Bottom
D	15 yard starts	3	X	1		
E	Wrist Curl	3	X	8		
F	4 Way Neck	3	X	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	Coach View
B	Cuban Press	3	X	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	4	85-87.5%	6 Second Eccentric-Partner Help Up
B	Speed Band Bench Press	3	X	4	35-40%	Pause at Bottom for 2 Sec-Up Fast
C	DB Incline Bench	3	X	4	35-40%	Reactive-Speed
D	Speed Push Up	3	X	4	BW	Reactive
E	Jobes ECC	3	X	6	Moderate	4 second Eccentric
F	Antib Band	3	X	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar Lift	3	X	4	85-87.5%	6 Second Eccentric
B	Face Band Pulls	3	X	8	BAND	
C	1-Arm Lat. Pulldown	3	X	10	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	
C	DB Bent Over Row	3	x	8	85-87.5%	3 Second Eccentric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	Eccentric DB Psoas	3	x	6	BW	Each Side & Knee on Bench
C	Bar Curl	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Tri Ext	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	SL Calf Raises	3	x	6	Light	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Eccentric Block Wednesday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	X	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	5	X	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	X	4 Reps		
C	Antib Band	5	X	5 Reps		Rest 2 minutes at the end of each set
Perform A-D Simultaneously for 4 Sets; Complete 5th Set of A only						
25 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	3	90-95%	No Tempo
B	Med Ball Chest Pass	3	X	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	3	X	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar	3	X	5	90-95%	
B	DB Step Up	3	X	5	90-95%	Bottom Half
C	Hip Flexor Prone	3	X	8	BW	Knee On Bench
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	<u>Reps/Duration</u>		Load	Notes
A	DB Shoulder Press	3	x	10	90-95%	OC-D
B	Cuban Press Fig 8	3	x	8	Light	
C	Pull Up	3	x	7	BW	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	<u>Reps/Duration</u>		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Abduction	3	x	8	BW	
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 8	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	<u>Reps/Duration</u>		Load	Notes
A	Tri Push Down	3	x	5	90-95%	
B	DB Hammer Curls	3	x	5	90-95%	
C	Blackburn	3	x	T		3 Second Holds
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Eccentric Block Friday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Front Squat	1,1,1	X	5,3,3	50-80%	
B1	External Band Rotation	3	X	6ea		
B2	Ankle Band Work	3	X	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Front Squat	3	X	4	80-85%	6 Second Eccentric-Partner Help Up
B	Hurdle Hop	3	X	5		Pull Down
C	1/2 Squat Weighted Jump	3	X	4		Pause at Bottom
D	15 yard starts	3	X	1		
E	Wrist Curl	3	X	8		
F	4 Way Neck	3	X	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	Coach View
B	Cuban Press	3	X	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	4	80-85%	6 Second Eccentric-Partner Help Up
B	Speed Band Bench Press	3	X	4	35-40%	Reactive
C	DB Incline Bench	3	X	4	35-40%	Reactive
D	Clap Push Up	3	X	4		Reactive
E	Jobes ECC	3	X	6		4 second Eccentric
F	Antib Band	3	X	10		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 5		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar Lift	3	x	5	80-85%	6 Second Eccentric
B	Face Band Pulls	3	x	12	Band	
C	1-Arm Lat. Pulldown	3	x	10	80-85%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 6		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	10	BW	
B	Bench Abduction	3	x	10	BW	
C	DB Bent Over Row	3	x	8	80-85%	4 Second Eccentric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	80-85%	Bottom Half
B	Hip Flexor Eccentric Prone	3	x	6	BW	Each Side
C	Zottman Curl	3	x	10	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8		<u>Upper Body Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	EZ Tricep Extension	3	x	8	80-85%	
B	Bench Abduction	3	x	8	80-85%	
C	SL Calf Raises	3	x	10		
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 1 Exercise Progressions

Warm-Up Options

Triphasic Aerobic Base Injury Prevention Runs

This warm-up method can be set up simply with 4 cones in a rectangle, the longer the distance the better. Athletes will begin by jogging around the rectangle. The coach will have them change movement patterns from jogging, to shuffling, to jogging, to carioca, to backwards running. The entire drill will be completed at the original jogging pace. With these different movement patterns, athletes will experience an increased heart rate while also preparing their body in different motions. Start at a 4 minute run and work up to 10 minutes over the 8 week period of time. If space permits, use the entire football field. This warm-up is suggested to be used once or twice a week.

Low Level Plyometric: Calisthenics

This second warm-up option is a group calisthenics workouts which we call GPP. It is a series of exercises set at intervals that strengthen the ankle/foot complex. In lines, the athletes start with jumping jacks and will rotate to a variety of exercises. A simple version is to switch exercises every 20 seconds and start at 6 minutes of exercise. We have found that after reaching 12 minutes, the drill becomes monotonous. Progress 1 minute every week. The offensive system the school I coach at calls plays through the use of signals, so we have a signal attached to an exercise and we want to get a play off every 13 seconds. To match these needs and prepare the athletes mentally, every 13 seconds we change the exercise. The coach is always moving around so the players need to find the coach. Some basic movements we use are shown in the "Week 1" table above.

Ankle Rocker Drills

Wipers

The athlete works on lateral and medial rotational range of motion in this drill.

Toe ups

In this drill the athlete stands and elevates the toes off the floor to the greatest height possible to improve dorsiflexion ability.

Slow Run/Preparation Drills

Hurdle Walks

A set of hurdles set at a knee height will be set up in a line with about 1 yard in between each hurdle (6-10 hurdles). Athletes proceed to will walk over each hurdle with one foot contact in between each hurdle. The goal is to use hip to raise the opposite hip in the step over of the hurdle. The right foot will stay on right side of the midline and left foot will stay on left side of the midline. Each step should take about 10 seconds. Have the athlete try to bring the trail leg knee into their same side armpit. Also, have the athlete limit trunk rotation and flexion.

Hurdle Overhead Walks

When the skill of Hurdle Walks is mastered, an athlete can add difficulty by raising their hands over their heads and reach as high as possible. A skip can also be added to the step in between with their hands over head. A common mistake is that the hip of the leg that is on the ground will push outward, losing the athlete's lateral stability. A coach must be aware of this and correct it immediately, otherwise dysfunctions and other compensation patterns will occur. Another common mistake is when an athlete spins on their plant foot in order to rotate their hips. 6-8 reps of 6-10 hurdles is an appropriate amount for the completion of this drill.

[Crane walks](#)

This drill is a very slow, exaggerated stride at an extremely slow speed. As the athlete takes a step, they will emphasize the swing leg heel coming to the back of the thigh and as they flex the hip forward on the swing leg, they need to keep balance on their plant leg. As the knee begins to raise, again, the athlete must keep the heel tucked tightly to the back of the leg for as long as possible. The athlete will then begin to push up onto their toes on the plant leg while maintaining the tightly tucked position of the swing leg. At this point they will try to control the landing of the swing leg as long as possible. Once the athlete is on the ground with the new plant leg, repeat the process. Ideally, each step should take 15-20 seconds with a goal of doing 5-10 steps on each leg. Common mistakes include the loss of lateral stability or the opening of the hips, as listed in hurdle walks, and not pulling swing leg heel as tight as possible into the back of the swing leg.

[Booms](#)

[Boom Speed Development](#)

In this drill the athlete will stand on one leg with the other leg held high in the air with a bent knee. Their swing knee should be at navel height. On command, the athlete will switch legs explosively. There should be little movement in the athletes' body. For example, there should be no small jump before the switch takes place and hands should be placed on their hips, so their upper body doesn't drive their lower body. The reps should stay low, with ample rest in between sets. This should be a psoas glute exercise. Not a hip flexor exercise. Start with sets of 2 on each leg and gradually build to 8-10 per leg. If their hip flexors start to grab, rest. Common mistakes include jumping to make the legs switch rather than pushing from a stand still. Also, knees passing each other too low to the ground.

[Boom Boom Speed Development](#)

This is a secondary progression to the Booms above, but now the athlete will finish on the same leg that was started on. Standing on one leg, the athlete will switch legs quickly with the original hanging leg hitting the ground forcefully and immediately bringing it back up to the starting position. Again, keep reps low and explosive. Keep reps to 5-6 and work on higher sets, up to 5 so the athlete doesn't recruit hip quads instead of psoas to do drill. Common mistakes include jumping to make the legs switch rather than pushing from a stand still. Also, knees passing each other too low to the ground.

[Boom Boom Boom Speed Development](#)

This is the final progression of the Boom Speed Development series. Athletes will now complete 3 “Booms” in sequence while maintaining appropriate posture.

Speed

[Flying 10's](#)

Build up to top end speed and then hold for a total of 10 meters. Choose whichever approach you desire, but be sure to give the athlete ample space to build up (10 meters at least). Allow the athlete to slowly decelerate to prevent any possible unnecessary hamstring stress.

[The Stance](#)

The stance, which is shown in the hyperlink above, is a crucial aspect for speed training. Too many athletes believe that they need to crouch the line. The problem is that they do not possess the strength to push their body forward out of such a bunched position. Are you stronger in a deep squat or a quarter squats? This results in the athlete either having a rounded spine when they accelerate, stepping rather than exploding out of stance and a foot placement that is too far in front of the center of mass. By correcting these issues the acceleration phase can be improved dramatically.

Ideally, the toe of the front leg will be underneath the edge of the glute (usually 2 foot lengths behind the starting line). The back foot should be 1 shoe length behind the front foot. When the athlete is in that foot position, they will kneel down on the knee of the back leg. In this position, they will fold from the hip forward, almost a chop at the hip to fall forward and allow the hands to come out to catch the body from falling. The reason we do this is that too many athletes have an arched back when they leave the blocks. We call it a turtle back. When they are hunched, they are unable to achieve any extension out of the blocks and have to step out instead of explode. When they get up to the set position with their opposite hand on the ground from their front leg and head in a neutral position and their shins as low to the ground as possible, they will push from their back foot and then front foot. It is a quick succession of movements but I have found it helps train the movement if they think there are two separate movements. As they push forward, their torso will raise to a 45 degree angle to clear the torso so the knee can come up and try to drive knee up and push back down. The trail leg will drag low (toe stays low to the ground) to the ground.

To drill this for the first 4 weeks, we use a large rubber band supported around the waist of the athlete with their partner holding on to the band. The banded athlete will learn how to drive through their first three steps with support of the band. As the athlete gets more comfortable with the position, a lighter band can be used.

Agility

The agility work in the first 8 weeks will be working over a line. We are trying to develop foot stiffness in multiple planes. In a perfect scenario, we try to count the number of contacts in a 30 sec period. This gives players a sense of urgency. Too many times while doing foot contact work, players go at about 80% and never push themselves to improve.

[Line hop progression](#)

[2 leg lateral line hop with knees bent](#)

Have athlete find a line to jump over. Have athletes fold body until it is a Z. Watching from the side, the players shins should be parallel with their spine. Also, make sure the athlete does not slump forward.

The hyperlines shown below can be used to vary the starting position used in training agility.

[start variation 1 for agility Drills](#)

[Start Variation 2 for agility Drills](#)

[Start Variation 3 for agility Drills](#)

Training Progression Week 2					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	as directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Wipers	25	1	20 - 40 Seconds	12
	Toes Up	25	1	20 - 40 Seconds	12

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Hurdle walks	3	1-4	20 to 40 Seconds	12
	Hurdle Overhead Walk	3	1-4	20 to 40 Seconds	12
	Crane walks	2	1-4	20 to 40 Seconds	13
	Boom Speed Development	5	1-4	20 to 40 Seconds	13
	Boom Boom Speed Development	5	1-4	20 to 40 Seconds	13
	Boom Boom Boom Speed Development	5	1-4	20 to 40 Seconds	13
Speed					
Speed	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Flying 10	3-4 Reps	1 Set	30 to 90 Seconds	14
	Stance Start, 2 Steps	3-4 Reps	1 Set	20 to 40 Seconds	Page
Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	2 leg quad jump with knees bent	30 Seconds	2 (1 Clock, and 1 Counter-clockwise)	20 to 40 Seconds	24
Lifting					
Lifting					18-23

Eccentric Block Monday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	X	5,3,3	50-80%	
B1	External Band Rotation	3	X	6ea		
B2	Ankle Band Work	3	X	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	3	X	4	85-87.5%	6 Second Eccentric-Partner Help Up
B	Hurdle Hop	3	X	5		Pull Down
C	1/2 Squat Weighted Jump	3	X	4		Pause at Bottom
D	15 yard starts	3	X	1		
E	Wrist Curl	3	X	8		
F	4 Way Neck	3	X	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	Coach View
B	Cuban Press	3	X	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	4	85-87.5%	6 Second Eccentric-Partner Help Up
B	Speed Band Bench Press	3	X	4	35-40%	Pause at Bottom for 2 Sec-Up Fast
C	DB Incline Bench	3	X	4	35-40%	Reactive-Speed
D	Speed Push Up	3	X	4	BW	Reactive
E	Jobes ECC	3	X	6	Moderate	4 second Eccentric
F	Antib Band	3	X	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar Lift	3	X	4	85-87.5%	6 Second Eccentric
B	Face Band Pulls	3	X	8	BAND	
C	1-Arm Lat. Pulldown	3	X	10	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	
C	DB Bent Over Row	3	x	8	85-87.5%	3 Second Eccentric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	Eccentric DB Psoas	3	x	6	BW	Each Side & Knee on Bench
C	Bar Curl	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Tri Ext	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	SL Calf Raises	3	x	6	Light	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Eccentric Block Wednesday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	X	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	5	X	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	X	4 Reps		
C	Antib Band	5	X	5 Reps		Rest 2 minutes at the end of each set
Perform A-D Simultaneously for 4 Sets; Complete 5th Set of A only						
25 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	3	90-95%	No Tempo
B	Med Ball Chest Pass	3	X	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	3	X	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar	3	X	5	90-95%	
B	DB Step Up	3	X	5	90-95%	Bottom Half
C	Hip Flexor Prone	3	X	8	BW	Knee On Bench
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	<u>Reps/Duration</u>		Load	Notes
A	DB Shoulder Press	3	x	10	90-95%	OC-D
B	Cuban Press Fig 8	3	x	8	Light	
C	Pull Up	3	x	7	BW	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	<u>Reps/Duration</u>		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Abduction	3	x	8	BW	
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 8	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	<u>Reps/Duration</u>		Load	Notes
A	Tri Push Down	3	x	5	90-95%	
B	DB Hammer Curls	3	x	5	90-95%	
C	Blackburn	3	x	T		3 Second Holds
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Eccentric Block Friday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Front Squat	1,1,1	X	5,3,3	50-80%	
B1	External Band Rotation	3	X	6ea		
B2	Ankle Band Work	3	X	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Front Squat	3	X	4	80-85%	6 Second Eccentric-Partner Help Up
B	Hurdle Hop	3	X	5		Pull Down
C	1/2 Squat Weighted Jump	3	X	4		Pause at Bottom
D	15 yard starts	3	X	1		
E	Wrist Curl	3	X	8		
F	4 Way Neck	3	X	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	Coach View
B	Cuban Press	3	X	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	4	80-85%	6 Second Eccentric-Partner Help Up
B	Speed Band Bench Press	3	X	4	35-40%	Reactive
C	DB Incline Bench	3	X	4	35-40%	Reactive
D	Clap Push Up	3	X	4		Reactive
E	Jobes ECC	3	X	6		4 second Eccentric
F	Antib Band	3	X	10		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 5		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar Lift	3	x	5	80-85%	6 Second Eccentric
B	Face Band Pulls	3	x	12	Band	
C	1-Arm Lat. Pulldown	3	x	10	80-85%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 6		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	10	BW	
B	Bench Abduction	3	x	10	BW	
C	DB Bent Over Row	3	x	8	80-85%	4 Second Eccentric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	80-85%	Bottom Half
B	Hip Flexor Eccentric Prone	3	x	6	BW	Each Side
C	Zottman Curl	3	x	10	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8		<u>Upper Body Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	EZ Tricep Extension	3	x	8	80-85%	
B	Bench Abduction	3	x	8	80-85%	
C	SL Calf Raises	3	x	10		
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 2 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

No Changes, Refer to Week 1

Slow Run/Preparation Drills

No Changes, Refer to Week 1

Speed

[Stance Start, 2 Steps](#)

The same stance is used as in week 1 above. Now the athlete focuses on their first two steps.

Agility

[2 leg quad jump with knees bent](#)

This drill is similar to the 2 leg lateral line hop drill used in week 1. However, now the athlete will move in a rectangular pattern, hitting all 4 spaces of the quadrant. Complete 2 drills in the counterclockwise and 2 counter-clockwise while allowing the appropriate rest time. Continue to focus on fast feet and attempt to count the number of touches when possible.

Training Progression Week 3					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	as directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	single leg squat For Ankle Rocker	25	1	20 - 40 Seconds	33
	Stair Walks	25	1	20 - 40 Seconds	33
	Shuffle Walks	25	1	20 - 40 Seconds	33

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	Mini Hurdle Runs	10-12 Hurdles	7-10 Reps - 1 Set	20 - 40 Seconds	33
	Prime Times Speed Development	20-30 Yards	3-5 Reps - 1 Set	20 - 40 Seconds	34
Speed					
Speed	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	Flying 10	3-4 Reps	1 Set	30 to 90 Seconds	12
	Stance Start, 3 Steps	3-4 Reps	1 Set	20 to 40 Seconds	Page
Agility					
Agility	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	Single leg line hop with straight leg	30 Seconds	2 (1 Clock, and 1 Counter-clockwise)	20 - 40 Seconds	34
Lifting					
Lifting					27-32

Isometric Block Monday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	3	x	6	85-87.5%	3 Second Isometric-Partner Help Up
B	Hurdle Hop	3	x	5		Pull Down
C	1/2 Squat Weighted Jump	3	x	4		Pause at Bottom
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	x	4	85-87.5%	3 Second Isometric-Partner Help Up
B	Speed Band Bench Press	3	x	4	35-40%	Pause at Bottom for 2 Sec-Up Fast
C	DB Incline Bench	3	x	4	35-40%	Reactive-Speed
D	Clap Push Up	3	x	4	BW	Reactive
E	Jobes	3	x	6	Moderate	4 second Eccentric
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar Lift	3	x	6	85-87.5%	3 Second Isometric
B	Face Band Pulls	3	x	8	BAND	
C	1-Arm Lat. Pulldown	3	x	10	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	
C	DB Bent Over Row	3	x	8	85-87.5%	3 Second Isometric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	DB Psoas	3	x	6	85-87.5%	
C	Bar Curl	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	EZ Tricep Extension	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	SL Calf Raises	3	x	6	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Isometric Block Wednesday- Sample Training Day

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
Block 2	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	5	x	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	x	4 Reps		
C	Antib Band	5	x	5 Reps		Rest 2 minutes at the end of each set
Perform A-D Simultaneously for 3 Sets; Complete 4th Set of A only						
25 seconds Rest Between Exercises						
Block 3	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
Block 4	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	x	3	90-95%	No Tempo
B	Med Ball Chest Pass	3	x	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	3	x	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar	3	x	5	90-95%	
B	DB Step Up	3	x	5	90-95%	Bottom Half
C	Hip Flexor Prone	3	x	8	BW	Knee On Bench
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	90-95%	OC-D
B	Cuban Press Fig 8	3	x	8	Light	
C	Pull Up	3	x	7	BW	Partner Pull
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Abduction	3	x	8	BW	
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 8	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Tri Push Down	3	x	5	90-95%	
B	DB Hammer Curls	3	x	5	90-95%	
C	Blackburn	3	x	T		3 Second Holds
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Isometric Block Friday- Sample Training Day

Block 1	Lower Body Warm-up					
Order	Exercise	Sets	Reps/Duration	Load	Notes	
A	Front Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 2 Sets						
2: Minutes Rest Between Exercises						
Block 2	Lower Body Strength					
Order	Exercise	Sets	Reps/Duration	Load	Notes	
A	Front Squat	3	x	8	80-85%	3 Second Isometric-Partner Help Up
B	Hurdle Hop	3	x	5		Pull Down
C	1/2 Squat Weighted Jump	3	x	4		Pause at Bottom
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	Upper Body Warm-up					
Order	Exercise	Sets	Reps/Duration	Load	Notes	
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 2 Sets						
2 Minutes Rest between Sets of Bench						
Block 4	Upper Body Strength					
Order	Exercise	Sets	Reps/Duration	Load	Notes	
A	Bench Press	3	x	8	80-85%	3 Second Isometric-Partner Help Up
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4		Reactive
E	Jobes	3	x	6		4 Second Isometric
F	Antib Band	3	x	10		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	Upper/Lower Auxiliary					
Order	Exercise	Sets	Reps/Duration	Load	Notes	
A	Glute Ham Bar Lift	3	x	8	80-85%	3 Second Isometric
B	Face Band Pulls	3	x	12	Band	
C	1-Arm Lat. Pulldown	3	x	10	80-85%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Hyper	3	x	10	BW	
B	Bench Adduction	3	x	10	BW	
C	DB Bent Over Row	3	x	8	80-85%	3 Second Isometric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	3	x	10	80-85%	Bottom Half
B	Hip Flexor Isometric Prone	3	x	6	80-85%	
C	Zottman Curl	3	x	10	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Tri Ext	3	x	8	80-85%	
B	Bench Abduction	3	x	8	80-85%	
C	SL Calf Raises	3	x	10		
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 3 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

[Single leg squat For Ankle Rocker](#)

In this drill the athlete keeps the entire foot flat on the ground. The athlete then drives the knee as far forward as possible while maintaining contact between the heel and floor.

[Shuffle walks](#)

The athlete begins in an ankle squat position by pushing their shins as far forward as possible while maintaining whole foot pressure. One forefoot is raised as high as possible while maintaining heel contact with the ground and then sliding it forward 6 inches. The athlete then drops the forefoot back to the ground. Without shifting their weight, the athlete will then raise the rear forefoot and try to slide it 6 inches in front of the other foot. The key is to not shift the weight between the feet and to make the ankle complete the work. The better an athlete and ankle gets, the lower the athlete can drop in and the greater distance each step can cover.

[Stair walk](#)

The athlete places their forefoot on a stair and pushes their shin as far forward as possible without letting the heel raise. Then the athlete will push through the foot to go up the stairs and extend all the way to the big toe before the next foot is placed on the stair in front of them. Repeat with the other foot.

Slow Run/Preparation Drills

[Mini hurdle runs](#)

Mini hurdle runs force perfect the timing required in sprints. If the timing is not exactly as needed, the athlete will strike the hurdles. To set this drill up place 10-12, 6 inch hurdles with PVC of 1.7 meters (1.9 yards) apart in a straight line. Have the athlete run through the hurdles, while always maintaining the right foot on the right side of the line and left foot on the left side of the center line. As a coach, ensure they are not running on their toes, and emphasize solid foot contacts with the ground.

As the athlete progresses, they can run through with their hands over their heads, reaching as high as possible. Another progression would be to increase the distance between the hurdles, up to as they improve on the drill, the coach can lengthen the distance between the hurdles as far as 2.1 m (2.3 yards). If the hurdles are placed too far apart, the athlete will have an increased ground contact time with a change in running form as well. This must be avoided. Generally, 1.7-1.9 is good for beginning and intermediate runners. Faster athletes will be capable of handling the distance of 2.1m.

I have never used a distance greater than 2.1m. Adding 2 inches to the height of the hurdles can also make the drill more difficult. Again, start at shorter distances and lower heights. The

key is to maintain proper positioning and running mechanics. I have also gone shorter to 1.5 m to really have the athletes focus on getting their feet off the ground. It is a great drill because if the athlete runs through, it is difficult to do wrong unless they cross over the line. The shorter and longer distances work better at top speed. The middle distances are better at 80-90%. Complete 10-12 hurdles at varying distances with good form and appropriate rest for 7-10 sets.

[Prime Time Speed Development](#)

This drill is named, appropriately, after Deon Sanders. It is a stiff legged sprint. The athlete will jog to start but once they pick up speed, they will run with their legs straight. This not only ensures optimal foot placement under the center of mass but it also strengthens their hamstrings.

I usually have them hold their top speed for 30m. Placing their arms overhead will add to the difficulty of the drill. If extra timers are handy, it is a great drill to run fly 30s with. Especially with beginners, the faster their prime time, the faster they run. Do 3-5 reps per workout. Common mistakes include landing on heels instead of toes and athletes having a slight bend in their knee. A perfect rep would show some bounce off the ground.

Speed

[Stance Start, 3 Steps](#)

The same stance is used as in week 1 above. Now the athlete focuses on their first three steps.

Agility

[Single leg line hop with straight leg](#)

In this drill have the athlete find a line to jump over. They will then hop over line as quickly as possible in a lateral motion while keeping the knee straight.

Training Progression Week 4					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	as directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	single leg squat For Ankle Rocker	25	1	20 - 40 Seconds	33
	Stair Walks	25	1	20 - 40 Seconds	33
	Shuffle walks	25	1	20 - 40 Seconds	33

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Mini Hurdle Runs	10-12 Hurdles	7-10 Reps - 1 Set	20 - 40 Seconds	33
	Prime Times Speed Development	20-30 Yards	3-5 Reps - 1 Set	20 - 40 Seconds	34
Speed					
Speed	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Flying 10	3-4 Reps	1 Set	30 to 90 Seconds	12
	Block 5	3-4 Reps	1 Set	20 to 40 Seconds	43
Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Single leg line hop with straight leg	30 Seconds	2 (1 Clock, and 1 Counter-clockwise)	20 - 40 Seconds	34
Lifting					
Lifting					37-42

Isometric Block Monday- Sample Training Day

Block 1	<u>Lower Body Warm-up</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Back Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
Block 2	<u>Lower Body Strength</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Back Squat	3	x	6	85-87.5%	3 Second Isometric-Partner Help Up
B	Hurdle Hop	3	x	5		Pull Down
C	1/2 Squat Weighted Jump	3	x	4		Pause at Bottom
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	<u>Upper Body Warm-up</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
Block 4	<u>Upper Body Strength</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	4	85-87.5%	3 Second Isometric-Partner Help Up
B	Speed Band Bench Press	3	x	4	35-40%	Pause at Bottom for 2 Sec-Up Fast
C	DB Incline Bench	3	x	4	35-40%	Reactive-Speed
D	Clap Push Up	3	x	4	BW	Reactive
E	Jobes	3	x	6	Moderate	4 second Eccentric
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar Lift	3	x	6	85-87.5%	3 Second Isometric
B	Face Band Pulls	3	x	8	BAND	
C	1-Arm Lat. Pulldown	3	x	10	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	
C	DB Bent Over Row	3	x	8	85-87.5%	3 Second Isometric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	DB Psoas	3	x	6	85-87.5%	
C	Bar Curl	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	EZ Tricep Extension	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	SL Calf Raises	3	x	6	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Isometric Block Wednesday- Sample Training Day

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
Block 2	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	5	x	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	x	4 Reps		
C	Antib Band	5	x	5 Reps		Rest 2 minutes at the end of each set
Perform A-D Simultaneously for 3 Sets; Complete 4th Set of A only						
25 seconds Rest Between Exercises						
Block 3	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
Block 4	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	x	3	90-95%	No Tempo
B	Med Ball Chest Pass	3	x	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	3	x	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar	3	x	5	90-95%	
B	DB Step Up	3	x	5	90-95%	Bottom Half
C	Hip Flexor Prone	3	x	8	BW	Knee On Bench
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	90-95%	OC-D
B	Cuban Press Fig 8	3	x	8	Light	
C	Pull Up	3	x	7	BW	Partner Pull
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Abduction	3	x	8	BW	
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 8	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Tri Push Down	3	x	5	90-95%	
B	DB Hammer Curls	3	x	5	90-95%	
C	Blackburn	3	x	T		3 Second Holds
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Isometric Block Friday- Sample Training Day

Block 1	<u>Lower Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration	Load	Notes	
A	Front Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 2 Sets						
2: Minutes Rest Between Exercises						
Block 2	<u>Lower Body Strength</u>					
Order	Exercise	Sets	Reps/Duration	Load	Notes	
A	Front Squat	3	x	8	80-85%	3 Second Isometric-Partner Help Up
B	Hurdle Hop	3	x	5		Pull Down
C	1/2 Squat Weighted Jump	3	x	4		Pause at Bottom
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	<u>Upper Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration	Load	Notes	
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 2 Sets						
2 Minutes Rest between Sets of Bench						
Block 4	<u>Upper Body Strength</u>					
Order	Exercise	Sets	Reps/Duration	Load	Notes	
A	Bench Press	3	x	8	80-85%	3 Second Isometric-Partner Help Up
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4		Reactive
E	Jobes	3	x	6		4 Second Isometric
F	Antib Band	3	x	10		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration	Load	Notes	
A	Glute Ham Bar Lift	3	x	8	80-85%	3 Second Isometric
B	Face Band Pulls	3	x	12	Band	
C	1-Arm Lat. Pulldown	3	x	10	80-85%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Hyper	3	x	10	BW	
B	Bench Adduction	3	x	10	BW	
C	DB Bent Over Row	3	x	8	80-85%	3 Second Isometric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	3	x	10	80-85%	Bottom Half
B	Hip Flexor Isometric Prone	3	x	6	80-85%	
C	Zottman Curl	3	x	10	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Tri Ext	3	x	8	80-85%	
B	Bench Abduction	3	x	8	80-85%	
C	SL Calf Raises	3	x	10		
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 4 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

No Changes, Refer to Week 3

Slow Run/Preparation Drills

No Changes, Refer to Week 3

Speed

[Block 5 starts](#)

This is not a timed acceleration but more of a drill to improve the start position. The key is to get the athlete in a beneficial stance and learn to drive from that stance.

Agility

No Changes, Refer to Week 3

Training Progression Week 5					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	as directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	single leg squat For Ankle Rocker	25	1	20 - 40 Seconds	33
	Shuffle walks	25	1	20 - 40 Seconds	33

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	Mini Hurdle Runs	10-12 Hurdles	7-10 Reps - 1 Set	20 - 40 Seconds	33
	Prime Times Speed Development	20-30 Yards	3-5 Reps - 1 Set	20 - 40 Seconds	34
Speed					
Speed	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	Flying 10	3-4 Reps	1 Set	30 to 90 Seconds	12
	Block 5	3-4 Reps	1 Set	20 to 40 Seconds	43
Agility					
Agility	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	Single leg line hop with a bent knee	30 Seconds	2 (1 Clock, and 1 Counter-clockwise)	20 - 40 Seconds	52
Lifting					
Lifting					46-51

Concentric Block Monday- Sample Training Day

Block 1	<u>Lower Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
Block 2	<u>Lower Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	3	x	5	85-87.5%	No Tempo
B	Hurdle Hop	3	x	4		Distance
C	1/2 Squat Weighted Jump	3	x	4		Reactive
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	<u>Upper Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
Block 4	<u>Upper Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	5	85-87.5%	No Tempo
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4	BW	Reactive
E	Jobes	3	x	6	Moderate	4 second Eccentric
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar	3	x	7	85-87.5%	
B	Face Band Pulls	3	x	8	BAND	
C	1-Arm Lat. Pulldown	3	x	10	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	
C	DB Bent Over Row	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	DB Psoas	3	x	6	BW	
C	Bar Curl	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	EZ Tricep Extension	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	SL Calf Raises	3	x	6	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Concentric Block Wednesday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	5	x	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	x	4 Reps		
C	Antib Band	5	x	5 Reps		Rest 2 minutes at the end of each set
Perform A-D Simultaneously for 4 Sets; Complete 5th Set of A only						
25 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	x	3	90-95%	No Tempo
B	Med Ball Chest Pass	3	x	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	3	x	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar	3	x	4	90-95%	
B	DB Step Up	3	x	5	90-95%	
C	Hip Flexor Prone	3	x	8	BW	Knee On Bench
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

<u>Block 6</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	3	x	10	90-95%	Bottom Half
B	Cuban Press Fig 8	3	x	8	Light	
C	Pull Up	3	x	7	90-95%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
<u>Block 7</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Abduction	3	x	8	BW	
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
<u>Block 8</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Tri Push Down	3	x	5	90-95%	
B	DB Hammer Curls	3	x	5	90-95%	
C	Blackburn	3	x	5	90-95%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Concentric Block Friday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Front Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Front Squat	3	x	7	80-85%	No Tempo
B	Hurdle Hop	3	x	4		Distance
C	1/2 Squat Weighted Jump	3	x	4		Reactive
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	x	7	80-85%	No Tempo
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4	BW	Reactive
E	Jobes	3	x	6		
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar	3	x	7	80-85%	
B	Face Band Pulls	3	x	12	Band	
C	1-Arm Lat. Pulldown	3	x	10	80-85%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	10	BW	
B	Bench Adduction	3	x	10	BW	
C	DB Bent Over Row	3	x	8	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	80-85%	Bottom Half
B	DB Psoas	3	x	6	BW	
C	Zottman Curl	3	x	10	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Tri Ext	3	x	8	80-85%	
B	Bench Abduction	3	x	8	80-85%	
C	SL Calf Raises	3	x	10		Use with Knee Bend
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 5 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

No Changes, Refer to Week 3

Slow Run/Preparation Drills

No Changes, Refer to Week 3

Speed

No Changes, Refer to Week 4

Agility

[Single leg line hop with a bent knee](#)

Similar to the straight leg lateral drill completed previously but now the athlete will use a bent knee.

Training Progression Week 6					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	as directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	single leg squat For Ankle Rocker	25	1	20 - 40 Seconds	33
	Shuffle walks	25	1	20 - 40 Seconds	33

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Mini Hurdle Runs	10-12 Hurdles	7-10 Reps - 1 Set	20 - 40 Seconds	33
	Prime Times Speed Development	20-30 Yards	3-5 Reps - 1 Set	20 - 40 Seconds	34
Speed					
Speed	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Flying 20	3-4 Reps	1 Set	30 to 90 Seconds	61
	Block 10	3-4 Reps	1 Set	20 to 40 Seconds	61
Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Single leg line hop with a bent knee	30 Seconds	2 (1 Clock, and 1 Counter-clockwise)	20 - 40 Seconds	52
Lifting					
Lifting					55-60

Concentric Block Monday- Sample Training Day

Block 1	<u>Lower Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
Block 2	<u>Lower Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	3	x	5	85-87.5%	No Tempo
B	Hurdle Hop	3	x	4		Distance
C	1/2 Squat Weighted Jump	3	x	4		Reactive
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	<u>Upper Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
Block 4	<u>Upper Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	5	85-87.5%	No Tempo
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4	BW	Reactive
E	Jobes	3	x	6	Moderate	4 second Eccentric
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar	3	x	7	85-87.5%	
B	Face Band Pulls	3	x	8	BAND	
C	1-Arm Lat. Pulldown	3	x	10	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	
C	DB Bent Over Row	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	DB Psoas	3	x	6	BW	
C	Bar Curl	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	EZ Tricep Extension	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	SL Calf Raises	3	x	6	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Concentric Block Wednesday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	5	x	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	x	4 Reps		
C	Antib Band	5	x	5 Reps		Rest 2 minutes at the end of each set
Perform A-D Simultaneously for 4 Sets; Complete 5th Set of A only						
25 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	x	3	90-95%	No Tempo
B	Med Ball Chest Pass	3	x	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	3	x	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar	3	x	4	90-95%	
B	DB Step Up	3	x	5	90-95%	
C	Hip Flexor Prone	3	x	8	BW	Knee On Bench
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

<u>Block 6</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	3	x	10	90-95%	Bottom Half
B	Cuban Press Fig 8	3	x	8	Light	
C	Pull Up	3	x	7	90-95%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
<u>Block 7</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Abduction	3	x	8	BW	
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
<u>Block 8</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Tri Push Down	3	x	5	90-95%	
B	DB Hammer Curls	3	x	5	90-95%	
C	Blackburn	3	x	5	90-95%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Concentric Block Friday- Sample Training Day

Block 1						
Lower Body Warm-up						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Front Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
Block 2						
Lower Body Strength						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Front Squat	3	x	7	80-85%	No Tempo
B	Hurdle Hop	3	x	4		Distance
C	1/2 Squat Weighted Jump	3	x	4		Reactive
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3						
Upper Body Warm-up						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
Block 4						
Upper Body Strength						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	7	80-85%	No Tempo
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4	BW	Reactive
E	Jobes	3	x	6		
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5						
Upper/Lower Auxiliary						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar	3	x	7	80-85%	
B	Face Band Pulls	3	x	12	Band	
C	1-Arm Lat. Pulldown	3	x	10	80-85%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	10	BW	
B	Bench Adduction	3	x	10	BW	
C	DB Bent Over Row	3	x	8	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	80-85%	Bottom Half
B	DB Psoas	3	x	6	BW	
C	Zottman Curl	3	x	10	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Tri Ext	3	x	8	80-85%	
B	Bench Abduction	3	x	8	80-85%	
C	SL Calf Raises	3	x	10		Use with Knee Bend
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 6 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

No Changes, Refer to Week 3

Slow Run/Preparation Drills

No Changes, Refer to Week 3

Speed

[Fly 20](#)

Once an athlete learns to reach top speed, they will need to then learn how to hold that speed. Very rarely will we find an athlete that can match their first 10m with their 2nd. That is goal in this exercise. Find top end speed and then hold it over the span of 20 meters.

Other examples to read about this are listed below.

[Flying Drill Sheets](#)

[Block 10's](#)

This drill is now timed to quantify the improvements in the 10 meter start.

Agility

No Changes, Refer to Week 5

Training Progression Week 7					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	as directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Single leg squat For Ankle Rocker	25	1	20 - 40 Seconds	33
	Shuffle walks	25	1	20 - 40 Seconds	33

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Lateral High Knees Hands Up Speed Development	10 meters	3-5 Reps / 1 Set	No Rest	70
	Captain Morgan Speed Drill	30 meters	2-3 Reps / 1 Set	No Rest	70
Speed					
Speed	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Flying 20	3-4 Reps	1 Set	30 to 90 Seconds	61
	Block 10	3-4 Reps	1 Set	20 to 40 Seconds	61
Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Single leg quadrant jump	30 Seconds	2 (1 Clock, and 1 Counter-clockwise)	20 - 40 Seconds	70
Lifting					
Lifting					64--69

Below 80% Block Monday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	1,1,1	X	5,3,3	50-80%	
B	TKE	3	X	6ea	Band	
Perform A & B Series Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	4	X	5	55-62%	Reactive
B	Hurdle Hop	4	X	4		Distance
C	1/2 Squat Weighted Jump	4	X	4		Reactive
D	15 yard starts	4	X	15 yd		
E	Wrist Curl	4	X	10		Reactive
F	4 Way Neck	4	X	4		Rest 2 min at the end of each set
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	
B	External Rot.	2	X	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	5	55-62%	Reactive
B	Speed Band Bench Press	3	X	4	35-40%	Reactive
C	DB Incline Bench	3	X	4	35-40%	Reactive
D	Clap Push Up	3	X	4	BW	Reactive
E	Jobs	3	X	8		
F	Antib Band	3	X	8	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar Lift	3	X	5	55-62%	Don't Hit Ground
B	OH Reb Delt Drop	3	X	8	Band	
C	DB Bent Over Row	3	X	10	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	6	Light	Reactive
B	Bench Abduction	3	x	12	BW	OC-Disadvantage- +1 Full Rep
C	Hip Flexor Prone OC	3	x	12		OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	55-62%	OC-Disadvantage- +1 Full Rep
B	Bench Abduction	3	x	12	BW	OC-Disadvantage- +1 Full Rep
C	Bar Curl	3	x	7	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Tri Band Push Down Pro Sup	3	x	7	55-62%	
B	Chin Up	3	x	8	55-62%	Bottom Half
C	Delt BO Lat Drop	3	x	8	Light	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Below 80% Block Wednesday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Hex Deadlift	1,1,1	X	5,3,3	50-80%	
B	TKE	2	X	6ea		
Perform A & B Series Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Hex Deadlift	4	X	4	72-80%	Reactive
B	Depth Drop Box Jump	4	X	4		
C	Antib Band	4	X	8		Rest 2 min between sets
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	
B	External Rot.	2	X	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	4	X	4	72-80%	No Tempo
B	Med Ball Chest Pass	4	X	5	Moderate	Quick Hip
C	Delt BO Lat Drop	4	X	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Bar Lift	3	X	6	72-80%	
B	Face Band Pulls	3	X	8	Band	
C	1-Arm DB Row	3	X	6	72-80%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	6	BW	
B	OC Swiss Ball Groin Squeeze	3	x	10	Ball	OC-Disadvantage
C	Bench Abduction	3	x	6	BW	OC-Disadvantage
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	8	72-80%	OC-Disadvantage- +1 Full Rep
B	Hip Flexor Band Pulls	3	x	6	Band	
C	Ez Bar Curl	3	x	8	72-80%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8		<u>Upper Body Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Tri Push Down	3	x	8	72-80%	
B	Pull Up	3	x	6	72-80%	Bottom Half
C	Calf Raises	3	x	8	72-80%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Below 80% Block Friday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	1,1,1	x	5,3,3	50-80%	
B	TKE	3	x	6ea	Band	
Perform A & B Series Simultaneously for 3 Sets						
No Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	4	x	7	55-62%	Reactive
B	Hurdle Hop	4	x	4		Distance
C	1/2 Squat Weighted Jump	4	x	4		Reactive
D	15 yard starts	4	x	15 yd		
E	Wrist Ulnar	4	x	10		Reactive
F	4 Way Neck	4	x	4		Rest 2 min at the end of each set
Perform A-D Simultaneously for 4 Sets						
15 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	
B	External Rot.	2	x	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	x	7	55-62%	Reactive
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4	BW	Reactive
E	Cuban Press ext. rot. Band OC	3	x	10		OC-Disadvantage- +1 Full Rep
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar Lift	3	x	7	55-62%	Don't Hit Ground
B	OH Reb Delt Drop	3	x	15	Band	Reactive
C	DB Bent Over Row	3	x	7	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Hyper	3	x	7	Light	Reactive
B	Bench Adduction	3	x	15	BW	OC-Disadvantage- +1 Full Rep
C	Hip Flexor Prone OC	3	x	15		OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	3	x	8	55-62%	
B	Bench Abduction	3	x	15	BW	OC-Disadvantage- +1 Full Rep
C	Bar Curl	3	x	10	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8		<u>Upper Body Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Tri Band Push Down Pro Sup	3	x	8	55-62%	Reactive
B	Chin Up	3	x	10	55-62%	Bottom Half
C	Delt BO Lat Drop	3	x	8	55-62%	Reactive
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 7 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

No Changes, Refer to Week 3

Slow Run/Preparation Drills

[Lateral High Knees Hands Up Speed Development](#)

The athlete will speed up their boom booms and move down a line laterally, almost like the old fashioned rope drill. They will also reach their arms as high as possible over their heads. They will cover a distance of 10m laterally. Rest and then complete the drill going back the other way, facing the same direction. Have athletes stay on balls of their feet emphasizing locked elbows. Their torso should maintain a slight lean forward. Complete 3-5 reps of this 10 meter distance per direction.

[Captain Morgan Speed Drill](#)

This is a strange drill modeled after the figure on the bottle of Rum. The athlete will stand on one leg and rotate their swing leg out to the side. With their hands over their head, they will hop forward in this position. It puts an incredible amount of pressure on the lateral hip. Make sure the athlete is as tall as possible. Complete this drill for 2-3 reps of 30m.

Speed

No Changes, Refer to Week 6

Agility

[Single leg quadrant jump](#)

This drill is similar to the quadrant progression completed previously, but now the drill is completed on a single leg. Complete both clockwise and counter-clockwise directions.

Training Progression Week 8					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	as directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	single leg squat For Ankle Rocker	25	1	20 - 40 Seconds	33
	Shuffle walks	25	1	20 - 40 Seconds	33

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Lateral High Knees Hands Up Speed Development	10 meters	3-5 Reps / 1 Set	No Rest	70
	Captain Morgan Speed Drill	30 meters	2-3 Reps / 1 Set	No Rest	70
Speed					
Speed	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Flying 20	3-4 Reps	1 Set	30 to 90 Seconds	61
	Block 20	3-4 Reps	1 Set	30 to 60 Seconds	79
Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Single leg quadrant jump	30 Seconds	2 (1 Clock, and 1 Counter-clockwise)	20 - 40 Seconds	70
Lifting					
Lifting					73-78

Below 80% Block Monday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	1,1,1	X	5,3,3	50-80%	
B	TKE	3	X	6ea	Band	
Perform A & B Series Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	4	X	5	55-62%	Reactive
B	Hurdle Hop	4	X	4		Distance
C	1/2 Squat Weighted Jump	4	X	4		Reactive
D	15 yard starts	4	X	15 yd		
E	Wrist Curl	4	X	10		Reactive
F	4 Way Neck	4	X	4		Rest 2 min at the end of each set
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	
B	External Rot.	2	X	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	5	55-62%	Reactive
B	Speed Band Bench Press	3	X	4	35-40%	Reactive
C	DB Incline Bench	3	X	4	35-40%	Reactive
D	Clap Push Up	3	X	4	BW	Reactive
E	Jobses	3	X	8		
F	Antib Band	3	X	8	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar Lift	3	X	5	55-62%	Don't Hit Ground
B	OH Reb Delt Drop	3	X	8	Band	
C	DB Bent Over Row	3	X	10	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	6	Light	Reactive
B	Bench Abduction	3	x	12	BW	OC-Disadvantage- +1 Full Rep
C	Hip Flexor Prone OC	3	x	12		OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	55-62%	OC-Disadvantage- +1 Full Rep
B	Bench Abduction	3	x	12	BW	OC-Disadvantage- +1 Full Rep
C	Bar Curl	3	x	7	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Tri Band Push Down Pro Sup	3	x	7	55-62%	
B	Chin Up	3	x	8	55-62%	Bottom Half
C	Delt BO Lat Drop	3	x	8	Light	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Below 80% Block Wednesday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Hex Deadlift	1,1,1	X	5,3,3	50-80%	
B	TKE	2	X	6ea		
Perform A & B Series Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Hex Deadlift	4	X	4	72-80%	Reactive
B	Depth Drop Box Jump	4	X	4		
C	Antib Band	4	X	8		Rest 2 min between sets
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	
B	External Rot.	2	X	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	4	X	4	72-80%	No Tempo
B	Med Ball Chest Pass	4	X	5	Moderate	Quick Hip
C	Delt BO Lat Drop	4	X	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Bar Lift	3	X	6	72-80%	
B	Face Band Pulls	3	X	8	Band	
C	1-Arm DB Row	3	X	6	72-80%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	6	BW	
B	OC Swiss Ball Groin Squeeze	3	x	10	Ball	OC-Disadvantage
C	Bench Abduction	3	x	6	BW	OC-Disadvantage
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	8	72-80%	OC-Disadvantage- +1 Full Rep
B	Hip Flexor Band Pulls	3	x	6	Band	
C	Ez Bar Curl	3	x	8	72-80%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8		<u>Upper Body Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Tri Push Down	3	x	8	72-80%	
B	Pull Up	3	x	6	72-80%	Bottom Half
C	Calf Raises	3	x	8	72-80%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Below 80% Block Friday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	1,1,1	x	5,3,3	50-80%	
B	TKE	3	x	6ea	Band	
Perform A & B Series Simultaneously for 3 Sets						
No Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	4	x	7	55-62%	Reactive
B	Hurdle Hop	4	x	4		Distance
C	1/2 Squat Weighted Jump	4	x	4		Reactive
D	15 yard starts	4	x	15 yd		
E	Wrist Ulnar	4	x	10		Reactive
F	4 Way Neck	4	x	4		Rest 2 min at the end of each set
Perform A-D Simultaneously for 4 Sets						
15 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	
B	External Rot.	2	x	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	x	7	55-62%	Reactive
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4	BW	Reactive
E	Cuban Press ext. rot. Band OC	3	x	10		OC-Disadvantage- +1 Full Rep
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar Lift	3	x	7	55-62%	Don't Hit Ground
B	OH Reb Delt Drop	3	x	15	Band	Reactive
C	DB Bent Over Row	3	x	7	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Hyper	3	x	7	Light	Reactive
B	Bench Adduction	3	x	15	BW	OC-Disadvantage- +1 Full Rep
C	Hip Flexor Prone OC	3	x	15		OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	3	x	8	55-62%	
B	Bench Abduction	3	x	15	BW	OC-Disadvantage- +1 Full Rep
C	Bar Curl	3	x	10	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8		<u>Upper Body Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Tri Band Push Down Pro Sup	3	x	8	55-62%	Reactive
B	Chin Up	3	x	10	55-62%	Bottom Half
C	Delt BO Lat Drop	3	x	8	55-62%	Reactive
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 8 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

No Changes, Refer to Week 3

Slow Run/Preparation Drills

No Changes, Refer to Week 7

Speed

[Block 20 yd](#)

Similar to the block start but now the athlete completes the acceleration for 20 yards.

Agility

No Changes, Refer to Week 7

Week 9 Testing

[This link provides many examples and testing tool possibilities](#)

Training Progression Week 10					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	as directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	Ankle Rocker One Speed Development	15	2 -3	10 - 20 Seconds	90
	Ankle Rocker three Speed Development	15	2 -3	10 - 20 Seconds	90
	Ankle Rocker Two Speed Development	15	2 -3	10 - 20 Seconds	90

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Lateral High Knees Hands Up Speed Development	10 meters	3-5 Reps - 1 Set	20 to 40 Seconds	70
	Captain Morgan Speed Drill	30 meters	2-3 Reps - 1 Set	20 to 40 Seconds	70
Speed					
Speed	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Flying 10	3-4 Reps	1 Set	30 to 90 Seconds	12
	Block 10	3-4 Reps	1 Set	30 to 60 Seconds	61
Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Running Squares	1	4-5	20 to 60 Seconds	90
	Running Circles	1	4-5	20 to 60 Seconds	90
	Large Circles	1	4-5	20 to 60 Seconds	91
	Figure 8's	1	4-5	20 to 60 Seconds	91
	Racing T	1	4-5	20 to 60 Seconds	91
	Down and Back Agility Drill	1	4-5	20 to 60 Seconds	91
	T Short Agility Drill	1	4-5	20 to 60 Seconds	91
	Square Carioca Agility Drill	1	4-5	20 to 60 Seconds	92
	Square Fwd Agility Drill	1	4-5	20 to 60 Seconds	92

Lifting					
Lifting					84-89

Eccentric Block Monday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	X	5,3,3	50-80%	
B1	External Band Rotation	3	X	6ea		
B2	Ankle Band Work	3	X	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	3	X	4	85-87.5%	6 Second Eccentric-Partner Help Up
B	Hurdle Hop	3	X	5		Pull Down
C	1/2 Squat Weighted Jump	3	X	4		Pause at Bottom
D	15 yard starts	3	X	1		
E	Wrist Curl	3	X	8		
F	4 Way Neck	3	X	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	Coach View
B	Cuban Press	3	X	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	4	85-87.5%	6 Second Eccentric-Partner Help Up
B	Speed Band Bench Press	3	X	4	35-40%	Pause at Bottom for 2 Sec-Up Fast
C	DB Incline Bench	3	X	4	35-40%	Reactive-Speed
D	Speed Push Up	3	X	4	BW	Reactive
E	Jobes ECC	3	X	6	Moderate	4 second Eccentric
F	Antib Band	3	X	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar Lift	3	X	4	85-87.5%	6 Second Eccentric
B	Face Band Pulls	3	X	8	BAND	
C	1-Arm Lat. Pulldown	3	X	10	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	
C	DB Bent Over Row	3	x	8	85-87.5%	3 Second Eccentric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	Eccentric DB Psoas	3	x	6	BW	Each Side & Knee on Bench
C	Bar Curl	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Tri Ext	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	SL Calf Raises	3	x	6	Light	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Eccentric Block Wednesday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	X	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	5	X	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	X	4 Reps		
C	Antib Band	5	X	5 Reps		Rest 2 minutes at the end of each set
Perform A-D Simultaneously for 4 Sets; Complete 5th Set of A only						
25 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	3	90-95%	No Tempo
B	Med Ball Chest Pass	3	X	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	3	X	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar	3	X	5	90-95%	
B	DB Step Up	3	X	5	90-95%	Bottom Half
C	Hip Flexor Prone	3	X	8	BW	Knee On Bench
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	<u>Reps/Duration</u>		Load	Notes
A	DB Shoulder Press	3	x	10	90-95%	OC-D
B	Cuban Press Fig 8	3	x	8	Light	
C	Pull Up	3	x	7	BW	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	<u>Reps/Duration</u>		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Abduction	3	x	8	BW	
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 8	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	<u>Reps/Duration</u>		Load	Notes
A	Tri Push Down	3	x	5	90-95%	
B	DB Hammer Curls	3	x	5	90-95%	
C	Blackburn	3	x	T		3 Second Holds
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Eccentric Block Friday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Front Squat	1,1,1	X	5,3,3	50-80%	
B1	External Band Rotation	3	X	6ea		
B2	Ankle Band Work	3	X	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Front Squat	3	X	4	80-85%	6 Second Eccentric-Partner Help Up
B	Hurdle Hop	3	X	5		Pull Down
C	1/2 Squat Weighted Jump	3	X	4		Pause at Bottom
D	15 yard starts	3	X	1		
E	Wrist Curl	3	X	8		
F	4 Way Neck	3	X	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	Coach View
B	Cuban Press	3	X	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	4	80-85%	6 Second Eccentric-Partner Help Up
B	Speed Band Bench Press	3	X	4	35-40%	Reactive
C	DB Incline Bench	3	X	4	35-40%	Reactive
D	Clap Push Up	3	X	4		Reactive
E	Jobes ECC	3	X	6		4 second Eccentric
F	Antib Band	3	X	10		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 5		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar Lift	3	x	5	80-85%	6 Second Eccentric
B	Face Band Pulls	3	x	12	Band	
C	1-Arm Lat. Pulldown	3	x	10	80-85%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 6		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	10	BW	
B	Bench Abduction	3	x	10	BW	
C	DB Bent Over Row	3	x	8	80-85%	4 Second Eccentric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	80-85%	Bottom Half
B	Hip Flexor Eccentric Prone	3	x	6	BW	Each Side
C	Zottman Curl	3	x	10	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8		<u>Upper Body Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	EZ Tricep Extension	3	x	8	80-85%	
B	Bench Abduction	3	x	8	80-85%	
C	SL Calf Raises	3	x	10		
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 10 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

[Ankle Rocker One Speed Development Jump #1-](#) (Body Weight only)

The athlete begins with their hands on their hips. They will bend their ankles so their shins move forward but trying to eliminate any movement in their hips. At the bottom, they will pause for a count and jump as high as possible.

[Ankle Rocker Two Speed Development Jump #2-](#) (Body Weight only)

In this drill this athlete will start as above but when their ankles don't bend anymore, have them push their hips back until their spine and shins are in a parallel position. Hold for a count and jump as high as possible.

[Ankle Rocker Three Speed Development Jump #3-](#) (Body Weight only)

This drill is similar to the #2 drill above, but now the athlete will go down as quickly as possible and immediately into a jump. The athlete should now be able to immediately transfer from the downward motion into the explosive jump.

Slow Run/Preparation Drills

No Changes, Refer to Week 7

Speed

[Flying 10's](#)

Refer to Week 1

[Block 10's](#)

Refer to Week 6

Agility

[Running Squares](#)

Now the square drill is completed, but with the athlete sprinting all 3 ways through. This replaces either the shuffle or carioca used in the two drills above.

[Running Circles](#)

Most agility drills are designed to run and stop, but football also has a constant motion about it and that is why running circles is used in this training manual. The circles can range in size from

hula hoops, to garbage cans or the top of the key on a basketball court. The key is to have the outside hip even with the inside hip as the athlete turns. Too often an athlete leaves the outside hip behind and their center of mass never advances. So, in effect, they are taking a false step when they turn. Complete this drill for 4-5 reps each way.

Large Circles

In this drill the top of the key or center court in a basketball court as our circle which range from 12-15 feet in diameter. One player is the rabbit and one is the fox. The rabbit will be a stride away from the fox. On go, the fox will chase the rabbit around the circle for 2 laps. To make it interesting, add a player in the center who will try to jam the fox. A coach can also place 2 rabbits on opposite sides and fox will start with back to the center. The fox will jump around and chase the rabbit (who presets before with the other rabbit, who will run). Be sure to run in both directions in this drill to train each side evenly for 4-5 reps.

[Figure 8's](#) - 4 to 5 reps

Figure 8's use hula-hoops or garbage cans to work on tight turns. The circle will be set-up with another circle 1 yard apart. The athlete has 9 seconds to make as many figure 8's as possible. We use 9 sec because that is a ballpark estimate of the end of anaerobic energy. Complete 4-5 reps of this drill as well.

[T Agility Drills](#)

T's are set up to practice pro agility and L's. There are 4 cones used in this drill. One is the start cone, one is 5 yds out, one is 10 yds out and the fourth in 5 yds in from the middle cone. Players will work on lateral starts, which is a cross, step cross and touch. To warm up, we start with a square or staggered stance and run down and touch the cone and come back. Then, we turn sideways to the cones and work on cross step cross touch cone and run back. From there, athletes can go out to the 2nd cone and get sprint back. With the fourth cone in place, we can add in the L drill as well.

[L Agility Drills](#)

3 cones are needed for this drill, all placed 5 yards apart to create an "L" shape. The athlete will sprint ahead, make a 90 degree cut, and retrace their steps back to the starting point. Be sure to train both directions in this drill. Variations such as shuffling and other movement strategies can also be implemented.

[Pro Agility Drill](#)

Similar to the L Agility Drills, 3 cones are required and are placed 5 yards apart in a straight line. The athlete will face the same way after all 3 cuts used in this drill. Begin at the middle cone and sprint 5 yards to the cone on the right, then quickly change direction to sprint 10 yards back to the cone furthest cone away (10 yards). Finally change direction again and finish through the same cone that was started from. Be sure to train both directions evenly.

[Racing T](#)

Have two athletes face each other on the straight line and race down, back down back. The racing really pushes the athletes to train at their highest speeds, getting in and out of cuts.

Other Racing Chase Drills:

Lateral Partner Chase

Have the athletes begin facing the same way. The first athlete will take off, turning 90 degrees and sprinting. The second athlete is required to respond as quickly as possible and follows the first athlete, attempting to catch them.

T Agility

Now the T faces the athlete. A cone is placed 5 yds in front of the athlete and there will be cones placed 5 yds to both sides of the middle cone. Now the athlete will run down and back and then speed turn around the cones across the top of the T and run back.

Square shuffle Agility Drill

Cones are placed 5 yards apart to create a square. The athlete will sprint forward to the first cone, shuffle to the second, and then finish by turning and sprinting the final 5 yards.

Square Carioca Agility Drill

Similar to the drill above, now instead of shuffling the athlete will carioca to the second cone.

Square Forward Agility Drill

Now the square drill is completed, but with the athlete sprinting all 3 ways through. This replaces either the shuffle or carioca used in the two drills above.

M Back Agility

This drill has a similar set up to the square drills above, but now with the addition of a single cone placed directly in the center. The athlete sprints forward to the first cone, then backpedals to the center cone, then sprints to cone 3, and finishes by backpedaling through the final cone.

M Forward Agility

This drill uses the same "M" set up but now the entire drill is completed while sprinting.

Training Progression Week 11					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	as directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	Ankle Rocker One Speed Development	15	2 -3	10 - 20 Seconds	90
	Ankle Rocker three Speed Development	15	2 -3	10 - 20 Seconds	90
	Ankle Rocker Two Speed Development	15	2 -3	10 - 20 Seconds	90

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Lateral High Knees Hands Up Speed Development	10 meters	3-5 Reps / 1 Set	20 - 40 Seconds	70
	Captain Morgan Speed Drill	30 meters	2-3 Reps / 1 Set	20 - 40 Seconds	70
Speed					
Speed	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Flying 20	3-4 Reps	1 Set	30 to 90 Seconds	61
	Block 10	3-4 Reps	1 Set	30 to 60 Seconds	61
Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Running Squares	1	4-5	20 to 60 Seconds	90
	Running Circles	1	4-5	20 to 60 Seconds	90
	Large Circles	1	4-5	20 to 60 Seconds	91
	Figure 8's	1	4-5	20 to 60 Seconds	91
	Racing T	1	4-5	20 to 60 Seconds	91
	Down and Back Agility Drill	1	4-5	20 to 60 Seconds	91
	T Short Agility Drill	1	4-5	20 to 60 Seconds	91
	Square Carioca Agility Drill	1	4-5	20 to 60 Seconds	92
	Square Fwd Agility Drill	1	4-5	20 to 60 Seconds	92

Lifting					
Lifting					96-101

Eccentric Block Monday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	X	5,3,3	50-80%	
B1	External Band Rotation	3	X	6ea		
B2	Ankle Band Work	3	X	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	3	X	4	85-87.5%	6 Second Eccentric-Partner Help Up
B	Hurdle Hop	3	X	5		Pull Down
C	1/2 Squat Weighted Jump	3	X	4		Pause at Bottom
D	15 yard starts	3	X	1		
E	Wrist Curl	3	X	8		
F	4 Way Neck	3	X	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	Coach View
B	Cuban Press	3	X	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	4	85-87.5%	6 Second Eccentric-Partner Help Up
B	Speed Band Bench Press	3	X	4	35-40%	Pause at Bottom for 2 Sec-Up Fast
C	DB Incline Bench	3	X	4	35-40%	Reactive-Speed
D	Speed Push Up	3	X	4	BW	Reactive
E	Jobes ECC	3	X	6	Moderate	4 second Eccentric
F	Antib Band	3	X	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar Lift	3	X	4	85-87.5%	6 Second Eccentric
B	Face Band Pulls	3	X	8	BAND	
C	1-Arm Lat. Pulldown	3	X	10	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	
C	DB Bent Over Row	3	x	8	85-87.5%	3 Second Eccentric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	Eccentric DB Psoas	3	x	6	BW	Each Side & Knee on Bench
C	Bar Curl	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Tri Ext	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	SL Calf Raises	3	x	6	Light	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Eccentric Block Wednesday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	X	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	5	X	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	X	4 Reps		
C	Antib Band	5	X	5 Reps		Rest 2 minutes at the end of each set
Perform A-D Simultaneously for 4 Sets; Complete 5th Set of A only						
25 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	3	90-95%	No Tempo
B	Med Ball Chest Pass	3	X	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	3	X	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar	3	X	5	90-95%	
B	DB Step Up	3	X	5	90-95%	Bottom Half
C	Hip Flexor Prone	3	X	8	BW	Knee On Bench
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	<u>Reps/Duration</u>		Load	Notes
A	DB Shoulder Press	3	x	10	90-95%	OC-D
B	Cuban Press Fig 8	3	x	8	Light	
C	Pull Up	3	x	7	BW	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	<u>Reps/Duration</u>		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Abduction	3	x	8	BW	
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 8	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	<u>Reps/Duration</u>		Load	Notes
A	Tri Push Down	3	x	5	90-95%	
B	DB Hammer Curls	3	x	5	90-95%	
C	Blackburn	3	x	T		3 Second Holds
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Eccentric Block Friday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Front Squat	1,1,1	X	5,3,3	50-80%	
B1	External Band Rotation	3	X	6ea		
B2	Ankle Band Work	3	X	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Front Squat	3	X	4	80-85%	6 Second Eccentric-Partner Help Up
B	Hurdle Hop	3	X	5		Pull Down
C	1/2 Squat Weighted Jump	3	X	4		Pause at Bottom
D	15 yard starts	3	X	1		
E	Wrist Curl	3	X	8		
F	4 Way Neck	3	X	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	Coach View
B	Cuban Press	3	X	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	4	80-85%	6 Second Eccentric-Partner Help Up
B	Speed Band Bench Press	3	X	4	35-40%	Reactive
C	DB Incline Bench	3	X	4	35-40%	Reactive
D	Clap Push Up	3	X	4		Reactive
E	Jobes ECC	3	X	6		4 second Eccentric
F	Antib Band	3	X	10		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 5		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar Lift	3	x	5	80-85%	6 Second Eccentric
B	Face Band Pulls	3	x	12	Band	
C	1-Arm Lat. Pulldown	3	x	10	80-85%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 6		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	10	BW	
B	Bench Abduction	3	x	10	BW	
C	DB Bent Over Row	3	x	8	80-85%	4 Second Eccentric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	80-85%	Bottom Half
B	Hip Flexor Eccentric Prone	3	x	6	BW	Each Side
C	Zottman Curl	3	x	10	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8		<u>Upper Body Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	EZ Tricep Extension	3	x	8	80-85%	
B	Bench Abduction	3	x	8	80-85%	
C	SL Calf Raises	3	x	10		
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 11 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

No Changes, Refer to Week 10

Slow Run/Preparation Drills

No Changes, Refer to Week 7

Speed

[Block 30](#)

The start position from the blocks is now completed for 30 yards.

Agility

No Changes, Refer to Week 10

Training Progression Week 12					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	as directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Ankle Rocker One Speed Development	15	2 -3	10 - 20 Seconds	90
	Ankle Rocker three Speed Development	15	2 -3	10 - 20 Seconds	90
	Ankle Rocker Two Speed Development	15	2 -3	10 - 20 Seconds	90

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Lateral High Knees Hands Up Speed Development	10 meters	3-5 Reps / 1 Set	20 - 40 Seconds	70
	Captain Morgan Speed Drill	30 meters	2-3 Reps / 1 Set	20 - 40 Seconds	70
Speed					
Speed	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Flying 10	3-4 Reps	1 Set	30 to 90 Seconds	12
	Block 30	3-4 Reps	1 Set	30 to 60 Seconds	102
Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Running Squares	1	4-5	20 to 60 Seconds	90
	Running Circles	1	4-5	20 to 60 Seconds	90
	Large Circles	1	4-5	20 to 60 Seconds	91
	Figure 8's	1	4-5	20 to 60 Seconds	91
	Racing T	1	4-5	20 to 60 Seconds	91
	Down and Back Agility Drill	1	4-5	20 to 60 Seconds	91
	T Short Agility Drill	1	4-5	20 to 60 Seconds	91
	Square Carioca Agility Drill	1	4-5	20 to 60 Seconds	92
	Square Fwd Agility Drill	1	4-5	20 to 60 Seconds	92

Lifting					
Lifting					106-111

Isometric Block Monday- Sample Training Day

Block 1						
Lower Body Warm-up						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
Block 2						
Lower Body Strength						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	3	x	6	85-87.5%	3 Second Isometric-Partner Help Up
B	Hurdle Hop	3	x	5		Pull Down
C	1/2 Squat Weighted Jump	3	x	4		Pause at Bottom
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3						
Upper Body Warm-up						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
Block 4						
Upper Body Strength						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	4	85-87.5%	3 Second Isometric-Partner Help Up
B	Speed Band Bench Press	3	x	4	35-40%	Pause at Bottom for 2 Sec-Up Fast
C	DB Incline Bench	3	x	4	35-40%	Reactive-Speed
D	Clap Push Up	3	x	4	BW	Reactive
E	Jobes	3	x	6	Moderate	4 second Eccentric
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5						
Upper/Lower Auxiliary						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar Lift	3	x	6	85-87.5%	3 Second Isometric
B	Face Band Pulls	3	x	8	BAND	
C	1-Arm Lat. Pulldown	3	x	10	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6		<u>Upper/Lower Auxiliary</u>				
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	
C	DB Bent Over Row	3	x	8	85-87.5%	3 Second Isometric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7		<u>Upper/Lower Auxiliary</u>				
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	DB Psoas	3	x	6	85-87.5%	
C	Bar Curl	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8		<u>Upper Body Auxiliary</u>				
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	EZ Tricep Extension	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	SL Calf Raises	3	x	6	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Isometric Block Wednesday- Sample Training Day

Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
Block 2	<u>Lower Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	5	x	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	x	4 Reps		
C	Antib Band	5	x	5 Reps		Rest 2 minutes at the end of each set
Perform A-D Simultaneously for 3 Sets; Complete 4th Set of A only						
25 seconds Rest Between Exercises						
Block 3	<u>Upper Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
Block 4	<u>Upper Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	3	90-95%	No Tempo
B	Med Ball Chest Pass	3	x	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	3	x	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar	3	x	5	90-95%	
B	DB Step Up	3	x	5	90-95%	Bottom Half
C	Hip Flexor Prone	3	x	8	BW	Knee On Bench
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	90-95%	OC-D
B	Cuban Press Fig 8	3	x	8	Light	
C	Pull Up	3	x	7	BW	Partner Pull
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Abduction	3	x	8	BW	
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 8	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Tri Push Down	3	x	5	90-95%	
B	DB Hammer Curls	3	x	5	90-95%	
C	Blackburn	3	x	T		3 Second Holds
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Isometric Block Friday- Sample Training Day

Block 1	<u>Lower Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Front Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 2 Sets						
2: Minutes Rest Between Exercises						
Block 2	<u>Lower Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Front Squat	3	x	8	80-85%	3 Second Isometric-Partner Help Up
B	Hurdle Hop	3	x	5		Pull Down
C	1/2 Squat Weighted Jump	3	x	4		Pause at Bottom
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	<u>Upper Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 2 Sets						
2 Minutes Rest between Sets of Bench						
Block 4	<u>Upper Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	8	80-85%	3 Second Isometric-Partner Help Up
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4		Reactive
E	Jobes	3	x	6		4 Second Isometric
F	Antib Band	3	x	10		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar Lift	3	x	8	80-85%	3 Second Isometric
B	Face Band Pulls	3	x	12	Band	
C	1-Arm Lat. Pulldown	3	x	10	80-85%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Hyper	3	x	10	BW	
B	Bench Adduction	3	x	10	BW	
C	DB Bent Over Row	3	x	8	80-85%	3 Second Isometric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	3	x	10	80-85%	Bottom Half
B	Hip Flexor Isometric Prone	3	x	6	80-85%	
C	Zottman Curl	3	x	10	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Tri Ext	3	x	8	80-85%	
B	Bench Abduction	3	x	8	80-85%	
C	SL Calf Raises	3	x	10		
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 12 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

No Changes, Refer to Week 10

Slow Run/Preparation Drills

No Changes, Refer to Week 7

Speed

Refer to Week 7

Agility

No Changes, Refer to Week 10

Training Progression Week 13					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	as directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Ankle Rocker One Speed Development	15	2 -3	10 - 20 Seconds	90
	Ankle Rocker three Speed Development	15	2 -3	10 - 20 Seconds	90
	Ankle Rocker Two Speed Development	15	2 -3	10 - 20 Seconds	90

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Lateral High Knees Hands Up Speed Development	10 meters	3-5 Reps / 1 Set	20 - 40 Seconds	70
	Captain Morgan Speed Drill	30 meters	2-3 Reps / 1 Set	20 - 40 Seconds	70
Speed					
Speed	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Flying 20	3-4 Reps	1 Set	30 to 90 Seconds	61
	Block 20	3-4 Reps	1 Set	30 to 60 Seconds	79
Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Running Squares	1	4-5	20 to 60 Seconds	90
	Running Circles	1	4-5	20 to 60 Seconds	90
	Large Circles	1	4-5	20 to 60 Seconds	91
	Figure 8's	1	4-5	20 to 60 Seconds	91
	Racing T	1	4-5	20 to 60 Seconds	91
	Down and Back Agility Drill	1	4-5	20 to 60 Seconds	91
	T Short Agility Drill	1	4-5	20 to 60 Seconds	91
	Square Carioca Agility Drill	1	4-5	20 to 60 Seconds	92
	Square Fwd Agility Drill	1	4-5	20 to 60 Seconds	92

Lifting					
Lifting					116-121

Isometric Block Monday- Sample Training Day

Block 1	<u>Lower Body Warm-up</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Back Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
Block 2	<u>Lower Body Strength</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Back Squat	3	x	6	85-87.5%	3 Second Isometric-Partner Help Up
B	Hurdle Hop	3	x	5		Pull Down
C	1/2 Squat Weighted Jump	3	x	4		Pause at Bottom
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	<u>Upper Body Warm-up</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
Block 4	<u>Upper Body Strength</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	4	85-87.5%	3 Second Isometric-Partner Help Up
B	Speed Band Bench Press	3	x	4	35-40%	Pause at Bottom for 2 Sec-Up Fast
C	DB Incline Bench	3	x	4	35-40%	Reactive-Speed
D	Clap Push Up	3	x	4	BW	Reactive
E	Jobes	3	x	6	Moderate	4 second Eccentric
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar Lift	3	x	6	85-87.5%	3 Second Isometric
B	Face Band Pulls	3	x	8	BAND	
C	1-Arm Lat. Pulldown	3	x	10	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	
C	DB Bent Over Row	3	x	8	85-87.5%	3 Second Isometric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	DB Psoas	3	x	6	85-87.5%	
C	Bar Curl	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	EZ Tricep Extension	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	SL Calf Raises	3	x	6	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Isometric Block Wednesday- Sample Training Day

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
Block 2	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	5	x	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	x	4 Reps		
C	Antib Band	5	x	5 Reps		Rest 2 minutes at the end of each set
Perform A-D Simultaneously for 3 Sets; Complete 4th Set of A only						
25 seconds Rest Between Exercises						
Block 3	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
Block 4	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	x	3	90-95%	No Tempo
B	Med Ball Chest Pass	3	x	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	3	x	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar	3	x	5	90-95%	
B	DB Step Up	3	x	5	90-95%	Bottom Half
C	Hip Flexor Prone	3	x	8	BW	Knee On Bench
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	90-95%	OC-D
B	Cuban Press Fig 8	3	x	8	Light	
C	Pull Up	3	x	7	BW	Partner Pull
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Abduction	3	x	8	BW	
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 8	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Tri Push Down	3	x	5	90-95%	
B	DB Hammer Curls	3	x	5	90-95%	
C	Blackburn	3	x	T		3 Second Holds
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Isometric Block Friday- Sample Training Day

Block 1	<u>Lower Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Front Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 2 Sets						
2: Minutes Rest Between Exercises						
Block 2	<u>Lower Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Front Squat	3	x	8	80-85%	3 Second Isometric-Partner Help Up
B	Hurdle Hop	3	x	5		Pull Down
C	1/2 Squat Weighted Jump	3	x	4		Pause at Bottom
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	<u>Upper Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 2 Sets						
2 Minutes Rest between Sets of Bench						
Block 4	<u>Upper Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	8	80-85%	3 Second Isometric-Partner Help Up
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4		Reactive
E	Jobes	3	x	6		4 Second Isometric
F	Antib Band	3	x	10		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar Lift	3	x	8	80-85%	3 Second Isometric
B	Face Band Pulls	3	x	12	Band	
C	1-Arm Lat. Pulldown	3	x	10	80-85%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Hyper	3	x	10	BW	
B	Bench Adduction	3	x	10	BW	
C	DB Bent Over Row	3	x	8	80-85%	3 Second Isometric
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	3	x	10	80-85%	Bottom Half
B	Hip Flexor Isometric Prone	3	x	6	80-85%	
C	Zottman Curl	3	x	10	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Tri Ext	3	x	8	80-85%	
B	Bench Abduction	3	x	8	80-85%	
C	SL Calf Raises	3	x	10		
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 13 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

No Changes, Refer to Week 10

Slow Run/Preparation Drills

No Changes, Refer to Week 7

Speed

[Flying 20's](#)

Refer to Week 6

[Block 20's](#)

Refer to Week 8

Agility

No Changes, Refer to Week 10

Training Progression Week 14					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	as directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	Trap Bar Ankle Rocker One Speed Development	15	2 -3	10 - 20 Seconds	131
	Trap Bar Ankle Rocker three Speed Development	15	2 -3	10 - 20 Seconds	131
	Trap Bar Ankle Rocker Two Speed Development	15	2 -3	10 - 20 Seconds	131
	Drop Jumps	6	2-3	20 - 40 Seconds	131

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Lateral High Knees Hands Up Speed Development	10 meters	3-5 Reps / 1 Set	20 - 40 Seconds	70
	Captain Morgan Speed Drill	30 meters	2-3 Reps / 1 Set	20 - 40 Seconds	70
Speed					
Speed	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Flying 10	3-5 Reps	1 Set	No Rest	12
	Block 30	2-3 Reps	1 Set	No Rest	102
Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Running Squares	1	4-5	20 to 60 Seconds	90
	Running Circles	1	4-5	20 to 60 Seconds	90
	Large Circles	1	4-5	20 to 60 Seconds	91
	Figure 8's	1	4-5	20 to 60 Seconds	91
	Racing T	1	4-5	20 to 60 Seconds	91
	Down and Back Agility Drill	1	4-5	20 to 60 Seconds	91
	T Short Agility Drill	1	4-5	20 to 60 Seconds	91
	Square Carioca Agility Drill	1	4-5	20 to 60 Seconds	92
	Square Fwd Agility Drill	1	4-5	20 to 60 Seconds	92
Lifting					
Lifting					125-131

Concentric Block Monday- Sample Training Day

Block 1	<u>Lower Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
Block 2	<u>Lower Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	3	x	5	85-87.5%	No Tempo
B	Hurdle Hop	3	x	4		Distance
C	1/2 Squat Weighted Jump	3	x	4		Reactive
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	<u>Upper Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
Block 4	<u>Upper Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	5	85-87.5%	No Tempo
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4	BW	Reactive
E	Jobes	3	x	6	Moderate	4 second Eccentric
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar	3	x	7	85-87.5%	
B	Face Band Pulls	3	x	8	BAND	
C	1-Arm Lat. Pulldown	3	x	10	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	
C	DB Bent Over Row	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	DB Psoas	3	x	6	BW	
C	Bar Curl	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	EZ Tricep Extension	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	SL Calf Raises	3	x	6	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Concentric Block Wednesday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	5	x	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	x	4 Reps		
C	Antib Band	5	x	5 Reps		Rest 2 minutes at the end of each set
Perform A-D Simultaneously for 4 Sets; Complete 5th Set of A only						
25 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	x	3	90-95%	No Tempo
B	Med Ball Chest Pass	3	x	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	3	x	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar	3	x	4	90-95%	
B	DB Step Up	3	x	5	90-95%	
C	Hip Flexor Prone	3	x	8	BW	Knee On Bench
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	Upper/Lower Auxiliary					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	90-95%	Bottom Half
B	Cuban Press Fig 8	3	x	8	Light	
C	Pull Up	3	x	7	90-95%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 7	Upper/Lower Auxiliary					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Abduction	3	x	8	BW	
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 8	Upper/Lower Auxiliary					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Tri Push Down	3	x	5	90-95%	
B	DB Hammer Curls	3	x	5	90-95%	
C	Blackburn	3	x	5	90-95%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Concentric Block Friday- Sample Training Day

Block 1	<u>Lower Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Front Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
Block 2	<u>Lower Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Front Squat	3	x	7	80-85%	No Tempo
B	Hurdle Hop	3	x	4		Distance
C	1/2 Squat Weighted Jump	3	x	4		Reactive
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	<u>Upper Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
Block 4	<u>Upper Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	7	80-85%	No Tempo
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4	BW	Reactive
E	Jobes	3	x	6		
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar	3	x	7	80-85%	
B	Face Band Pulls	3	x	12	Band	
C	1-Arm Lat. Pulldown	3	x	10	80-85%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

<u>Block 6</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Hyper	3	x	10	BW	
B	Bench Adduction	3	x	10	BW	
C	DB Bent Over Row	3	x	8	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 7</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	3	x	10	80-85%	Bottom Half
B	DB Psoas	3	x	6	BW	
C	Zottman Curl	3	x	10	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 8</u>	<u>Upper Body Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Tri Ext	3	x	8	80-85%	
B	Bench Abduction	3	x	8	80-85%	
C	SL Calf Raises	3	x	10		Use with Knee Bend
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 14 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

[Ankle Rocker One Speed Development Jump #1-](#) (Trap bar)

A trap bar has now been added for increased difficulty. The athlete drops in without movement from their hips, pauses, and jumps.

[Ankle Rocker Two Speed Development Jump #2-](#) (Trap Bar)

Once again the trap bar has been added, the athlete will start as above but when their ankles don't bend anymore, have them push their hips back until their spine and shins are in a parallel position. Hold for a count and jump as high as possible.

[Ankle Rocker Three Speed Development Jump#3-](#) (Trap Bar)

This is more of a range of motion movement. The athlete will turn their foot out and push the shin forward and turn the foot in and push the shin forward, improving range of motion in multiple planes.

[Drop jumps](#)

From a 6 inch short box, drop off allow the ankles knees and hips to absorb the force of the drop and then explode. This Can be Done on to box or without. Complete 2 or 3 Sets x 10 Reps.

Slow Run/Preparation Drills

No Changes, Refer to Week 7

Speed

[Flying 10's](#)

Refer to Week 1

[Block 30's](#)

Refer to Week 11

Agility

No Changes, Refer to Week 10

Training Progression Week 15					
Warm Up Options					
Warm Up Options	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	Aerobic Base Injury Prevention Runs	as directed		No Rest	12
Low Level Jumps (Option 2)					
	Jumping jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Split Jacks	20 to 40 Seconds	1 Sets	No Rest	12
	Lateral line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Front and back line hops	20 to 40 Seconds	1 Sets	No Rest	12
	Mountain climbers	20 to 40 Seconds	1 Sets	No Rest	12
	Burpees	20 to 40 Seconds	1 Sets	No Rest	12
	Star Jumps	20 to 40 Seconds	1 Sets	No Rest	12
	Squat and roll	20 to 40 Seconds	1 Sets	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168
Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Trap Bar Ankle Rocker One Speed Development	15	2 -3	10 - 20 Seconds	131
	Trap Bar Ankle Rocker three Speed Development	15	2 -3	10 - 20 Seconds	131
	Trap Bar Ankle Rocker Two Speed Development	15	2 -3	10 - 20 Seconds	131
	Drop Jumps	6	2-3	20 - 40 Seconds	131

Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Lateral High Knees Hands Up Speed Development	10 meters	3-5 Reps / 1 Set	20 - 40 Seconds	70
	Captain Morgan Speed Drill	30 meters	2-3 Reps / 1 Set	20 - 40 Seconds	70
Speed					
Speed	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Flying 30	3-5 Reps	1 Set	No Rest	140
	Block 10	2-3 Reps	1 Set	No Rest	61
Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Running Squares	1	4-5	20 to 60 Seconds	90
	Running Circles	1	4-5	20 to 60 Seconds	90
	Large Circles	1	4-5	20 to 60 Seconds	91
	Figure 8's	1	4-5	20 to 60 Seconds	91
	Racing T	1	4-5	20 to 60 Seconds	91
	Down and Back Agility Drill	1	4-5	20 to 60 Seconds	91
	T Short Agility Drill	1	4-5	20 to 60 Seconds	91
	Square Carioca Agility Drill	1	4-5	20 to 60 Seconds	92
	Square Fwd Agility Drill	1	4-5	20 to 60 Seconds	92
Lifting					
Lifting					134-139

Concentric Block Monday- Sample Training Day

Block 1	<u>Lower Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
Block 2	<u>Lower Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	3	x	5	85-87.5%	No Tempo
B	Hurdle Hop	3	x	4		Distance
C	1/2 Squat Weighted Jump	3	x	4		Reactive
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	<u>Upper Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
Block 4	<u>Upper Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	5	85-87.5%	No Tempo
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4	BW	Reactive
E	Jobes	3	x	6	Moderate	4 second Eccentric
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar	3	x	7	85-87.5%	
B	Face Band Pulls	3	x	8	BAND	
C	1-Arm Lat. Pulldown	3	x	10	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	
C	DB Bent Over Row	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	DB Psoas	3	x	6	BW	
C	Bar Curl	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	EZ Tricep Extension	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	SL Calf Raises	3	x	6	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Concentric Block Wednesday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	5	x	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	x	4 Reps		
C	Antib Band	5	x	5 Reps		Rest 2 minutes at the end of each set
Perform A-D Simultaneously for 4 Sets; Complete 5th Set of A only						
25 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	x	3	90-95%	No Tempo
B	Med Ball Chest Pass	3	x	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	3	x	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar	3	x	4	90-95%	
B	DB Step Up	3	x	5	90-95%	
C	Hip Flexor Prone	3	x	8	BW	Knee On Bench
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

<u>Block 6</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	3	x	10	90-95%	Bottom Half
B	Cuban Press Fig 8	3	x	8	Light	
C	Pull Up	3	x	7	90-95%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
<u>Block 7</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Abduction	3	x	8	BW	
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
<u>Block 8</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Tri Push Down	3	x	5	90-95%	
B	DB Hammer Curls	3	x	5	90-95%	
C	Blackburn	3	x	5	90-95%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Concentric Block Friday- Sample Training Day

Block 1	<u>Lower Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Front Squat	1,1,1	x	5,3,3	50-80%	
B1	External Band Rotation	3	x	6ea		
B2	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
2: Minutes Rest Between Exercises						
Block 2	<u>Lower Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Front Squat	3	x	7	80-85%	No Tempo
B	Hurdle Hop	3	x	4		Distance
C	1/2 Squat Weighted Jump	3	x	4		Reactive
D	15 yard starts	3	x	1		
E	Wrist Curl	3	x	8		
F	4 Way Neck	3	x	4		2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	<u>Upper Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
Block 4	<u>Upper Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	7	80-85%	No Tempo
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4	BW	Reactive
E	Jobes	3	x	6		
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar	3	x	7	80-85%	
B	Face Band Pulls	3	x	12	Band	
C	1-Arm Lat. Pulldown	3	x	10	80-85%	Bottom Half
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	10	BW	
B	Bench Adduction	3	x	10	BW	
C	DB Bent Over Row	3	x	8	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	80-85%	Bottom Half
B	DB Psoas	3	x	6	BW	
C	Zottman Curl	3	x	10	80-85%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Tri Ext	3	x	8	80-85%	
B	Bench Abduction	3	x	8	80-85%	
C	SL Calf Raises	3	x	10		Use with Knee Bend
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 15 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

No Changes, Refer to Week 14.

Slow Run/Preparation Drills

No Changes, Refer to Week 7

Speed

[Flying 30's](#)

Refer to Week 1

[Block 10's](#)

Refer to Week 6

Agility

No Changes, Refer to Week 10

Training Progression Week 16

Warm Up Options					
Warm Up Options	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	<u>Aerobic Base Injury Prevention Runs</u>	as directed		No Rest	12
Low Level Jumps (Option 2)					
	<u>Jumping jacks</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Split Jacks</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Lateral line hops</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Front and back line hops</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Mountain climbers</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Burpees</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Star Jumps</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Squat and roll</u>	20 to 40 Seconds	1 Set	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168

Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	<u>Trap Bar Ankle Rocker One Speed Development</u>	15	2 -3	10 - 20 Seconds	131
	<u>Trap Bar Ankle Rocker three Speed Development</u>	15	2 -3	10 - 20 Seconds	131
	<u>Trap Bar Ankle Rocker Two Speed Development</u>	15	2 -3	10 - 20 Seconds	131
	<u>Drop Jumps</u>	6	2-3	20 - 40 Seconds	131
Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	<u>Lateral High Knees Hands Up Speed Development</u>	10 meters	3-5 Reps / 1 Set	20 - 40 Seconds	70
	<u>Captain Morgan Speed Drill</u>	30 meters	2-3 Reps / 1 Set	20 - 40 Seconds	70
Speed					
Speed	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	<u>Flying 10</u>	3-4	1 Set	30 to 60 Seconds	12
	<u>Block 30</u>	3-4	1 Set	30 to 60 Seconds	102

Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Single leg quadrant jump	30 Seconds	2 (1 Clock, and 1 Counter-clockwise)	No Rest	70
Lifting					
Lifting					144-149

Below 80% Block Monday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	1,1,1	X	5,3,3	50-80%	
B	TKE	3	X	6ea	Band	
Perform A & B Series Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	4	X	5	55-62%	Reactive
B	Hurdle Hop	4	X	4		Distance
C	1/2 Squat Weighted Jump	4	X	4		Reactive
D	15 yard starts	4	X	15 yd		
E	Wrist Curl	4	X	10		Reactive
F	4 Way Neck	4	X	4		Rest 2 min at the end of each set
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	
B	External Rot.	2	X	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	5	55-62%	Reactive
B	Speed Band Bench Press	3	X	4	35-40%	Reactive
C	DB Incline Bench	3	X	4	35-40%	Reactive
D	Clap Push Up	3	X	4	BW	Reactive
E	Jobs	3	X	8		
F	Antib Band	3	X	8	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar Lift	3	X	5	55-62%	Don't Hit Ground
B	OH Reb Delt Drop	3	X	8	Band	
C	DB Bent Over Row	3	X	10	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	6	Light	Reactive
B	Bench Abduction	3	x	12	BW	OC-Disadvantage- +1 Full Rep
C	Hip Flexor Prone OC	3	x	12		OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	55-62%	OC-Disadvantage- +1 Full Rep
B	Bench Abduction	3	x	12	BW	OC-Disadvantage- +1 Full Rep
C	Bar Curl	3	x	7	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Tri Band Push Down Pro Sup	3	x	7	55-62%	
B	Chin Up	3	x	8	55-62%	Bottom Half
C	Delt BO Lat Drop	3	x	8	Light	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Below 80% Block Wednesday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Hex Deadlift	1,1,1	X	5,3,3	50-80%	
B	TKE	2	X	6ea		
Perform A & B Series Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Hex Deadlift	4	X	4	72-80%	Reactive
B	Depth Drop Box Jump	4	X	4		
C	Antib Band	4	X	8		Rest 2 min between sets
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	
B	External Rot.	2	X	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	4	X	4	72-80%	No Tempo
B	Med Ball Chest Pass	4	X	5	Moderate	Quick Hip
C	Delt BO Lat Drop	4	X	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Bar Lift	3	X	6	72-80%	
B	Face Band Pulls	3	X	8	Band	
C	1-Arm DB Row	3	X	6	72-80%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	6	BW	
B	OC Swiss Ball Groin Squeeze	3	x	10	Ball	OC-Disadvantage
C	Bench Abduction	3	x	6	BW	OC-Disadvantage
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	8	72-80%	OC-Disadvantage- +1 Full Rep
B	Hip Flexor Band Pulls	3	x	6	Band	
C	Ez Bar Curl	3	x	8	72-80%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8		<u>Upper Body Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Tri Push Down	3	x	8	72-80%	
B	Pull Up	3	x	6	72-80%	Bottom Half
C	Calf Raises	3	x	8	72-80%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Below 80% Block Friday- Sample Training Day

Block 1						
Lower Body Warm-up						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Sport Back Squat	1,1,1	X	5,3,3	50-80%	
B	TKE	3	X	6ea	Band	
Perform A & B Series Simultaneously for 3 Sets						
No Rest Between Exercises						
Block 2						
Lower Body Strength						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Sport Back Squat	4	X	7	55-62%	Reactive
B	Hurdle Hop	4	X	4		Distance
C	1/2 Squat Weighted Jump	4	X	4		Reactive
D	15 yard starts	4	X	15 yd		
E	Wrist Ulnar	4	X	10		Reactive
F	4 Way Neck	4	X	4		Rest 2 min at the end of each set
Perform A-D Simultaneously for 4 Sets						
15 seconds Rest Between Exercises						
Block 3						
Upper Body Warm-up						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	
B	External Rot.	2	x	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
Block 4						
Upper Body Strength						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	7	55-62%	Reactive
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4	BW	Reactive
E	Cuban Press ext. rot. Band OC	3	x	10		OC-Disadvantage- +1 Full Rep
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5						
Upper/Lower Auxiliary						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar Lift	3	x	7	55-62%	Don't Hit Ground
B	OH Reb Delt Drop	3	x	15	Band	Reactive
C	DB Bent Over Row	3	x	7	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Hyper	3	x	7	Light	Reactive
B	Bench Adduction	3	x	15	BW	OC-Disadvantage- +1 Full Rep
C	Hip Flexor Prone OC	3	x	15		OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	3	x	8	55-62%	
B	Bench Abduction	3	x	15	BW	OC-Disadvantage- +1 Full Rep
C	Bar Curl	3	x	10	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8		<u>Upper Body Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Tri Band Push Down Pro Sup	3	x	8	55-62%	Reactive
B	Chin Up	3	x	10	55-62%	Bottom Half
C	Delt BO Lat Drop	3	x	8	55-62%	Reactive
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 16 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

No Changes, Refer to Week 14.

Slow Run/Preparation Drills

No Changes, Refer to Week 7

Speed

[Flying 10's](#)

Refer to Week 1

[Block 30's](#)

Refer to Week 11

Agility

Refer to Week 7

Training Progression Week 17

Warm Up Options					
Warm Up Options	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
GPP Warm Up (Option 1)					
	<u>Aerobic Base Injury Prevention Runs</u>	as directed		No Rest	12
Low Level Jumps (Option 2)					
	<u>Jumping jacks</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Split Jacks</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Lateral line hops</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Front and back line hops</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Mountain climbers</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Burpees</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Star Jumps</u>	20 to 40 Seconds	1 Set	No Rest	12
	<u>Squat and roll</u>	20 to 40 Seconds	1 Set	No Rest	12
Other Options					
	Other Available Warm-Ups				162-168

Ankle Rocker					
Ankle Rocker	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	<u>Trap Bar Ankle Rocker One Speed Development</u>	15	2 -3	10 - 20 Seconds	131
	<u>Trap Bar Ankle Rocker three Speed Development</u>	15	2 -3	10 - 20 Seconds	131
	<u>Trap Bar Ankle Rocker Two Speed Development</u>	15	2 -3	10 - 20 Seconds	131
	<u>Drop Jumps</u>	6	2-3	20 - 40 Seconds	131
Slow Run/Preparation Drills					
Slow Run/Preparation Drills	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	<u>Lateral High Knees Hands Up Speed Development</u>	10 meters	3-5 Reps / Set 1	20 - 40 Seconds	70
	<u>Captain Morgan Speed Drill</u>	30 meters	2-3 Reps / Set 1	20 - 40 Seconds	70
Speed					
Speed	Drill	Repetitions/Durati on	Sets	Rest Time	Page Number
	<u>Flying 30</u>	3-4	1 Set	20 to 60 Seconds	140
	<u>Block 10</u>	3-4	1 Set	20 to 60 Seconds	61

Agility					
Agility	Drill	Repetitions/Duration	Sets	Rest Time	Page Number
	Single leg quadrant jump	30 Seconds	2 (1 Clock, and 1 Counter-clockwise)	20 to 30 Seconds	70
Lifting					
Lifting					154-159

Below 80% Block Monday- Sample Training Day

<u>Block 1</u>	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	1,1,1	X	5,3,3	50-80%	
B	TKE	3	X	6ea	Band	
Perform A & B Series Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 2</u>	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	4	X	5	55-62%	Reactive
B	Hurdle Hop	4	X	4		Distance
C	1/2 Squat Weighted Jump	4	X	4		Reactive
D	15 yard starts	4	X	15 yd		
E	Wrist Curl	4	X	10		Reactive
F	4 Way Neck	4	X	4		Rest 2 min at the end of each set
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	X	5,3,3	50-80%	
B	External Rot.	2	X	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 4</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	X	5	55-62%	Reactive
B	Speed Band Bench Press	3	X	4	35-40%	Reactive
C	DB Incline Bench	3	X	4	35-40%	Reactive
D	Clap Push Up	3	X	4	BW	Reactive
E	Jobs	3	X	8		
F	Antib Band	3	X	8	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar Lift	3	X	5	55-62%	Don't Hit Ground
B	OH Reb Delt Drop	3	X	8	Band	
C	DB Bent Over Row	3	X	10	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	6	Light	Reactive
B	Bench Abduction	3	x	12	BW	OC-Disadvantage- +1 Full Rep
C	Hip Flexor Prone OC	3	x	12		OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	55-62%	OC-Disadvantage- +1 Full Rep
B	Bench Abduction	3	x	12	BW	OC-Disadvantage- +1 Full Rep
C	Bar Curl	3	x	7	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Tri Band Push Down Pro Sup	3	x	7	55-62%	
B	Chin Up	3	x	8	55-62%	Bottom Half
C	Delt BO Lat Drop	3	x	8	Light	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Below 80% Block Wednesday- Sample Training Day

Block 1	Lower Body Warm-up					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Hex Deadlift	1,1,1	X	5,3,3	50-80%	
B	TKE	2	X	6ea		
Perform A & B Series Simultaneously for 2 Sets						
No Rest Between Exercises						
Block 2	Lower Body Strength					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Hex Deadlift	4	X	4	72-80%	Reactive
B	Depth Drop Box Jump	4	X	4		
C	Antib Band	4	X	8		Rest 2 min between sets
Perform A-D Simultaneously for 3 Sets						
15 seconds Rest Between Exercises						
Block 3	Upper Body Warm-up					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	X	5,3,3	50-80%	
B	External Rot.	2	X	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
Block 4	Upper Body Strength					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	4	X	4	72-80%	No Tempo
B	Med Ball Chest Pass	4	X	5	Moderate	Quick Hip
C	Delt BO Lat Drop	4	X	7	Light	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	Upper/Lower Auxiliary					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Bar Lift	3	X	6	72-80%	
B	Face Band Pulls	3	X	8	Band	
C	1-Arm DB Row	3	X	6	72-80%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	6	BW	
B	OC Swiss Ball Groin Squeeze	3	x	10	Ball	OC-Disadvantage
C	Bench Abduction	3	x	6	BW	OC-Disadvantage
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	8	72-80%	OC-Disadvantage- +1 Full Rep
B	Hip Flexor Band Pulls	3	x	6	Band	
C	Ez Bar Curl	3	x	8	72-80%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8	<u>Upper Body Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Tri Push Down	3	x	8	72-80%	
B	Pull Up	3	x	6	72-80%	Bottom Half
C	Calf Raises	3	x	8	72-80%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Below 80% Block Friday- Sample Training Day

Block 1						
Lower Body Warm-up						
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	1,1,1	X	5,3,3	50-80%	
B	TKE	3	X	6ea	Band	
Perform A & B Series Simultaneously for 3 Sets						
No Rest Between Exercises						
Block 2						
Lower Body Strength						
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Sport Back Squat	4	X	7	55-62%	Reactive
B	Hurdle Hop	4	X	4		Distance
C	1/2 Squat Weighted Jump	4	X	4		Reactive
D	15 yard starts	4	X	15 yd		
E	Wrist Ulnar	4	X	10		Reactive
F	4 Way Neck	4	X	4		Rest 2 min at the end of each set
Perform A-D Simultaneously for 4 Sets						
15 seconds Rest Between Exercises						
Block 3						
Upper Body Warm-up						
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	
B	External Rot.	2	x	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
Block 4						
Upper Body Strength						
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	3	x	7	55-62%	Reactive
B	Speed Band Bench Press	3	x	4	35-40%	Reactive
C	DB Incline Bench	3	x	4	35-40%	Reactive
D	Clap Push Up	3	x	4	BW	Reactive
E	Cuban Press ext. rot. Band OC	3	x	10		OC-Disadvantage- +1 Full Rep
F	Antib Band	3	x	10	Band	2:00 Minutes Rest Before Starting Back at A
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5						
Upper/Lower Auxiliary						
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar Lift	3	x	7	55-62%	Don't Hit Ground
B	OH Reb Delt Drop	3	x	15	Band	Reactive
C	DB Bent Over Row	3	x	7	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Block 6		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Hyper	3	x	7	Light	Reactive
B	Bench Adduction	3	x	15	BW	OC-Disadvantage- +1 Full Rep
C	Hip Flexor Prone OC	3	x	15		OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 7		<u>Upper/Lower Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	3	x	8	55-62%	
B	Bench Abduction	3	x	15	BW	OC-Disadvantage- +1 Full Rep
C	Bar Curl	3	x	10	55-62%	OC-Disadvantage- +1 Full Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 8		<u>Upper Body Auxiliary</u>				
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Tri Band Push Down Pro Sup	3	x	8	55-62%	Reactive
B	Chin Up	3	x	10	55-62%	Bottom Half
C	Delt BO Lat Drop	3	x	8	55-62%	Reactive
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Week 17 Exercise Progressions

Warm-Up Options

No Changes, Refer to Week 1

Ankle Rocker Drills

No Changes, Refer to Week 14.

Slow Run/Preparation Drills

No Changes, Refer to Week 7

Speed

[Flying 30's](#)

Refer to Week 15

[Block 10's](#)

Refer to Week 6

Agility

Refer to Week 7

Week 18 Testing

[This link provides many examples and testing tool possibilities](#)

The Active Warm up

The Start

The purpose of a dynamic warm-up is to get your body moving in ways comparable with the demands of your specific sport. While your body gets moving, the temperature inside your body and muscles is elevated and the heart begins to pump more blood throughout the body.

The Further

Dynamic jogging is used first in the dynamic warm-up process to increase blood flow. This is followed by dynamic walking movements. Dynamic warm-up movements are then completed to wrap up the warm-up.

How for the process is broken down

The warm-up periods are broken down into different phases that coincide with the purpose of our training blocks. Our goal with warm-ups is to try to use that time to improve on a specific aspect of training. We are going to kill two birds with one stone. They will begin every workout and should last anywhere from 4 minutes to 20 minutes depending on where the team is in the progression. The goal for early weeks in the program is to build an aerobic base, Once we have established that base after 4-6 weeks, we will move on to general agility work and progress into sport specific movement patterns as the season nears.

The Where

You can complete your dynamic warm-up in any space. The dynamic warm-up can be completed in small locker room, hallways, weight rooms, and even stadiums.
Side note - Complete the dynamic warm-ups with no shoes on. This will help your balance and kinesthetic awareness, which will aid in injury prevention.

The Length

The duration of your warm up should be between 4 and 20 minutes in duration and should include all types of movements. Examples of these are shown below and range from jogging, walking, standing, and other movements.

Dynamic jogging - The dynamic jogging part of your warm-up should be a continuous activity. Some coaches will go down and back, which is fine and works well if they have appropriate space at their disposal. However if you have, for example, a long hallway, a coach can put two cones down the hallway. The athletes will then perform the dynamic jogging around the cones in a continuous fashion while they complete the dynamic exercises I call out. Be sure both sides are completed for lateral movements such as shuffling and carioca.

The following are examples of jogging dynamic warm-ups

<u>JOGGING FORWARD</u> <u>JOGGING BACKWARD</u> <u>CARIOCA LEFT</u> <u>CARIOCA RIGHT</u> <u>SKIPPING (FWD)</u> <u>SKIPPING (BWD)</u> <u>JOG W\ CROSSOVER STEP (FWD)</u> <u>CHERRY PICKERS</u> <u>SHUFFLE (X-ARM SWING) RT</u> <u>JOGGING BACKWARD THROW</u> <u>PUNCHES</u> <u>High Knee Carioca</u> <u>JOGGING FORWARD ARM CIRCLE</u> <u>GALLOP RT LEG FORWARD</u> <u>GALLOP LT LEG FORWARD</u> <u>JOG W\ HIGH KNEES (FWD)</u>	<u>GALLOP RT LEG BACKWARD</u> <u>GALLOP LT LEG BACKWARD</u> <u>JOGGING FORWARD</u> Toes Pointed In <u>SKIP W\ FLARED KNEES (BWD)</u> <u>JOG HI KNEE X-OVER (FWD)</u> <u>LATERAL STRAIGHT LEG SKIPS LT</u> <u>CARIOCA QUICK STEP</u> <u>Jogging FORWARD</u> Toes Pointed Out <u>SKIP W\ STAIGHT LEGS FWD</u> <u>SKIP W\ KICK (FWD)</u> <u>Jogging Backwards</u> Toes Pointed In <u>FOOT FIRE</u> <u>JOGGING Backward</u> Toes Pointed Out <u>C SERIES RT</u> <u>C SERIES LT</u>
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Dynamic walking - the dynamic walking warm-up will progress to larger, slower movements. These movements provide increased mobility training for your athletes and will further assist in injury prevention.

Dynamic movements - after the walking dynamic warm-up, dynamic movements will be added to finish the warm-up process. These dynamic movements will progress to various joint specific and injury prevention movements that can be used for an entire body warm-up. This aspect of the warm-up may be done lying on the ground, sitting and standing.

The following are examples are for dynamic warm-up movements

<u>5 PNF Both Legs Inside & Outside</u> <u>WALKING BAREFEET</u> <u>5 PNF Leg Flares</u> <u>Walking on inside of feet</u> <u>Standing Arm Circle Side-</u> <u>WALKING FORWARD ON OUTSIDE OF FEET</u> <u>STANDING ARM CIRCLES FRONT</u> <u>WALKING FORWARD ON TOES</u> <u>STANDING ARM CIRCLES OVER HEAD</u> <u>WALKING BACKWARD ON INSIDE OF FEET</u> <u>PUSH AWAY</u> <u>WALKING BACKWARD ON OUTSIDE OF FEET</u> <u>TRUNK TWISTS REINDEER</u> <u>WALKING BACKWARD ON TOES</u> <u>NECK ROLLS</u> <u>FRANKS</u>	<u>LATERAL CROSSOVERLUNGE</u> <u>FIGHTER SHOULDER ROLLS</u> <u>Spiderman Crawl</u> <u>Toe to Mouth Supine</u> <u>Lying Leg Twist</u> <u>Bent Leg Hip Rotation</u> <u>DNS Get Up</u> <u>Hurdler Twist Both Legs In</u> <u>Quadruped Shifts</u> <u>Baby Crawling Stage One</u> <u>Baby Crawling Stage Two</u> <u>Elbow to Instep with T-spine</u> <u>Rotation</u> <u>Bent Over Interlocked Arm Circles</u> <u>Interlocked Front Arm Circles</u> <u>Interlocked Over Head Arm Circles</u>
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[NECK SLIDES - FORWARD & BACKWARD](#)
[WALKING BEND ANKLE GRAB](#)
[HOOR GLASS](#)
[HIGH KNEE PULLS WITH F8 SHAKE](#)
[SHOULDER SLIDES LATERAL](#)
[FIGURE 4 SIT WALKS](#)
[MESSIER SQUATS](#)
[Walking Lunge](#)
[ANKLE ROLLS](#)
[KNEE ROLLS 4 EACH WAY](#)
[Lateral Lunge W/ ANKLE TILTS](#)
[STRAIGHT LEG FIGURE 8 4 EACH](#)
[VISION SHIFT TRAINING HI & LOW](#)
[FORWARD CROSSOVER WALKING LUNGE WITH TWIST](#)
[LUMBAR ROLLS](#)
[Duck Walk](#)
[X-BEHIND](#)
[SHUFFLE W\ Drag Foot](#)
[NECK SLIDES](#)
[SHUFFLE W\ DRAG FOOT LT](#)
[CHEST SINKS](#)
[LATERAL SHIFTING](#)
[TRUNK ROLLS](#)
[WALKING BACKWARD REACHES](#)
[LEG SWINGS FOR-BACKWARD](#)
[STRAIGHT LEG TOE TOUCH WALK](#)
[Hip Swing](#)
[REVERSE FLARE LUNGE PALMS TO CEILING](#)
[SQUATTING INTERNAL ROTATION](#)
[FRANKENSTEIN WITH SKIP](#)
[TOE ROLLS](#)
[SINGLE LEG "T" RDL](#)
[REINDEER ELBOW CIRCLES](#)
[LATERAL CROSSOVER LUNGE](#)
[FIGHTER SHOULDER ROLLS](#)

[Thumb Look Aways to Right](#)
[Thumb Look Aways Left](#)
[Marching Slow](#)
[Gallop Forward](#)
[Carioca Quick Step](#)
[Cat Cow](#)
[Donkey Kick](#)
[Hip Circles](#)
[Quadraped Shifts](#)
[Quadraped Forward Leg Circles](#)
[Quadraped Backward Leg Circles](#)
[Quadraped Out Hip Lift](#)
[Laying Knee Ups fronts](#)
[Scorpion](#)
[Push Up Stretch](#)
[Push Up Stretch With Twist](#)
[Toe Pikes](#)
[Spread Eagle](#)
[Laying Knee Ups](#)
[Bent Leg Hip Rotation](#)
[Dynamic Butterfly](#)
[Knee To Chest and Roll](#)
[Laying Leg Over](#)
[Inverted Bike](#)
[Laying Up and Over](#)
[Inverted Leg Swings](#)
[Laying Straight Leg Kicks](#)
[Lying Leg Twist](#)
[Laying Leg Circles](#)
[Hurdler Twist](#)
[Hamstring Up and Over](#)
[Hurdler Twist Both Legs In](#)

Triphasic Aerobic Base Injury Prevention Runs

Our first 4 weeks are based on Triphasic Aerobic Base Injury Prevention Runs. This is a modified version due to lack of space but using similar movements. The field will be set up in a rectangle. The longer the distance the better. Athletes will begin by jogging around the rectangle. The coach will have them change movement patterns from jogging, to shuffles, to jogging, to carioca, to backwards running. The entire drill will be run at a jog pace. With all of the lateral movement, athletes will tire quickly. Start at a 4 minute run and work towards 10 minutes over the 8 week period of time. If space permits, use the entire football field. Use this once or twice a week.

Triphasic Training Metabolic Injury Prevention Running

By Matthew Van Dyke and Cal Dietz

Aerobic training lays the foundation upon which all other methods of training are built. If this base aerobic training is ignored, specific, high-intensity training cannot be supported in later training cycles because an athlete will not achieve maximal benefits from the high-intensity work. "Metabolic Injury Prevention Running" enhances an athlete's aerobic abilities, which is the main objective in the aerobic training cycle, while simultaneously working to reduce injuries to soft-tissue areas of the hip, groin, knee, and ankle. The reduction of injuries should be viewed as the primary goal of any coach and should be consistently and actively pursued. Metabolic injury prevention running focuses on both the reduction of injuries and training of the cardiovascular system, while keeping impact intensities minimal. Impact intensities can be kept relatively low in this aerobic training method due to the focus on movements that use the stabilizing muscles of the hip and groin area, such as shuffling and carioca. The activation and utilization of the stabilizer muscles leads to movement efficiency being reduced significantly when compared to running or sprinting in a straight line, while these commonly underused and injury prone muscles are strengthened and thus, less prone to injury. This method also can be used to prepare elite athletes for pre-season training camps or the competition season. The same movements are utilized as in the base endurance model, just at maximal intensities. This increased intensity further drives adaptations of the cardiovascular system while also continuing to reduce injury likelihood to the small, stabilizer muscles due to training muscle functioning and timing at high, game speed velocities. This high-intensity training prepares athletes with optimal conditioning levels and the increased ability to compete in their training camps.

Base Aerobic Training Aspects

Metabolic injury prevention running is used to drive extremely high levels of aerobic, cardiovascular fitness, which is the foundation upon which all other strength and conditioning abilities are built. This method of training allows for low-impact, high-intensity training by activating stabilizing muscles, particularly those of the hip and groin area. These stabilizer muscles are trained with the completion of non-typical running methods such as shuffling, carioca, and cross-over running. These methods of locomotion cause the body to work at a decreased level of efficiency which causes an elevation of the heart rate. It is important to note that the intensity will appear low at the start of this training piece as the athlete is moving at considerably lower speeds than when sprinting. The use of the commonly inactive and undertrained stabilizer muscles and movement patterns that cause the body to be less efficient than normal will lead to heart rate elevation to an aerobic training zone of 140-150 bpm. This heart rate elevation can be manipulated based on the needs of intensity. The intensity can range from as low as 110 bpm up to the lactate threshold of each individual athlete, which ensures that aerobic intensities are kept and trained. The intensity to reach this training zone

will typically fall between the 30 and 60% effort range for athletes. The low impact intensities allow this aerobic training method to be completed barefoot. This aerobic training method leads to an increase in work capacity which lays the foundation for future, high-intensity training that will be completed in later stages of the block periodization method.

Injury Resistance Aspects

The activation and then training of the stabilizing muscles of the hip and groin lead to increased functioning at higher levels of work, which reduce injury patterns. This is accomplished by training these underused and weak links of the kinetic chain in planes in which they are not typically trained. These stabilizing muscles are commonly the victims of soft-tissue injuries in the lower body simply because they are not strong enough to continue to support the increased strength of the primary movers. As a strength coach and an athlete, it is easy to train the primary movers, such as the glutes, quads, and hamstrings, due to their direct correlation with improved lower body strength and maximal speed. However, the mentality that “an athlete is only as strong as their weakest link” must be remembered at all times. If an athlete has the ability to squat an enormous amount of weight but has not taken the time to strengthen the stabilizing muscles, they will not be able to perform maximally and will deal with soft-tissue, stabilizer muscle injuries. These injuries, although minor in nature, will hinder their performance until the true issue is addressed. This issue is addressed head on with this metabolic injury prevention running method. The low impact intensities allow this aerobic training method to be completed barefoot. Training barefoot leads to increased strength in the plantar and dorsiflexors of the foot, while also strengthening the muscles of the lower leg. This develops and trains the foot to properly absorb impact and prevents shin splints and foot fractures. Barefoot training used in this lower-intensity training continues to contribute to injury prevention by improving strength levels in the commonly weak and underused muscles.

Game Speed Training (Possibly used in Agility Training Section)

As the competition phase approaches and specificity of exercise selection is high, metabolic injury prevention running can be used to peak athletes before the rigors of their long, demanding season. The stabilizer muscles of the hip, groin, knee, and ankle are continually improved through the same movement patterns as described above, but they are now completed at maximum intensities. These high intensities will drive extremely high levels of cardiovascular fitness, even higher levels of cardiovascular fitness than sprinting, when distance and intensity are compared, as the body is continuing to move using inefficient movements. This game speed training using the methods of metabolic injury prevention running can be implemented during the final four to five weeks prior to the start of camp or the season and can be individualized based on position to increase specificity. Adaptations from this high-intensity method can be seen in as little as two weeks if an athlete is properly trained throughout the rest of the off-season, meaning they have had adequate aerobic training, as well as high-intensity training. The more specific movements made to the position and/or movements that will be completed in competition, the greater the benefits will be in injury reduction. This increased specificity leads to training the commonly underused and injury prone stabilizer muscles in the same planes they will be required to be used in competition.

Example Program

The keys of metabolic injury prevention running are the cardiovascular response and the strengthening of the stabilization muscles of the hip, groin, knee, and ankle. The target heart rate zone of this specific aerobic conditioning piece lies within 140-150 bpm. The first phase of

metabolic injury prevention running includes three laps of low intensity, continuous jogging. The pace of jogging should give a heart rate response of about 110 bpm, which is an extremely low intensity. After the three laps are completed, the different running techniques such as shuffling, carioca, and backpedaling are implemented at the same pace as the low intensity jogging was completed. The inefficiency of the body through these movements will amplify the intensity and spike the heart rate into the goal aerobic heart rate zone of 140-150 bpm while keeping impact intensities low enough to train barefoot, thus strengthening the muscles of the ankle and foot. The intensity of these movements can be manipulated slightly as needed in order to attain a heart rate within this aerobic training zone. It is important to reiterate the speed of these movements does not need to be increased from the slow jogging since the heart rate will increase due to the movements being used in this method.

The example below shows how the five exercises used in this metabolic injury prevention running can be cycled through continuously. The cones can be set up anywhere between 20 and 50 yards apart. The key to this exercise is ensuring the lactate threshold of the athlete is not reached which is why an intensity of 140-150 bpm is set as the goal heart rate range. This method of training can be used with any set-up, even just two cones. This example falls in line with the use of metabolic injury prevention running around a concourse of an arena. Game speed training with the metabolic injury prevention running method uses the same movements as above, just at maximal intensities. This high-intensity training method strengthens the stabilizer muscles and trains proper timing and firing rate of the stabilizers to prevent injury during competition. During game speed training, different positions can go through different movements, which increase specificity of training prior to the competition period. It should be noted this training should be completed with shoes on due to the high impact intensities.

The example of game speed training below shows the progression through this phase of training. Repetitions at this point of training can be completed based on time or distance, depending on how training is set up for that specific day. The same movements will be used during this progression, but will be completed at maximum velocities. The distance or time of each rep, rest time between reps and between sets, and the number of sets completed can all be determined based on each athlete's individual needs to prepare them for a successful camp and/or season. In the example below, a single set is shown with the distance set of 15 yards from each other (30 yards there and back), 10 seconds of rest between each rep, with 60 seconds rest allowed after each set. The example shown is one of the more difficult programs of metabolic injury prevention running, as it uses minimal rest times between repetitions as well as between sets.

The off-season can be broken into 3 phases of conditioning training as follows.

Phase 1 – Off-Season Program

During this phase, base running and training are completed. This is the phase in which metabolic injury prevention running will be completed. This first phase of training typically lasts between 2 and 4 weeks, with the goal of creating a solid foundation of training which will allow more intense training as the off-season progresses. Metabolic injury prevention running can be completed between 2 and 3 times per week due to its low impact intensities and overall lower intensity on the body.

Phase 2

Phase 2 consists of sport specific speed development and includes the qualities of acceleration, top end speed, and change of directions. The majority of the time within this phase will be spent completing as many sport specific drills as possible. This intermediate phase will last between 4 and 8 weeks to allow optimal development, with high quality work being the goal of each repetition.

Phase 3 Off-Season

This final phase of the off-season periodization consists of game speed conditioning. This will be completed 2 to 3 weeks prior to the beginning of training camp or the season. This phase is used as the final peaking method to prepare athletes for camp or an athlete's season. It will offer optimal conditioning and injury prevention using maximal intensities. It should be performed at least twice a week, if not three times, when no other conditioning methods are being utilized. However, if speed development of athletes is still required, this quality can be trained throughout the week.

Various Types and Kinds of Warm Up

The [Dynamic hurdle warm-up](#) can be placed into your warm-up to increase hip mobility for your athletes.

The [Neurological Reprogramming Dynamic warm-up](#) should be completed before a sport skill learning session, a speed development training, a pre-rehab session, and after a chiropractic and/or manual therapy treatment. These movements should be placed into youth sport dynamic warm-ups daily to encourage proper motor learning patterns.

The [In Place Dynamic warm-up](#) Can be completed in a locker room or other small spaces such as hallways with limited space so your athletes get a proper warm-up when facilities are not readily available.

The [Ground Dynamic warm-up](#) Can be also be completed in a locker room or another tight spaces such as hallways with limited space so your athletes get a proper warm-up when facilities are not readily available.

The [Youth Specific Dynamic Warm-Up](#) was created for younger generations and is a specific warm-up for the development of youth athletes.

[Advanced Dynamic Warm up](#) is used with the many different types of athletes and is very complete.

Use the [Dynamic Warm up Builder](#) to complete your own Dynamic warmup
Many athlete dynamic warm-ups involve vision training, kinesthetic awareness, mobility training, balance training, and many other performance preparation movements. These movements are vital to achieve proper training and the development of elite athletes.

Ankle Rocker Training

Importance of Foot Stability

An athlete's foot quickness is often correlated with their ability to get off the ground. As their foot hits the ground, their weight displaces on the foot. The foot responds by absorbing the force and then tightening to push the weight forward again. The amount the foot changes shape will often dictate how quickly the foot gets off the ground. So, if an athlete has poor foot structure, when their foot hits the ground, an arch may collapse or a heel may spin. But as soon as the foot finds stability and rigidity, it will give impulse to push off the ground. Watch a really good sprinter. Notice how when their foot hits the ground, it looks like the foot just bounces off the ground. That would not happen if it were not for the rigidity of the foot.

The best way to strengthen the rigidity of the foot is by getting the foot stronger in extension. The more the foot can extend, the more rigid the foot becomes or to put another way, the more the arches of the foot tighten. To see how this works, stand on one foot and pull your toes as far back as possible. Notice how the arches of the foot tighten and the foot becomes more rigid. In fact, in some cases, less foot is on the ground. This rigid foot is what bounces off the ground, almost like the difference between bouncing an iron rod on its end compared to trying to bounce a sand bag.

How can we strengthen our feet? It is really quite simple. Stand on one foot, barefooted and pull your toes as high as you can and do shallow, single leg squat. The goal isn't really for depth of the squat, yet, but to work on extension of the toes. When the extension range improves, then it is time to move on to ankle rocker.

Ankle Rocker

One of the fastest ways to improve movement is through ankle range of motion or more specifically ankle rocker.

In the gait cycle, a person is on one leg. While on that leg, the body has to find out a way to move the body's mass forward. So, how can the body move the mass forward in the most efficient way and create momentum forward. The most efficient way to do so is to go through the "rocker" cycle. There is heel rocker, ankle rocker, and forefoot rocker. The heel rocker is the contact phase and begins to move the weight forward. Most people don't have a problem here because it is a contact response. The ankle rocker is the big one. That movement is the ability of the ankle or body to get the center of mass through the mid-stance phase and create forward movement. Notice that I said ankle or body. If the ankle is locked, for whatever reason at 90 degrees or less, the body has to find a way for the center of mass to move forward. The ankle rocker is, by far, the most efficient manner, but if something has happened at some point that your ankle doesn't want to bend, your body will compensate or find some other way to move forward. The most common "cheat" is for the hip to rotate outward and swing around the leg that is on the ground. It is even easier to place the foot centrally, and the hip doesn't need to swing around. This is very common for people who have wide hips or weak gluteus medius. An athlete's knee may knock inward, almost buckle, to move the body mass forward. Someone may throw their arm far forward and jut out their jaw to get momentum going in a forward manner, almost a tilt of the body, in an extreme stumble pattern. Or, they may flatten their arch on their foot and collapse over the top to stumble forward once again. Or, the bouncy athlete who seems to walk on their toes with the incredible calf development, turns their feet out and bounces over the top. This athlete is a good sprinter for a while until they blow their hamstring.

All of these movements can be seen from watching a runner from the front. Stop the film when an athlete seems to be at mid-stance phase, and draw a line up from the outside of their heel, and see how straight the line is. From here, the coach should notice what is in line and what is not, considering the shoulder and hip points are parallel. Picture your best sprinters should have their foot directly under the appropriate hip. The only way that happens is if the ankle is bending properly.

How does a coach go about developing Ankle Rocker? Similar to the other elements of speed development this is a progression, which takes lots of reps and time. It starts with the ability to pull your foot into dorsiflexion. If you are sitting on the floor with your legs out, you should be able to pull your legs back to 110-120 degrees. Now, try it with your knees slightly bent. You should be able to do it about the same either way. Try rotating your feet side to side, like a windshield wiper. Do you notice that your range of motion may change as you rotate through your range of motion? An athlete can progress to sitting in a chair. With their feet on the ground, have the athlete practice pulling the forefoot up while keeping their heels on the ground. Again, shoot for that range of motion. To challenge the athlete, slowly bring the heels under the athletes' butt while sitting. Notice how the range of motion shortens. So the goal is to get your feet as far under your butt while maintaining the range of motion. The next progression is to get off your butt and get to a single leg. A supported single leg squat is a great way to develop the rocker, but now comes a twist. To help strengthen the rigidity of the foot, we will pull our toes back and just allow the balls of our foot to be on the ground. We are trying to teach a proper tripod. The importance of a good tripod is that when your body feels a stable platform to push on, it will push. If not, it will roll or spin until it feels strength, and will then push. This is how you develop foot quickness. It is more of an ankle squat on a tripod. Think as if your knee were getting pulled forward, and when you start the hip bend, go into it a tiny bit and drive your shin straight. Notice how much glute is getting involved in the squat. Some people believe the more ankle rocker, the more glute gets involved. Also, use your glute med to support your hip. The opposite hand can help stabilize your body. The final skill to learn is the ankle rocker shuffle. This should take the athlete the first three weeks of the block to work.

Maximal Speed Training

THE best way to get faster is to run fast. There is no substitute for speed development than to run fast. Squatting, Olympic lifting, plyometrics are not nearly as effective as sprinting. Too many people spend their off-season in the weight room and expect to emerge in the summer a faster athlete because their squat has increased. There is no correlation between the two, only coincidences and illusions. Speed development can happen in many places. Warm weather and a track or a field are ideal but hallways will also work. The key to speed is developing a 10m fly. Most athletes never know how to reach top end speed. And because their neurological system never functions in that world, their speed potential is never met. We will spend a considerable amount of time working on our flying 10. If monitored electronically, you will be amazed at how quickly and how much athlete's improve in this category. Ideally, an athlete will get about 20-30m run up to build speed, but we have used much shorter. I know it becomes an acceleration exercise at this point but football is a game of acceleration and neurologically, they are getting to top speed.

The same holds true for acceleration work. This is a skill based movement that needs to be trained neurologically. The only way to truly work on acceleration is to practice. A considerable amount of time will be spent working on very short distances. If the first steps are off, it is difficult to recover in such a short distance.

Speed Drills

Speed drills are designed to help improve a runners form or technique. I have found that by jumping into more complex drills, we actually create worse patterns or patterns that have little impact on our running. The infamous Speed Dynamics/Gerald Mach B Skip. It is a very popular drill used in warm ups but there really isn't ever a pure pull through. Even the originators of the exercise have left that one behind while those outside their circle continue on with the drill. This program will start very basic and progress to the point of not needing drills. Why continue to a do drill once you have mastered it? If it looks like the team needs more time on the drill, keep it around until they have mastered the drill. Each block will have a drill that develops three aspects of sprinting, knee drive, lateral stability and hamstring recruitment.

Knee drive is important to sprinting speed. The higher the knee drives, the longer the body is in the air so the foot strike will land more underneath the center of mass. With a low knee drive, an athlete's foot will strike in front of the center of mass which will result in the deceleration of the athlete. This will cause the foot to be on the ground a longer period of time and force the athlete to try to reaccelerate which forces them to have to use the quads to push, hence a push runner. At the same time, an exaggerated knee drive will not allow for proper force application on the ground. There needs to be a balance.



The picture shown above displays the running form typically seen in a high school athlete that does not support top speed development. Notice the foot placement is ahead of the hips in the landing phase. When this occurs a breakdown of running form takes place starting at the foot and then working through the hips and into the upper body. Drills implemented throughout this manual will develop proper technique to achieve maximal speed improvements.



Hamstring function will help prevent the early contact on the ground. If we can strengthen our hamstrings to give the body confidence to strike underneath the center of mass, we can help lessen the early contact. It will also strengthen the stiffness in the entire chain when the foot is under the body so the hamstring can fire properly and in a timely manner.

The development of timing and lateral stability also helps prevent the early contact with the ground. Timing is important because at midstance phase, (Figure above) we are looking for the swing leg knee to be in front of the plant leg knee. In this scenario, we know the knee is in position to lift high enough to allow the body to be in position for a mid-stance contact.



The simplicity and complexity of sprinting is that all of these attributes are dependent on each other. One may cause the other but we really never know where the cycle starts. The philosophy we will employ is to try to work on those three aspects to try to eliminate the heel strike/ early contact in gait. And with no deceleration, the athlete has no choice but to run faster.

Agility Training

Agility, like any other skill, is something that can be learned and practiced. I think coaches place their athletes in a bad situation when they sit in a weight room all off season and then expect them to move like a cat on the field. Agility is something that needs to be trained all season. And like everything else, we have a progression to develop this. Some of it goes in conjunction with other movement skills we are developing. For example, foot rigidity and ankle movement will greatly enhance a player's ability to move. Players will only get better "feet" when the foot becomes more rigid. When an athlete's foot hits the ground, it may deform. Their foot will misshape to the position it can push from. That takes time. If the foot becomes more rigid, it takes less time to get to a pushing position and can get off the ground faster. The beginning of the agility development will be in conjunction with warm-up/conditioning and ankle work.

Cross over section

As the team progresses into from Block 1 to Block 2, we want to start to teach proper mechanics for lateral movement. If a player is in a square stance and is preparing to move to the right, they will cross step or step across his body with his left leg. To practice this, place a band around the player's hips. His partner will hold the band. As the player goes to push, they will push from the outside of his left foot and then the outside of his right foot, just like a start out of the blocks. The left foot will get the center of mass moving and his right foot will finish the push. The band teaches the player how to drive instead of step. This is the key to lateral explosion.

Block 2 will put together the three agility builders from Block 1, agility warm-up, ankle rocker/foot development and line hops. Our sections will revolve around 5 yard blocks or distances.

The first week will be just learning the square. 4 cones will be placed in a 5 yd square with a cone in the middle. It should look like a dice showing 5. Players will line up behind the first cone. They will follow the following patterns below. In this drill, players will chop their feet at each cone. Try to get 5 steps in before the cut at the cone. When approaching the cone, players should be in a high body position. When approaching the cone, they should change body positions and drop their body down. Coaches should see a change of levels. A good coaching tip is to have player "hide his numbers".

False steps can be a limiting factor and they cost time. A player will reposition their feet so they are comfortable to push in a certain direction. Sometimes that direction is backwards or to the side or even a pump. We need to drill smooth first steps. And like any other skill, our first couple of weeks will be a slow acceleration to get use to steps without a misstep.

In any acceleration/agility drill, coaches can change a player's body/foot position. Starting at the beginning of the line, a player can have his feet positioned square or staggered. They need to learn to start from both positions without a false step. Or, have them face side-ways and have them and start with a cross step to a sprint. To really challenge their false step, have them drop off a 12 inch box and have them accelerate as soon as they hit the ground.

This is the key drills - - 2 reps of each drill

4 Day Lifting

Eccentric Block Monday- Sample Training Day

Block 1	<u>Lower Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	x	5,3,3	50-80%	
B	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
1:00 Minute Rest Between Exercises						
Block 2	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	4	x	4	85-87.5%	6 Sec Ecc-Partner Help Up
B	Hurdle Hop	4	x	5		Pull Down
C	1/2 Squat Weighted Jump	4	x	5		Pause at Bottom
D	15 yard starts	4	x	1		
E	Wrist Curl	4	x	8		
F	4 Way Neck	3	x	4		Partner or Machine
Perform A-F Simultaneously for 4 Sets						
25 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar Lift	3	x	4	85-87.5%	6 Second Eccentric
B	Bench Abduction	3	x	8	BW	
C	Antib Band	3	x	10	Band	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 4	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Split Squat	3	x	8	85-87%	Each Leg
B	Bench Abduction	3	x	8	BW	Each Leg
C	Glute Ham Hyper	3	x	8	85-87%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Ball Leg Curl	3	x	8	BW	
B	Antib Band	3	x	10	Band	Each Leg
C	SL Calf Raises	3	x	8	85-87%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Eccentric Block Tuesday- Sample Training Day

Block 1	Upper Body Warm-up					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		
Perform A-B Simultaneously for 3 Sets						
2 Minutes Rest between Sets of Bench						
Block 2	Upper Body Strength					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	3	x	4	85-87.5%	6 Sec. Ecc.-Partner Help Up
B	Speed Band Bench Press	3	x	4	35-40%	
C	DB Incline Bench	3	x	4	35-40%	Reactive-Speed
D	Clap Push Up	3	x	4	BW	Reactive
E	Cuban Press Ext. Rot. Band	3	x	6	Band	
Perform A-D Simultaneously for 3 Sets						
25 seconds Rest Between Exercises; 2:00 minutes between Rounds						
Block 3	Upper Auxiliary					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Incline DB Bench Press	3	x	5	85-87.5%	3 Second Eccentric
B	Face Band Pulls	3	x	10	BAND	
C	1-Arm Lat. Pulldown	3	x	7	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 4	Upper Auxiliary					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	DB Bent Over Row	3	x	8	85-87.5%	3 Second Eccentric
C	Hammer Curl	3	x	8	85-87.5%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	Upper Body Auxiliary					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Tri Ext	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	Cuban Press Internal Rotation Band	3	x	6	Light	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Eccentric Block Thursday- Sample Training Day

Block 1	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Back Squat	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
Block 2	<u>Lower Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Back Squat	5	x	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	x	4 Reps		
C	Antib Band	5	x	5 Reps		
Perform A-C Simultaneously for 5 Sets						
25 seconds Rest Between Exercises; 2:00 minutes between Rounds						
Block 3	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	RDL	4	x	5	90-95%	
B	DB Step Up	4	x	5	90-95%	Bottom Half
C	Hip Flexor Prone	4	x	8	BW	Knee On Bench
Perform A-C Simultaneously for 4 Sets						
25 seconds Rest Between Exercises						
Block 4	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar	3	x	8	90-95%	
B	Bench Abduction	3	x	8	BW	Each Leg
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	Each Leg
C	DB Walking Lunge	3	x	5	90-95%	5 Reps on Each Leg
Perform A-C Simultaneously for 3 Sets						
Limited Rest Between Exercises						

Eccentric Block Friday- Sample Training Day

<u>Block 1</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
<u>Block 2</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	5	x	2-3 Reps	90-95%	No Tempo
B	Med Ball Chest Pass	5	x	5	MB	Quick Hip
C	Delt BO Lat Rebound Drop	5	x	8	Light	
Perform A-C Simultaneously for 5 Sets						
25 seconds Rest Between Exercises						
<u>Block 3</u>	<u>Upper Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	4	x	8	90-95%	Bottom Half
B	Cuban Press Fig 8	4	x	8	Light	
C	Pull Up	4	x	7	90-95%	Bottom Half
Perform A-C Simultaneously for 5 Sets						
Limited Rest Between Exercises						
<u>Block 4</u>	<u>Upper Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Board Press	3	x	5	90-95%	
B	DB Bent Over Row	3	x	6	90-95%	
C	Delt BO OH Rebound Drop	3	x	8	Light	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 4</u>	<u>Upper Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Dips	3	x	5	90-95%	
B	Bar Curl	3	x	5	90-95%	
C	DB Rear Delt	3	x	6	90-95%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Isometric Block Monday- Sample Training Day

Block 1	<u>Lower Body Warm-up</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Back Squat	1,1,1	x	5,3,3	50-80%	
B	Ankle Band Work	3	x	10ea		
Perform A & B Series Simultaneously for 3 Sets						
1:00 Minute Rest Between Exercises						
Block 2	<u>Lower Body Strength</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Back Squat	4	x	3	85-87.5%	6 Sec Iso-Partner Help Up
B	Hurdle Hop	4	x	5		Pull Down
C	1/2 Squat Weighted Jump	4	x	5		Pause at Bottom
D	15 yard starts	4	x	1		
E	Wrist Curl	4	x	8		
F	4 Way Neck	4	x	4		Partner or Machine
Perform A-F Simultaneously for 4 Sets						
25 seconds Rest Between Exercises; 4:00 minutes between Rounds						
Block 3	<u>Upper/Lower Auxiliary</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar Lift	4	x	3	85-87.5%	6 Second Isometric
B	Bench Adduction	4	x	8	BW	Each Leg
C	Hip Flex Prone	3	x	7	BW	Knee On Bench
Perform A-C Simultaneously for 4 Sets						
25 seconds Rest Between Exercises						
Block 4	<u>Upper/Lower Auxiliary</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	DB Split Squat	3	x	8	85-87%	Each Leg
B	Bench Abduction	3	x	8	BW	Each Leg
C	Glute Ham Hyper	3	x	8	85-87%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper/Lower Auxiliary</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Ball Leg Curl	3	x	8	BW	
B	Antib Band	3	x	10	Band	Each Leg
C	SL Calf Raises	3	x	8	85-87%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Isometric Block Tuesday- Sample Training Day

Block 1 **Upper Body Warm-up**

Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Coach View
B	Cuban Press	3	x	8		

Perform A-B Simultaneously for 2 Sets

2 Minutes Rest between Sets of Bench

Block 2 **Upper Body Strength**

Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	4	x	3	85-87.5%	6 Sec Iso-Partner Help Up
B	Speed Band Bench Press	4	x	4	35-40%	
C	DB Incline Bench	4	x	4	35-40%	Reactive-Speed
D	Clap Push Up	4	x	4	BW	Reactive
E	Cuban Press Ext. Rot. Band	4	x	6	Band	

Perform A-D Simultaneously for 4 Sets

25 seconds Rest Between Exercises; 4:00 minutes between Rounds

Block 3 **Upper Auxiliary**

Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Incline DB Bench Press	3	x	6	85-87.5%	3 Second Isometric
B	Face Band Pulls	3	x	12	BAND	
C	1-Arm Lat. Pulldown	3	x	7	85-87.5%	

Perform A-C Simultaneously for 3 Sets

25 seconds Rest Between Exercises

Block 4 **Upper Auxiliary**

Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	85-87.5%	Bottom Half
B	DB Bent Over Row	3	x	6	85-87.5%	3 Second Isometric
C	Hammer Curl	3	x	8	85-87.5%	

Perform A-C Simultaneously for 3 Sets

25 seconds Rest Between Exercises

Block 5 **Upper Body Auxiliary**

Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Tri Ext	3	x	8	85-87.5%	
B	DB Rear Delt	3	x	6	85-87.5%	
C	Cuban Press Internal Rotation Band	3	x	6	Light	

Perform A-C Simultaneously for 3 Sets

25 seconds Rest Between Exercises

Isometric Block Thursday- Sample Training Day

Block 1 Lower Body Strength

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	1,1,1	x	5,3,3	50-80%	Warm-up

Perform A as Warm-up for Heavier Sets

2:00 Minutes Rest Between Sets

Block 2 Lower Body Strength

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Back Squat	5	x	2-3 Reps	90-95%	No Tempo
B	Box Jump	5	x	4 Reps		
C	Antib Band	5	x	7 Reps		

Perform A-C Simultaneously for 5 Sets

25 seconds Rest Between Exercises; 4:00 minutes between Rounds

Block 3 Upper/Lower Auxiliary

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	RDL	4	x	5	90-95%	No Tempo
B	DB Step Up	4	x	5	90-95%	Bottom Half
C	Hip Flexor Prone	4	x	8	BW	Knee On Bench

Perform A-C Simultaneously for 4 Sets

25 seconds Rest Between Exercises

Block 4 Upper/Lower Auxiliary

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Bar	3	x	8	90-95%	No Tempo
B	Bench Abduction	3	x	8	BW	Each Leg
C	Calf Raises	3	x	10	90-95%	

Perform A-C Simultaneously for 3 Sets

Limited Rest Between Exercises

Block 5 Upper/Lower Auxiliary

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	Each Leg
C	DB Walking Lunge	3	x	5	90-95%	5 Reps on Each Leg

Perform A-C Simultaneously for 3 Sets

Limited Rest Between Exercises

Isometric Block Friday- Sample Training Day

Block 1

Upper Body Warm-up

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	Warm-up

Perform A as Warm-up for Heavier Sets

2:00 Minutes Rest Between Sets

Block 2

Upper Body Strength

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	5	x	2-3 Reps	90-95%	No Tempo
B	Med Ball Chest Pass	5	x	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	5	x	8	Light	

Perform A-C Simultaneously for 5 Sets

25 seconds Rest Between Exercises

Block 3

Upper Auxiliary

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	4	x	8	90-95%	Bottom Half
B	Cuban Press Fig 8	4	x	8	Light	
C	Pull Up	4	x	7	90-95%	Bottom Half

Perform A-C Simultaneously for 4 Sets

Limited Rest Between Exercises

Block 4

Upper Auxiliary

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Board Press	3	x	6	90-95%	
B	DB Bent Over Row	3	x	6	90-95%	
C	Delt BO OH Rebound Drop	3	x	8	Light	

Perform A-C Simultaneously for 3 Sets

25 seconds Rest Between Exercises

Block 5

Upper Auxiliary

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Dips	3	x	5	90-95%	
B	Bar Curl	3	x	5	90-95%	
C	DB Rear Delt	3	x	6	90-95%	

Perform A-C Simultaneously for 3 Sets

25 seconds Rest Between Exercises

Concentric Block Monday- Sample Training Day

Block 1		<u>Lower Body Warm-up</u>				
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	1,1,1	x	5,3,3	50-80%	
B	TKE	3	x	6ea	Band	
Perform A & B Series Simultaneously for 3 Sets						
No Rest Between Exercises						
Block 2		<u>Lower Body Strength</u>				
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	4	x	5	85-87%	
B	Hurdle Hop	4	x	5		Distance
C	1/2 Squat Weighted Jump	4	x	5		
D	15 yard starts	4	x	1		15 yd sprint
E	Wrist Curl	4	x	10		
F	4 Way Neck	4	x	4		Machine/Partner
Perform A-F Simultaneously for 4 Sets						
15 Seconds Rest Between Exercises; 2 Minutes Rest After A-F is Done						
Block 3		<u>Lower Auxiliary</u>				
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar Lift	3	x	5	85-87%	Do Not Hit Ground
B	Bench Abduction	3	x	8	BW	OC
C	DB Split Squat	3	x	6	85-87%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 4		<u>Upper/Lower Auxiliary</u>				
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	6	85-87%	
B	Bench Adduction	3	x	8	BW	OC
C	Hip Flexor Prone	3	x	8		Knee On Bench
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5		<u>Lower Auxiliary</u>				
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Step Up	3	x	6	85-87%	
B	SL Ball Leg Curl	3	x	12	BW	Feet on Ball
C	SL Calf Raises	3	x	10		
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Concentric Block Tuesday- Sample Training Day

<u>Block 1</u>	<u>Upper Body Warm-up</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	
B	External Rot.	2	x	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
<u>Block 2</u>	<u>Upper Body Strength</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	4	x	8	85-87%	No Tempo
B	Speed Band Bench Press	4	x	4	35-40%	
C	DB Incline Bench	4	x	4	35-40%	
D	Clap Push Up	4	x	4	BW	
E	Jobs	4	x	8	Light DB	
Perform A-E Simultaneously for 4 Sets						
25 seconds Rest Between Exercises; 2 Min Rest Between Rounds						
<u>Block 3</u>	<u>Upper Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Incline DB Bench Press	4	x	5	85-87%	
B	Cuban External Rot Band	4	x	8	BAND	OC
C	Pull Up	4	x	7	85-87%	
Perform A-C Simultaneously for 4 Sets						
25 seconds Rest Between Exercises						
<u>Block 4</u>	<u>Upper Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	3	x	10	85-87%	Bottom Half
B	DB Bent Over Row	3	x	8	85-87%	
C	Bar Curl	3	x	7	85-87%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
<u>Block 5</u>	<u>Upper Body Auxiliary</u>					
<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Tri Ext.	3	x	7	85-87%	
B	Rear Delt	3	x	6	85-87%	
C	Cuban Internal Rot Band	3	x	6	Band	OC
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Concentric Block Thursday- Sample Training Day

Block 1	Lower Body Warm-up					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	1,1,1	x	5,3,3	50-80%	
B	TKE	2	x	6ea		
Perform A & B Series Simultaneously for 2 Sets						
No Rest Between Exercises						
Block 2	Lower Body Strength					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Back Squat	5	x	2-3 Reps	90-95%	Reactive
B	Depth Drop Box Jump	5	x	5		
C	Antib Band	5	x	8		
Perform A-C Simultaneously for 5 Sets						
25 Seconds Rest Between Exercises; 2 Min Rest Between Rounds						
Block 3	Lower Auxiliary					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	RDL	4	x	5	90-95%	
B	DB Step Up	4	x	5	90-95%	Bottom Half
C	Hip Flexor Prone	4	x	8	BW	Knee On Bench
Perform A-C Simultaneously for 4 Sets						
25 seconds Rest Between Exercises						
Block 4	Lower Auxiliary					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar	3	x	8	90-95%	
B	Bench Abduction	3	x	8	BW	Each Leg
C	Calf Raises	3	x	10	90-95%	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	Lower Auxiliary					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	8	BW	
B	Bench Adduction	3	x	8	BW	Each Leg
C	DB Walking Lunge	3	x	5	90-95%	5 Reps on Each Leg
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Concentric Block Friday- Sample Training Day

Block 1 Upper Body Warm-up

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	1,1,1	x	5,3,3	50-80%	Warm-up

Perform A as Warm-up for Heavier Sets

2:00 Minutes Rest Between Sets

Block 2 Upper Body Strength

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Bench Press	5	x	2-3 Reps	90-95%	No Tempo
B	Med Ball Chest Pass	5	x	5	MB	Quick Hip
C	Delt BO Lat Rebound Drop	5	x	8	Light DB	

Perform A-C Simultaneously for 5 Sets

25 Seconds Rest Between Exercises; 2 Min Rest Between Rounds

Block 3 Upper Auxiliary

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	DB Shoulder Press	4	x	8	90-95%	Bottom Half
B	Cuban Press Fig 8	4	x	8	Light	
C	Pull Up	4	x	7	90-95%	Bottom Half

Perform A-C Simultaneously for 4 Sets

Limited Rest Between Exercises

Block 4 Upper Auxiliary

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Board Press	3	x	5	90-95%	
B	DB Bent Over Row	3	x	6	90-95%	
C	Delt BO OH Rebound Drop	3	x	8	Light	

Perform A-C Simultaneously for 3 Sets

25 seconds Rest Between Exercises

Block 4 Upper Auxiliary

<u>Order</u>	<u>Exercise</u>	<u>Sets</u>	<u>Reps/Duration</u>		<u>Load</u>	<u>Notes</u>
A	Dips	3	x	5	90-95%	
B	Bar Curl	3	x	5	90-95%	
C	DB Rear Delt	3	x	6	90-95%	

Perform A-C Simultaneously for 3 Sets

25 seconds Rest Between Exercises

Below 80% Block Monday- Sample Training Day

Block 1

Lower Body Warm-up

Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Sport Back Squat	1,1,1	x	5,3,3	50-80%	
B	TKE	3	x	6ea	Band	

Perform A & B Series Simultaneously for 3 Sets

No Rest Between Exercises

Block 2

Lower Body Strength

Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Sport Back Squat	4	x	5	55-62%	Reactive
B	Hurdle Hop	4	x	5		Distance
C	1/2 Squat Weighted Jump	4	x	5		Reactive
D	15 yard starts	4	x	1		15 yd sprint
E	Wrist Curl	4	x	10		Reactive
F	4 Way Neck	4	x	4		

Perform A-D Simultaneously for 4 Sets

15 Seconds Rest Between Exercises; 2 Minutes Rest After A-F is Done

Block 3

Lower Auxiliary

Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Bar Lift	3	x	5	55-62%	Do Not Hit Ground
B	Bench Abduction	3	x	8	BW	OC-Disadvantage- +1 Rep
C	DB Split Squat	3	x	10	55-62%	OC-Disadvantage- +1 Rep

Perform A-C Simultaneously for 3 Sets

25 seconds Rest Between Exercises

Block 4

Upper/Lower Auxiliary

Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Ham Hyper	3	x	6	BW	Reactive
B	Bench Adduction	3	x	12	BW	OC-Disadvantage- +1 Rep
C	Hip Flexor Prone OC	3	x	12		Knee On Bench/ OC +1 Rep

Perform A-C Simultaneously for 3 Sets

25 seconds Rest Between Exercises

Block 5

Lower Auxiliary

Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Step Up	3	x	6	55-62%	
B	SL Ball Curl	3	x	12	BW	Drop Fast
C	Stiff Leg Ankle Hops	3	x	8		Jump High

Perform A-C Simultaneously for 3 Sets

25 seconds Rest Between Exercises

Below 80% Block Tuesday- Sample Training Day

Block 1	<u>Upper Body Warm-up</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	
B	External Rot.	2	x	10		
Perform A-B Simultaneously for 2 Sets						
No Rest Between Exercises						
Block 2	<u>Upper Body Strength</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Bench Press	4	x	8	55-62%	Reactive
B	Speed Band Bench Press	4	x	4	35-40%	Reactive
C	DB Incline Bench	4	x	4	35-40%	Reactive
D	Clap Push Up	4	x	4	BW	Reactive
E	Jobes	4	x	8	Light DB	
Perform A-D Simultaneously for 4 Sets						
25 seconds Rest Between Exercises; 2 Min Rest Between Rounds						
Block 3	<u>Upper Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Incline DB Bench Press	4	x	5	55-62%	Reactive
B	Cuban External Rot Band	4	x	12	BAND	OC-Disadvantage- +1 Rep
C	Pull Up	4	x	7	55-62%	OC-Disadvantage- +1 Rep
Perform A-C Simultaneously for 4 Sets						
25 seconds Rest Between Exercises						
Block 4	<u>Upper Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	3	x	10	55-62%	OC-Disadvantage- +1 Rep
B	DB Bent Over Row	3	x	10	55-62%	OC-Disadvantage- +1 Rep
C	Bi Band Curl Pro Sup	3	x	7	55-62%	AFSM
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper Body Auxiliary</u>					
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Tri Band Push Down Pro Sup	3	x	7	Band	AFSM
B	Delt BO Lat Rebound Drop	3	x	6	Light DB	Reactive
C	Cuban Internal Rot Band	3	x	6	Band	OC-Disadvantage- +1 Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Below 80% Block Thursday- Sample Training Day

Block 1						
Lower Body Warm-up						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Hex Deadlift	1,1,1	x	5,3,3	50-80%	
B	TKE	2	x	6ea		
Perform A & B Series Simultaneously for 2 Sets						
No Rest Between Exercises						
Block 2						
Lower Body Strength						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Hex Deadlift	5	x	5	72-80%	Don't Hit The Ground
B	Depth Drop Box Jump	5	x	5		
C	Antib Band	5	x	8		Rest 2 min between sets
Perform A-C Simultaneously for 5 Sets						
30 seconds Rest Between Exercises						
Block 3						
Lower Auxiliary						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Glute Bar Lift	4	x	6	72-80%	
B	Hip Flex Band Pulls	4	x	8	Band	
C	OC Swiss Ball Groin Squeeze	4	x	10	72-80%	
Perform A-C Simultaneously for 4 Sets						
25 seconds Rest Between Exercises						
Block 4						
Lower Auxiliary						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	DB Split Squat	4	x	6	72-80%	Reactive
B	Bench Abduction	4	x	10	BW	OC-Disadvantage
C	Glute Hyper Incline	4	x	6	BW	Reactive
Perform A-C Simultaneously for 4 Sets						
25 seconds Rest Between Exercises						
Block 5						
Lower Auxiliary						
Order	Exercise	Sets	Reps/Duration		Load	Notes
A	Ball Leg Curl Drop	3	x	6	Ball	Reactive
B	Bench Abduction	3	x	10	BW	OC-Disadvantage
C	Stiff Leg Ankle Hops	3	x	5	BW	Jump High
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Below 80% Block Friday- Sample Training Day

Block 1	<u>Upper Body Warm-up</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Bench Press	1,1,1	x	5,3,3	50-80%	Warm-up
Perform A as Warm-up for Heavier Sets						
2:00 Minutes Rest Between Sets						
Block 2	<u>Upper Body Strength</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Bench Press	5	x	5 Reps	72-80%	Reactive
B	Med Ball Chest Pass	5	x	5	Moderate	Quick Hip
C	Delt BO Lat Rebound Drop	5	x	8	Light	Reactive
Perform A-C Simultaneously for 5 Sets						
25 seconds Rest Between Exercises						
Block 3	<u>Upper Auxiliary</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	DB Shoulder Press	4	x	8	72-80%	Bottom Half
B	Cuban Press Fig 8	4	x	8	Light	
C	Pull Up	4	x	7	72-80%	Bottom Half
Perform A-C Simultaneously for 4 Sets						
Limited Rest Between Exercises						
Block 4	<u>Upper Auxiliary</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Board Press	3	x	6	72-80%	
B	DB Bent Over Row	3	x	7	72-80%	OC-Disadvantage- +1 Rep
C	Delt BO OH Rebound Drop	3	x	8	Light DB	
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						
Block 5	<u>Upper Auxiliary</u>					
Order	<u>Exercise</u>	Sets	Reps/Duration		Load	Notes
A	Dips	3	x	10	72-80%	OC-Disadvantage- +1 Rep
B	Bar Curl	3	x	10	72-80%	OC-Disadvantage- +1 Rep
C	Chin Up	3	x	10	72-80%	OC-Disadvantage- +1 Rep
Perform A-C Simultaneously for 3 Sets						
25 seconds Rest Between Exercises						

Triphasic Training

High School Strength and Conditioning
Manual version 3.0

New information in this updated manual is shown in red in the table of contents

TRIPHASIC TRAINING

**A High School Strength
And Conditioning Manual**

3.0



**Written By Cal Dietz
And Matt Van Dyke**

12/19/15

Why write this Manual:

We have written this manual to ensure every coach out there the opportunity to implement quality training programs for each of their teams. [All Works in Blue are Hyperlinked](#)

What this Manual is:

This manual incorporates all of the training methods used with our athletes in an annual cycle. These training blocks provide each athlete with the qualities necessary to maximize performance. Successful athletic performances require the optimization of many qualities, including rate of force development, an aerobic base system, and of course max strength. Rate of force development is vital in athletics. During maximal velocity contractions, as seen in competition, there is not enough time for maximal muscular force to be reached. This means athletes must have the goal of producing the most force possible in the time allowed during competition. The aerobic base is improved through the proper use of conditioning methods throughout the year. Adaptations to this system are vital for recovery in repeat-effort sports, which includes all team sports. Maximal strength is the most common method of training used and does have its place in improving performance, however, it is important to realize improvements in this quality do not always transfer to sport's success.

Through the use of [triphasic training](#), which is the realization that every dynamic movement includes an eccentric, isometric, and concentric aspect and trains each of these individually, we will lay out the annual cycle of training using the block periodization method. Block periodization relies on the residual effects of training, or the amount of time a quality remains at a heightened level after the cessation of training. This model, and the understanding of residual effects, allows multiple peaking throughout the competition period by training qualities in a specific order. The modified, undulated model is also used throughout training to allow continued adaptations to the desired qualities. All of these training aspects will be covered in greater detail throughout this Manual.

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16.2 Injury to lower body limb

17.1 Conditioning

17.1.1 Conditioning Post Training

17.2 Super Endurance Workouts

17.3 Tabata Intervals

18.1 Block Periodization & Annual Plan

18.2 The Advantages of Block Training in Athletics

19.0 Band Training

20.0 Ramadan and Athletes

21.0 Performance Calculators

1.0 The Simple Workout Order for High School Athlete

Part 1

The Start - Complete Warm Up – Page 32 - 5 to 12 minutes

Part 2

Agility Drills –Page 38 – 5 to 10 minutes

Part 3

The Workout – Page 55 – 25 to 40 minutes

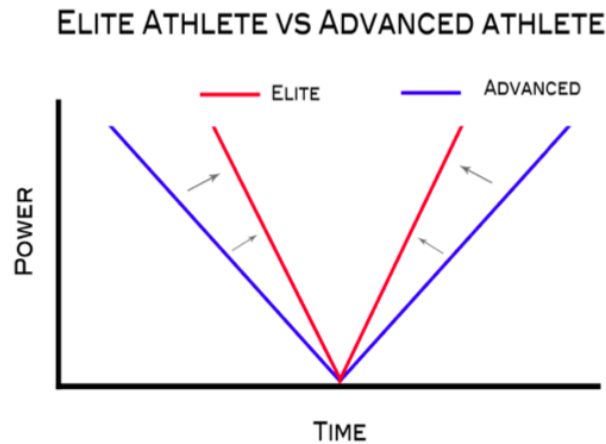
The Conditioning – Page 126 – 0 to 15 minutes – depending on time of year.

2.1 Triphasic Training - The Difference

Many traditional training methods teach athletes how to expel energy; little time and effort are spent teaching them to absorb it. That is the entire point of the Triphasic method—learning how to eccentrically and isometrically absorb energy before applying it in explosive dynamic movements. Athletes aren't powerlifters. They must be strong, but only to the extent that it can benefit them in their sport. Every dynamic human movement has a limited amount of time in which the mover can produce as much force as possible. Ben was a world-class thrower because he could generate more explosive strength (defined as maximal force in minimal time) in the time it took to throw a shot.

Most training methods focus on the development of explosive strength by emphasizing the concentric phase of dynamic movement. My epiphany in 2003 was that we were approaching the development of force from the wrong angle. The key to improved force production, and thus sport performance, doesn't lie in the concentric phase. To develop explosive strength, you must train the eccentric and isometric phases of dynamic movements at a level equal to that of the concentric phase.

Look at the figure below. Imagine the graph as depicting the same athlete at different times during his or her development. The lines are the same athlete, but one shows the results of an athlete developed using triphasic training and the other in the early stages of development. Your new goal as a strength and conditioning coach or athlete is to narrow that V as much as possible.



2.2 Eccentric

An eccentric action can be defined as when the muscle attachments closest and farthest from the center of the body (proximal and distal) move in opposite directions. This is often referred to as the lengthening, or yielding, phase, since the muscle is stretched due to a load placed on it.

Now, read this next part very carefully. Every dynamic movement begins with an eccentric muscle action. For example, when you jump, your hips perform a slight dip, eccentrically lengthening the quads and glutes before takeoff. This countermovement is critical to power production. The eccentric phase sets in motion a series of events that pre-load the muscle, thus storing energy to be used in an explosive, concentric and dynamic movement.

When you train the eccentric phase, two physiological processes contribute to force development. One is the most powerful human reflex in the body—the stretch reflex. The other, whose force producing abilities depend on the stretch reflex, is a close second in terms of force production. It is called the stretch-shortening cycle (SSC). (Although it's important to understand these processes, they are outside the scope of this article. For now, just accept the fact that they're important.)

Let's go back to the "V" from Part 1 of this series so you can see exactly what I'm talking about. When you look at the graph below, you begin to see the correlation between the eccentric and concentric phases. The steeper the eccentric line is coming into the bottom of the "V," the steeper the concentric line is leaving the bottom of the "V." The greater the velocity of

stretching during the eccentric contraction, the greater the storage of elastic energy. The athlete who can handle higher levels of force through an increased stretch reflex will be able to apply more force concentrically and be able to jump higher or use more power in other explosive movements.

To safely maximize eccentric adaptation, I have derived a few rules, which, when followed, yield the best results for athletes performing eccentric training.

1. Due to the intense stress placed on an athlete by eccentric training, its application should be limited to large, compound exercises.

When an athlete is first exposed to eccentric training, his or her physiological system will likely only be able to handle one compound exercise per workout. The exercise should be performed early in the workout while the nervous system is fresh.

2. Never perform slow eccentrics with loads greater than 85 percent of an athlete's one-rep max.

This rule is based on my own risk versus reward analysis. To me, the risk is far too great to have an athlete use weight close to, at or above his one-rep max for an extended period of time. I've seen torn pecs and quads, blown backs and injured shoulders. At the end of the day, you can get the same physiological adaptation using lighter loads for longer times with half the risk.

3. Always use a spotter when performing slow eccentrics.

You must remember that when performing eccentric training, the body is being maximally fatigued. As you can see in Table 3.2, as the load decreases, eccentric time increases. The resulting increase in time under tension means an athlete's muscular system could give out at any point during the lift, so proper spotting is crucial.

4. Always finish an eccentric focused lift with an explosive, concentric movement.

The most important aspect of performance—one that you're constantly trying to improve—is the nervous system. Every jump, cut and throw begins with an eccentric lengthening of the muscle and ends with an explosive concentric contraction. The bar will not necessarily move fast, especially when you use heavy eccentric loads, but the intent to accelerate the bar,

changing over from an eccentric to a concentric signaling pattern, must be firmly emphasized with every rep.

TABLE 3.2: ECCENTRIC LOADING PARAMETERS AND THEIR RESPECTIVE MESOCYCLE				
LOAD	TOTAL TIME OF ECCENTRIC (SECONDS)	REP RANGE	SETS	MESOCYCLE
85%	5-6 (ASSISTED)	1-2	1-2	ABOVE 80%
80%	5-6 (ASSISTED)	2-3	2-3	
75%	6-8	3-4	3-4	80-55%
70%	6-8	4-5	4-5	
65%	6-8	5-6	5-6	
60%	6-8	5-6	5-6	
55% AND BELOW	ECCENTRICS NOT IMPLEMENTED WITH THESE LOADS			BELOW 55%

Example Exercises with Eccentric Means and Coaching Points

Back Squat - Eccentric

1. Set up with the bar on the back of the shoulders.
2. Keeping the chest up and the back flat, sit back as if to a chair.
3. Descend into the bottom of the squat in the prescribed time.
4. Once the time has been reached, explosively fire up back to the start.

Front Squat - Eccentric

1. Set up with the bar on the front of the shoulders.
2. Keeping the chest and elbows up and the back flat, sit back as if to a chair.
3. Descend into the bottom of the squat in the prescribed time.
4. Once the time has been reached, explosively fire up back to the start.

RDL - Eccentric

1. Grab the bar just outside of the thighs with the feet shoulder width apart.
2. Keeping the back flat and the chest up, bend the knees slightly.
3. Allow the bar to slide down the thighs for the prescribed time.
4. Once the time has been reached, explosively fire up back to the start.

Bench Press - Eccentric

1. While laying on your back, grab the bar one thumb length away from the knurling.
2. Unrack the bar, keep the shoulders pulled back, and pull the bar into the chest.
3. Lower the bar in the prescribed time until it touches the chest.
4. Once the time has been reached, explosively fire up back to the start.

DB Shoulder Press -Eccentric

1. Begin standing with a dumbbell in each hand, palms facing each other.
2. Press the dumbbells up explosively to begin the exercise.
3. Lower the dumbbells back to the shoulders in the prescribed time.
4. Once the time has been reached, explosively fire up back to the start.

2.3 Isometric

Isometric actions are ones in which the muscle attachments closest and furthest from the center of the body (proximal and distal) remain at a constant length. You reach the isometric phase when the force you're exerting equals the force of the load.

Because the isometric phase is actually a contraction, it's trainable just like every other muscle action. Same as the eccentric phase, the isometric phase has two neurological processes that need to be trained to maximize the force transfer from the eccentric to concentric contractions. When muscles need to increase their level of force production, like they do when they decelerate and stop an eccentric contraction, they have two options:

Motor unit recruitment: Increase the number of muscles fibers that fire.

Rate coding: Increase the rate at which each fiber fires, which increases muscular tension.

Again, these physiological processes are outside the scope of this article. Just understand they are important to developing force. When you look at Figure 1, this becomes apparent. At some point on the graph, both lines have a transition point—a point where the line changes from a negative, eccentric slope to a positive, concentric one. That exact point is where the isometric contraction takes place. It is not like the eccentric phase, which has an entire line you can see and follow. Yet this single point is hugely important, because it acts as the springboard that launches the force from the stretch reflex and stretch-shortening cycle into the concentric contraction. The harder the stop, the better the total force recoil and the more explosive the action.

Specific attention to isometric training will result in improved force and power outputs for an athlete. Improving the qualities of the nervous system in this regard allows for high amounts of

energy to be absorbed, diverting maximal energy from the eccentric directly to the concentric with little to no loss of energy. This enables an athlete to maximize the power of both the stretch reflex and the stretch-shortening cycle. Add these to a strong, concentric contraction, which we will learn about in the next part of this series, and you'll feel like you're jumping off a trampoline instead of out of a sand pit.

Perform high-load isometrics at the beginning of your workout. Isometric contractions aren't as neurally taxing as eccentric training. As a result, lightened-load isometrics can, and should, be used throughout the entire workout. When I say "lightened," I mean assistance lifts—exercises that use lighter loads compared to large compound movements, such as Lunges or Closed-Grip Bench.

Stay safe and get the best results by following four rules during your isometric work.

1) Hit the ground like a brick.

When performing a resisted-load isometric, move through the eccentric portion quickly, pulling the bar down before trying to instantly stop its momentum. You *must* hit the isometric like a brick hitting a pavement floor—no give whatsoever!

2) Squeeze your muscles.

Squeeze your muscles as you hit the isometric contraction. For example, if you're performing a Back Squat, squat down to where you will be performing the isometric contraction during your sets. Once you have squatted down, squeeze your legs and glutes as hard as possible for several seconds. Once you experience what the isometric contraction feels like, you can begin your work sets.

3) Always use a spotter.

During triphasic training, your body will be reach maximum fatigue. Since your muscles could give out at any time, it is crucial that you use proper spotting.

4) Always finish an isometric-focused lift with an explosive, concentric movement.

By incorporating an explosive movement at the end of your lift, you're training your nervous system.

TABLE 3.4: RESISTED ISOMETRIC LOADING PARAMETERS AND THEIR RESPECTIVE MESOCYCLE				
LOAD	TOTAL TIME OF ISOMETRIC (SECONDS)	REP RANGE	SETS	MESOCYCLE
85%	3-4 (ASSISTED; HELP UP)	1-2	4-5	ABOVE 80%
80%	3-4 (ASSISTED; HELP UP)	2-3	4-5	
75%	4-5	3-4	3-4	55-80%
70%	4-5	4-5	3-4	
65%	4-5	5-6	3-4	
60%	4-5	5-6	3-4	
55% AND BELOW	ISOMETRICS NOT IMPLEMENTED WITH THESE LOADS DURING THIS TRAINING CYCLE			BELOW 55%

Example Exercises with Isometric Means and Coaching Points

Back Squat - Isometric

1. Set up with the bar on the back of the shoulders, keeping the chest up and the back flat.
2. Sit back and descend into the bottom of the squat rapidly.
3. Once in the bottom, become a statue and pause for the prescribed time.
4. Once the time has been reached, explosively fire up back to the start.

Front Squat - Isometric

1. Set up with the bar on the front of the shoulders, keeping the chest up and the back flat.
2. Sit back and descend into the bottom of the squat rapidly.
3. Once in the bottom, become a statue and pause for the prescribed time.
4. Once the time has been reached, explosively fire up back to the start.

RDL - Isometric

1. Grab the bar just outside of the thighs with the feet shoulder width apart.
2. Keeping the back flat and the chest up, lower the bar rapidly along the thighs.
3. Once the bar passes the knees, become a statue and pause for the prescribed time.
4. Once the time has been reached, explosively fire up back to the start.

Bench Press - Isometric

1. While laying on your back, grab the bar one thumb length away from the knurling.
2. Unrack the bar and pull it rapidly toward the chest.
3. Right before the bar hits the chest, stop it completely and pause.
4. Once the time has been reached, explosively fire up back to the start.

**TABLE 3.8: EXAMPLE EXERCISES WITH
LIGHTENED LOAD RESISTED ISOMETRIC MEANS
(ASSISTANCE, PERFORMED THROUGHOUT WORKOUT)**

EXERCISE	COACHING POINTS
<u>DB WALKING LUNGE-ISOMETRIC</u>	<ol style="list-style-type: none"> 1. Holding a pair of dumbbells, take a moderate step forward. 2. Keeping the chest up and the back flat, descend into the bottom of the lunge. 3. Lower yourself until the back knee is just above the ground and pause. 4. Once the time has been reached, explosively fire through and step forward.
<u>INCLINE DB BENCH</u>	<ol style="list-style-type: none"> 1. Holding a dumbbell in each hand, set up on an inclined bench. 2. Beginning the dumbbells near the shoulders, pause for the prescribed time. 3. Be sure to keep the chest up, the lower back arched, and the eyes toward the ceiling. 4. Once the time has been reached, explosively fire up and back to the start.
<u>DB RDL</u>	<ol style="list-style-type: none"> 1. Holding a pair of dumbbells, begin with the arms just along the thighs. 2. Keep the chest up, the back flat, and the knees slightly bent. 3. Lower the dumbbells along the thighs rapidly until just below the knees and pause. 4. Once the time has been reached, explosively fire up and back to the start.
<u>DB ROW - ISOMETRIC</u>	<ol style="list-style-type: none"> 1. Hold one dumbbell in the hand and use the other to stabilize the body on a bench. 2. Keeping the back flat, pull the dumbbell rapidly into the ribs. 3. Allow the dumbbell to return slightly toward the ground and pause. 4. Once the time has been reached, explosively fire up and back to the start.
<u>BENCH PRESS REACTIVE DROP PAUSE TOSS</u>	<ol style="list-style-type: none"> 1. While laying on your back, grab the bar one thumb length away from the knurling. 2. With a spotter, rapidly drop the bar until it is just about to hit the chest. 3. Pause with the bar right above the chest. 4. Once the time has been reached, explosively throw the bar as high as possible.

2.4 Reactive

The concentric phase of the triphasic training model is the sexy part of dynamic muscle action. It's the rock star that gets all the attention. You never walk into a gym and ask someone, "How much can you eccentrically lower to your chest?" You walk up and ask, "How much do you Bench?" You're asking how much weight they can concentrically lift by pushing it off their chest.

The concentric phase is the measuring stick used to evaluate all athletic performance. How much can you lift? How far can you jump? How fast can you run? These are all performance measures based on force output measured in the concentric phase. Specifically as it relates to dynamic movement, the concentric phase is the measure of an athlete's rate of force development (RFD).

In any dynamic movement, the combined force of the stretch reflex and stretch-shortening cycle aids the RFD. Recall from the earlier segments that the amount of potential energy stored within the musculoskeletal structure depends on the preceding eccentric and isometric contractions. When we understand how the concentric phase works in conjunction with these phases, we see why the concentric phase is imperative for maximizing explosive strength, RFD and performance. Would Nolan Ryan have been as intimidating without his fastball? Would Walter Payton have been as great if he couldn't cut? The answer: an emphatic "No!" An athlete who can quickly build and absorb energy is ineffective if he cannot use that energy concentrically to rapidly produce force.

The true importance of training the concentric phase is the synchronization of the entire triphasic muscle action—maximizing the energy transfer from the preceding eccentric and isometric phases into a unified, explosive and dynamic movement. For the purpose of simplicity, we are going to package these mechanisms into two categories—
inhibition/disinhibition and synchronization.

Inhibition/Disinhibition

In every muscular action, there is an agonist and an antagonist, an inhibitor and a disinhibitor. For our purposes here, all you need to understand is that while the agonist is concentrically

contracting (shortening) to produce force, the antagonist is eccentrically contracting (lengthening). The purpose of the eccentric contraction is to try to decelerate the speed and force of the concentric contraction to protect the joints and ensure that the antagonist muscle doesn't tear from rapid stretching. Training the concentric phase to perform explosive dynamic movements improves intermuscular coordination, allowing for the inhibition of the antagonist muscle and resulting in maximal RFD. Put another way, by training the concentric phase, you're also training the inhibition of the antagonist.

Synchronization

There's no question that an athlete who can generate more explosive force in less time has a decisive advantage. However, the advantage only goes to athletes who can unleash that power in a manner that gives them a performance edge. Nolan Ryan could touch 100 mph on the radar gun consistently, but that's not what made him a Hall of Fame pitcher. The ability to place those 100 mph fastballs wherever the catcher put his glove is what made him Ryan the most feared pitcher of his era.

As an example, compare the Hang Clean to a Romanian Deadlift and Shrug. A novice athlete can quickly learn to perform a proper Romanian Deadlift and Shrug. It is a slow, controlled movement that allows time for the athlete's neuromuscular system to interpret, process and execute the movement. On the other hand, teaching the Hang Clean can be a long and arduous process, even though it's similar to the RDL and Shrug. In the case of the Hang Clean, decreasing the weight and increasing the speed of the exercise overloads the athlete's neuromuscular system.

The point is that like the eccentric and isometric phases of a dynamic movement, the concentric phase is a learned and trainable skill. An athlete can learn to concentrically perform a Back Squat in a few minutes. It's intuitive since it's a neuromuscular action that is performed on a daily basis. However, teaching an athlete to move a bar like a shot out of a cannon takes time and a great deal of concentric-focused training.

How to Apply Concentric Training

This is fairly simple and straightforward—train fast! Concentric training will look very familiar to most, because it’s the predominant form of stress used in training. However, it only looks similar on paper. An athlete training concentrically after first building a solid foundation of eccentric and isometric strength will be able to move loads at much higher velocities.

TABLE 3.10: CONCENTRIC LOADING PARAMETERS AND THEIR RESPECTIVE MESOCYCLE				
LOAD	TOTAL TIME OF CONCENTRIC	REP RANGE	SETS	MESOCYCLE
97.5%	REACTIVE	1	1-2	ABOVE 80%
95%	REACTIVE	1	2-3	
90%	REACTIVE	1-2	3-4	
85%	REACTIVE	1-2	3-4	
80%	REACTIVE	1-3	4-5	
75%	REACTIVE	1-3	4-5	55-80%
70%	REACTIVE	2-3	4-6	
65%	REACTIVE	3	4-6	
60%	REACTIVE	3	4-6	
55%	REACTIVE	3	4-6	BELOW 55%
50%	REACTIVE	3	4-6	
45%	REACTIVE	3	4-6	
40%	REACTIVE	4	4-6	
35%	REACTIVE	4	4-6	
30%	REACTIVE	4	4-6	

TABLE 3.11: EXAMPLE EXERCISES WITH REACTIVE CONCENTRIC MEANS

EXERCISE	COACHING POINTS
<u>BACK SQUAT - REACTIVE</u>	<ol style="list-style-type: none"> 1. Set up with the bar on the back of the shoulders. 2. Keeping the chest up and the back flat, pull yourself down into the bottom of the squat. 3. Once in the bottom, explosively fire out as fast as possible. 4. Repeat for the desired number of repetitions.
<u>SINGLE LEG DB FRONT SQUAT - REACTIVE</u>	<ol style="list-style-type: none"> 1. Holding a pair of dumbbells on the shoulders, keep the chest up and the back flat. 2. One leg should be elevated to the rear. 3. Using the front leg, pull rapidly into the bottom of the squat. 4. Once in the bottom, explosively fire out and repeat for the desired repetitions.
<u>RDL - REACTIVE</u>	<ol style="list-style-type: none"> 1. Grab the bar just outside of the thighs with the feet shoulder width apart. 2. Keeping the chest up and the back flat, lower the bar along the thighs rapidly. 3. Once the bar hits the bottom position, explosively fire up and return to the start. 4. Repeat for the prescribed repetitions.
<u>BENCH PRESS - REACTIVE</u>	<ol style="list-style-type: none"> 1. While laying on your back, grab the bar one thumb length away from the knurling. 2. Using the upper back, pull the bar rapidly into the chest. 3. Once the bar touches the chest, explosively throw it as hard as possible. 4. Repeat for the prescribed repetitions.

TABLE 4.5: PROGRESSIVE LOADING SCHEME			
WEEK	MONDAY LOADING (MEDIUM INTENSITY)	WEDNESDAY LOADING (HIGH INTENSITY)	FRIDAY LOADING (LOW INTENSITY)
1	82.5% 1-2 REPS, 4-5 SETS	87.5% 1 REP, 3-4 SETS	75% 4-5 REPS, 4-5 SETS
2	85% 1-2 REPS, 4-5 SETS	90% 1 REP, 3-4 SETS	77.5% 3-5 REPS, 4-5 SETS
3	87.5% 1-2 REPS, 4-5 SETS	92.5% 1 REP, 3-4 SETS	80% 3-4 REPS, 4-5 SETS

TABLE 4.9: MONDAY TRIPHASIC LOADING PARAMETERS					
BLOCK	INTENSITY	LOAD	TEMPO	REPS	SETS
BLOCK 1 (ECCENTRIC)	MEDIUM INTENSITY	82-87%	6:0:0:0	1-3	2-4
BLOCK 2 (ISOMETRIC)		82-87%	0:3:0:0	1-3	3-5
BLOCK 3 (CONCENTRIC)		82-87%	0:0:0:0	2-4	3-4

**TABLE 4.8: MONDAY LOADING
(MEDIUM INTENSITY)**

7 1RM	MAXIMUM REPS POSSIBLE	HIGH QUALITY REPS (STRENGTH)	SETS (OFF-SEASON)	SETS (IN-SEASON)
97.5%	1-2			
95 %	2			
92.5%	2-3			
90%	3-4			
87.5%	4	1	3-4	2-3
85%	4-5	1-2	4-5	2-3
82.5%	5	1-2	4-5	2-3
80%	5-6			
77.5%	6-7			
75%	7 - 8			

**TABLE 4.11: WEDNESDAY LOADING
(HIGH INTENSITY)**

7 1RM	MAXIMUM REPS POSSIBLE	HIGH QUALITY REPS (STRENGTH)	SETS (OFF-SEASON)	SETS (IN-SEASON)
97.5%	1-2	1	1-2	1-2
95 %	2	1	2-3	1-2
92.5%	2-3	1	3-4	1-2
90%	3-4	1	3-4	2-3
87.5%	4			
85%	4-5			
82.5%	5			
80%	5-6			
77.5%	6-7			
75%	7-8			

TABLE 4.12: WEDNESDAY TRIPHASIC LOADING PARAMETERS					
BLOCK	INTENSITY	LOAD	TEMPO	REPS	SETS
BLOCK 1 (ECCENTRIC)	HIGH INTENSITY	90-97%	REACTIVE 0:0:0:0	1	1-4
BLOCK 2 (ISOMETRIC)		90-97%	REACTIVE 0:0:0:0	1	1-4
BLOCK 3 (CONCENTRIC)		90-97%	REACTIVE 0:0:0:0	1	1-4

TABLE 4.13: FRIDAY LOADING (LOW INTENSITY)				
7 1RM	MAXIMUM REPS POSSIBLE	HIGH QUALITY REPS (VOLUME)	SETS (OFF-SEASON)	SETS (IN-SEASON)
95 %	2			
92.5%	2-3			
90%	3-4			
87.5%	4			
85%	4-5			
82.5%	5			
80%	5-6	3-4	4-5	IN-SEASON VOLUME COMES FROM PRACTICE
77.5%	6-7	3-4	4-5	
75%	7-8	4-5	4-5	

TABLE 4.19: ABOVE 80 PERCENT THREE-DAY VERSUS FOUR-DAY MODEL

TRAINING WEEK:		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
THREE-DAY MODEL	FOCUS	TOTAL BODY	OFF	TOTAL BODY	OFF	TOTAL BODY	OFF
	LOAD	82-87%		90-97%		75-80%	
	MEANS APPLIED	TRIPHASIC		DYNAMIC		TRIPHASIC	
FOUR-DAY MODEL	FOCUS	LOWER BODY	UPPER BODY	OFF	LOWER BODY	UPPER BODY	OFF
	LOAD	82-87%	82-87%		90-97%	90-97%	
	MEANS APPLIED	TRIPHASIC			DYNAMIC		

TABLE 4.21: ABOVE 80 PERCENT THREE-DAY VERSUS FIVE-DAY MODEL

TRAINING WEEK:		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
THREE-DAY MODEL	FOCUS	TOTAL BODY	OFF	TOTAL BODY	OFF	TOTAL BODY	OFF
	LOAD	82-87%		90-97%		75-80%	
	MEANS APPLIED	TRIPHASIC		DYNAMIC		TRIPHASIC	
FIVE-DAY MODEL	FOCUS	LOWER BODY	UPPER BODY	LOWER BODY	UPPER BODY	TOTAL BODY	OFF
	LOAD	82-87%	82-87%	90-97%	90-97%	75-80%	
	MEANS APPLIED	TRIPHASIC		DYNAMIC		TRIPHASIC	

**TABLE 4.23: ABOVE 80 PERCENT THREE-DAY
VERSUS SIX-DAY MODEL**

TRAINING WEEK:		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
THREE-DAY MODEL	FOCUS	TOTAL BODY	OFF	TOTAL BODY	OFF	TOTAL BODY	OFF
	LOAD	82-87%		90-97%		75-80%	
	MEANS APPLIED	TRIPHASIC		DYNAMIC		TRIPHASIC	
SIX-DAY MODEL	FOCUS	LOWER BODY	UPPER BODY	LOWER BODY	UPPER BODY	LOWER BODY	UPPER BODY
	LOAD	82-87%	82-87%	90-97%	90-97%	75-80%	75-80%
	MEANS APPLIED	TRIPHASIC		DYNAMIC		TRIPHASIC	

TABLE 4.2

TABLE 4.2												
		MONDAY LOADING (MEDIUM INTENSITY)			WEDNESDAY LOADING (HIGH INTENSITY)			FRIDAY LOADING (HIGH VOLUME)				
7 1-RM	MAXIMUM REPS POSSIBLE	HIGH QUALITY REPS (STRENGTH)	SETS (OFF-SEASON)	SETS (IN-SEASON)	HIGH QUALITY REPS (STRENGTH)	SETS (OFF-SEASON)	SETS (IN-SEASON)	HIGH QUALITY REPS (VOLUME)	SETS (OFF-SEASON)	SETS (IN-SEASON)	IN-SEASON VOLUME COMES FROM PRACTICE	
97.5%	1 - 2				1	1 - 2	1 - 2				3 - 4	4 - 5
95 %	2				1	2 - 3	1 - 2				3 - 4	4 - 5
92.5%	2 - 3				1	3 - 4	1 - 2				4 - 5	4 - 5
90%	3 - 4				1	3 - 4	2 - 3					
87.50%	4	1	3 - 4	2 - 3								
85%	4 - 5	1 - 2	4 - 5	2 - 3								
82.5%	5	1 - 2	4 - 5	2 - 3								
80%	5 - 6											
77.5%	6 - 7											
75%	7 - 8											

This table displays my three-day loading variables of the above 80 percent undulated mesocycle. The column on the far left displays the percentage load of the athlete's 1RM with the maximal number of repetitions possible listed in the column to the right. The reps and sets within each training day indicate the number of both that can be performed while maintaining the quality of work at a high level for the athlete. A couple things to notice—the rep ranges stay the same regardless of whether the athlete is in in-season or off-season training and the number of sets used for in-season training are fewer than off-season training. This is due to the high work demands and the added stress of practice and games during the season. Also, look at Friday, Sets (in-season). During the season, all the volume work comes from practice and games. Don't train volume in-season! You'll overtrain your athletes.

An Exmple of a 5 day Conditioning protocol that can be used, however if conditioning 5 days, don't use the whole workouts provided below.

TRAINING DAY	CONDITIOING GOAL	SPECIAL INSTRUCTIONS	EXAMPLE OF WORKOUTS
DAY 1	Short Sprints (High Quality Speed)	Sprints under 10 seconds Full recovery: rest 90-120 seconds	Alactic High Quality Workout
			Flying 60s
			16 week short sprint workouts
			Cone agility
DAY 2	Long Sprints or Short Sprints w/ Reduced Rest (Speed Conditioning)	Sprints over 15 seconds Or Sprints under 10 recovery under 20 seconds	High Quality Lactic Anaerobic Power Training Builder
			Metabolic Injury Prevention Runs
DAY 3	Short Sprints (High Quality Speed)	Sprints under 10 seconds Full recovery: rest 90-120 seconds	Alactic High Quality Workout
			Flying 60s
			16 week short sprint workouts
			Cone agility
DAY 4	Short Sprints (Anaerobic Conditioning)	Sprints under 10 seconds Limit recovery: 45-60 seconds	Work Capacity Alactic Anaerobic Training Builder
			Flying 60s
			16 week short sprint workouts
			Cone agility
DAY 5	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity	Aerobic Work Capacity Training Builder
			Metabolic Injury Prevention Runs
			Bike Conditioning
			TrashBall

TABLE 4.1: EXAMPLE QUALITY REPS OVER QUANTITY							
PARAMETERS:	SET 1	SET 2	SET 3	SET 4	SET 5	TOTAL REPS	NUMBER OF QUALITY REPS
3x5 AT 80%	5 REPS	5 REPS	5 REPS			15	4-5
5x3 AT 80%	3 REPS	3 REPS	3 REPS	3 REPS	3 REPS	15	13-14

Basic Undulated Method of Yearly Training

Month of Training	Month 1	Month 2			Month 3			Month 4			Month 5		
Focus of Loading	Work Capacity	Below 80% of Max lift			Above 80% of Max lift			Below 80% of Max lift			Between 50% - 25% of Max lift		
Weekly loading within month	High Volume Low Weight	Day 1 65%	Day 2 80%	Day 3 55%	Day 1 85%	Day 2 92%	Day 3 80%	Day 1 65%	Day 2 80%	Day 3 55%	Day 1 40%	Day 2 50%	Day 3 25%
Duration of Month	3 to 6 Weeks	3 to 4 Weeks			3 to 4 Weeks			3 to 4 Weeks			3 to 4 Weeks		
Focus	Get in Shape	Speed Strength			Strength			Speed Strength			High Velocity Peaking for Sport		

Above 80 Progressive loading for Strength	Loading Day 1 Sub Max Effort Day	Loading Day 2 Max Strength Day	Loading Day 3 Higher Volume Day
Week 4	85% 1-2 Reps, 4-5 sets	92.5% 1 Rep, 3-4 sets	80% 3-4 Reps, 4-5 sets
Week 3	82.5% 1-2 Reps, 4-5 sets	90% 1 Rep, 3-4 sets	77.5% 3-5 Reps, 4-5 sets
Week 2	80% 1-2 Reps, 4-5 sets	87.5% 1 Rep, 3-4 sets	75% 4-5 Reps, 4-5 sets
Week 1	77.5% 1-3 Reps, 4-5 sets	85% 1-2 Reps, 4-5 sets	72.5% 4-5 Reps, 4-5 sets

The Follow Graph is a basic overview of a loading model use for various time and training focus.

Weekly Rep Schemes in Undulated model	Day 1 of the Week	Day 2 of the Week	Day 3 of the week
Strength Method - Above 80 Percent of Percent of Max Lift	2 -3 Reps per Set – Load used is 82.5%-87.5% of Max lift	1 Rep Per Set - Load used is 90%-97.5% of Max lift	3-5 Reps Per Set - Load used is 75%-80% of Max lift
Speed Strength – load is Between 55%-80%	3-4 Reps Per Set – Load used is 65%-72.5% of Max lift	1-2 Reps Per Sets – Load used is 80%-75% of Max lift	3-6 Reps Per Sets – Load used is 55%-65% of Max lift
High Velocity Peaking Method	5-8 Rep Per Set – Load used is 40% of Max lift	4-6 Rep Per Set – Load used is 50% of Max lift	6-8 Rep Per Set – Load used is 25% of Max lift
Other Methods used on Shifted Undulated model			
Bodybuilding Method	8-10 Reps Per Set - Load used is 77%-70% of Max lift	6 -8 Reps Per Set - Load used is 80% -75% of Max lift	10-12 Reps Per Set Load used is 70% -60% of Max lift
Strength Speed Method - Load Between 65– 90 percent of Max Lift	3-5 Reps Per Set – Load used is 72.5%-77.5% of Max lift	1-3 Reps Per Set - Load used is 85%-90% of Max lift	4-5 Reps Per Set - Load used is 65%-70% of Max lift

3.1 Applying Triphasic Training Methods to Olympic lifting

The means of applying Triphasic Training, from eccentric, to isometric, to reactive can be applied to any lift, even the Olympic movements, if a coach so desires. These exercises can be undulated for time in the same manner that any other lift utilized in the triphasic program can be, depending on a coach's goals and their athlete's needs.

The eccentric phase will require the movement to be started from the top of the hang position, as a lift starting from the floor would not allow any eccentric action to be completed. It is important that the athletes maintain a proper position throughout the eccentric portion of the exercise to allow for maximal power output. After the timed eccentric has reached the desired range of motion, which will usually be around the mid-shin area, an explosive pull and/or catch will be used to finish the movement.

The isometric phase will be completed with a pause held at the bottom of the movement. If a pull from the floor is the ultimate goal, the isometric would be completed with the plates hovering just off the ground while the athlete maintains a proper position. If a hang clean is the end goal movement, the isometric would be held anywhere from the top of the knee to the mid-shin area, depending on the athlete's lower limb lengths. It is vital that the athlete maintains a proper position and does not allow the weight of the bar to pull them out of a strong position. It is important to note that the isometric should be held for at least 3 seconds to ensure the stretch-shortening cycle is not being used during the lift, so potential energy dissipates. The movement will always be finished with a pull and/or catch depending on the coach's programming position. If general strength is a main goal of this training, an isometric hold could also be completed at the bottom of the front squat, but this training will not improve the power production of the pull in the Olympic lift. Olympic lifting is already a sport in its own regard, so it is important to remember that we are training athlete's to improve performance on the field, not improve lifting.

The reactive phase will be the completion of the entire Olympic movement. If a hang clean/pull is used, the stretch-shortening cycle will play a large role in energy production for the lift. The improvements made throughout the eccentric and isometric phases will be made very apparent during this phase. Power clean/pull will not cause the SSC to be used as there is no eccentric portion of the exercise. This is not to say the power clean cannot be used effectively in a training program. Starting strength increases due to the isometric phase will allow for a stronger pull from a stopped position, leading to increased power outputs.

A contrast method can be used with either the hang or power clean throughout the implementation of Triphasic Training. Two types of contrast methods can be used during training. The first includes a single plyometric, such as a box jump, with the chosen Olympic movement, the second option is the French contrast method. The French contrast method should be paired with the heavy sets to improve the utilization of the SSC and the RFD of athletes. This will consist of 3 sets of jumps, a body weight movement such as hurdle hops, a weighted movement such as weighted squat jumps, and finally an accelerated movement such as accelerated plyo jumps can be used to complete the French contrast training method. This training increases the transfer of training with speeds at (body weight), just below (weighted), and just above (accelerated) game speeds seen in competition.

The addition of the triphasic training method to the Olympic lifts will improve explosive power through the enhancement of the SSC, as well as increasing the rate of force development, when the French contrast method is included. These performance variables will immediately improve power outputs of athletes while also improving their efficiency of movement.

It is important to remember that this training is intended for athletes, not Olympic weight lifters. Few athletes reach the technical proficiency of true Olympic weight lifters, and as coaches we must keep in mind that the perfection of the movement is not the ultimate goal. The ultimate goal is to improve the power and the efficiency of each athlete. With this in mind straps will be allowed to be used during training as this can improve the ability to train.

Below is a template of a 6 week triphasic block showing the utilization of an Olympic movement paired with the French contrast method. The second chart shows the undulated model used in triphasic training with percentage ranges as well as rep and tempo options.

Triphasic Olympic Lift Progression						
Phase	Eccentric		Isometric		Reactive	
Week	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Main Movement	Hang Clean		Hang Clean		Hang Clean	
Motion	Slow count down to mid-shin		Isometric hold around mid-shin (at least 3 sec)		Full Hang Clean	
French Contrast	Hurdle Hop		Hurdle Hop		Hurdle Hop	
	Wt. Pause Squat Jump		Wt. Pause Squat Jump		Wt. Squat Jump	
	Acc. Pause Squat Jump		Acc. Pause Squat Jump		Acc. Squat Jump	

Undulated Model for Olympic Lifts Using Timed Sets						
Day	Monday		Wednesday		Friday	
Method	Eccentric/Isometric		Reactive		Eccentric/Isometric	
Intensity	82-87%		92%+		75-80%	
Set Time	:07	(:03)	Reactive		:10	(:05)
Reps	x1	x2	x2-3	x2-3	x1	x2

Composite Schemes for load and Reps for Main Lifts Back Squat, Bench, Olympics

	Maximum Reps in one Set (Rarely done)	Reps For High Quality Strength	Sets of High Quality Reps (use Column to left) off-season	Sets of High Quality Reps (use 2 Columns to left) in-season	Sets of High Volume for day 3 Training in undulated
97.5%	1-2 Reps	1 Repetition	1 - 2 Sets	1 - 2 Sets	
95 %	2 Reps	1 Repetition	2 - 3 Sets	1 - 2 Sets	
92.5%	2-3 Reps	1 Repetition	3 - 4 Sets	1 - 2 Sets	
90%	3-4 Reps	1 Repetition	3 - 4 Sets	2 - 3 Sets	
87. %	4 Reps	1 Repetition	3 - 4 Sets	2 - 3 Sets	
85%	4-5 Reps	1-2 Repetitions	4 - 5 Sets	2 - 3 Sets	
82.5%	5 Reps	1-2 Repetitions	4 - 5 Sets	2 - 3 Sets	
80%	5-6 Reps	1-2 Repetitions	4 - 5 Sets	2 - 3 Sets	3-4 Reps, 4-5 sets
77.5%	6-7 Reps	1-3 Repetitions	4 - 5 Sets	2 - 3 Sets	3-4 Reps, 4-5 sets
75%	7-8 Reps	1-3 Repetitions	4 - 5 Sets	3 - 4 Sets	4-5 Reps, 4-5 sets
72.5%	8-9 Reps	2-3 Repetitions	4 - 5 Sets	3 - 4 Sets	4-5 Reps, 4-5 sets
70 %	9-10 Reps	2-3 Repetitions	4 - 6 Sets	3 - 4 Sets	5-6 Reps, 4-5 sets
67.5%	11-12 Reps	2-3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-7 Reps, 4-5 sets
65%	13- 14 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets
62.5%	14-15 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets
60%	15-16 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets
57.5%	17-18 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets
55%	19-20 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets
52.5%	20-21 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets
50%	22-24 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets

4.1 Warm Up

The Start

The purpose of a dynamic warm-up is to get your body moving in ways comparable with the demands of your specific sport. While your body gets moving, the temperature inside your body and muscles is elevated and the heart begins to pump more blood throughout the body.

The Further

Dynamic jogging is used first in the dynamic warm-up process to increase blood flow. This is followed by dynamic walking movements. Dynamic warm-up movements are then completed to wrap up the warm-up.

The Where

You can complete your dynamic warm-up in any space. The dynamic warm-up can be completed in small locker room, hallways, weight rooms, and even stadiums.

Side note - Complete the dynamic warm-ups with no shoes on. This will help your balance and kinesthetic awareness, which will aid in injury prevention.

The Length

The duration of your warm up should be between 5 and 15 minutes in duration and should include all types of movements. Examples of these are shown below and range from jogging, walking, standing, and other movements.

Dynamic jogging - The dynamic jogging part of your warm-up should be a continuous activity. Some coaches will go down and back, which is fine and works well if they have appropriate space at their disposal. However if you have, for example, a long hallway, a coach can put two cones down the hallway. The athletes will then perform the dynamic jogging around the cones in a continuous fashion while they complete the dynamic exercises I call out. Be sure both sides are completed for lateral movements such as shuffling and carioca.

The following are examples of jogging dynamic warm-ups

<u>JOGGING FORWARD</u>	<u>GALLOP RT LEG BACKWARD</u>
<u>JOGGING BACKWARD</u>	<u>GALLOP LT LEG BACKWARD</u>
<u>CARIOCA LEFT</u>	<u>JOGGING FORWARD</u> Toes Pointed In
<u>CARIOCA RIGHT</u>	<u>SKIP W\ FLARED KNEES (BWD)</u>
<u>SKIPPING (FWD)</u>	<u>JOG HI KNEE X-OVER (FWD)</u>
<u>SKIPPING (BWD)</u>	<u>LATERAL STRAIGHT LEG SKIPS LT</u>
<u>JOG W\ CROSSOVER STEP (FWD)</u>	<u>CARIOCA QUICK STEP</u>
<u>CHERRY PICKERS</u>	<u>Jogging FORWARD</u> Toes Pointed Out
<u>SHUFFLE (X-ARM SWING) RT</u>	<u>SKIP W\ STAIGHT LEGS FWD</u>
<u>JOGGING BACKWARD THROW PUNCHES</u>	<u>SKIP W\ KICK (FWD)</u>
<u>High Knee Carioca</u>	<u>Jogging Backwards</u> Toes Pointed In
<u>JOGGING FORWARD ARM CIRCLE</u>	<u>FOOT FIRE</u>
<u>GALLOP RT LEG FORWARD</u>	<u>JOGGING Backward</u> Toes Pointed Out
<u>GALLOP LT LEG FORWARD</u>	<u>C SERIES RT</u>
<u>JOG W\ HIGH KNEES (FWD)</u>	<u>C SERIES LT</u>

Dynamic walking - the dynamic walking warm-up will progress to larger, slower movements. These movements provide increased mobility training for your athletes and will further assist in injury prevention.

Dynamic movements - after the walking dynamic warm-up, dynamic movements will be added to finish the warm-up process. These dynamic movements will progress to various joint specific and injury prevention movements that can be used for an entire body warm-up. This aspect of the warm-up may be done lying on the ground, sitting and standing.

The following are examples are for dynamic warm-up movements

<p>5 PNF Both Legs Inside & Outside</p> <p>WALKING BAREFEET</p> <p>5 PNF Leg Flares</p> <p>Walking on inside of feet</p> <p>Standing Arm Circle Side-</p> <p>WALKING FORWARD ON OUTSIDE OF FEET</p> <p>STANDING ARM CIRCLES FRONT</p> <p>WALKING FORWARD ON TOES</p> <p>STANDING ARM CIRCLES OVER HEAD</p> <p>WALKING BACKWARD ON INSIDE OF FEET</p> <p>PUSH AWAY</p> <p>WALKING BACKWARD ON OUTSIDE OF FEET</p> <p>TRUNK TWISTS REINDEER</p> <p>WALKING BACKWARD ON TOES</p> <p>NECK ROLLS</p> <p>FRANKS</p> <p>NECK SLIDES - FORWARD & BACKWARD</p> <p>WALKING BEND ANKLE GRAB</p> <p>HOUR GLASS</p> <p>HIGH KNEE PULLS WITH F8 SHAKE</p> <p>SHOULDER SLIDES LATERAL</p> <p>FIGURE 4 SIT WALKS</p> <p>MESSIER SQUATS</p> <p>Walking Lunge</p> <p>ANKLE ROLLS</p> <p>KNEE ROLLS 4 EACH WAY</p> <p>Lateral Lunge W/ ANKLE TILTS</p>	<p>LATERAL CROSSOVERLUNGE</p> <p>FIGHTER SHOULDER ROLLS</p> <p>Spiderman Crawl</p> <p>Toe to Mouth Supine</p> <p>Lying Leg Twist</p> <p>Bent Leg Hip Rotation</p> <p>DNS Get Up</p> <p>Hurdler Twist Both Legs In</p> <p>Quadruped Shifts</p> <p>Baby Crawling Stage One</p> <p>Baby Crawling Stage Two</p> <p>Elbow to Instep with T-spine Rotation</p> <p>Bent Over Interlocked Arm Circles</p> <p>Interlocked Front Arm Circles</p> <p>Interlocked Over Head Arm Circles</p> <p>Thumb Look Aways to Right</p> <p>Thumb Look Aways Left</p> <p>Marching Slow</p> <p>Gallop Forward</p> <p>Carioca Quick Step</p> <p>Cat Cow</p> <p>Donkey Kick</p> <p>Hip Circles</p> <p>Quadruped Shifts</p> <p>Quadruped Forward Leg Circles</p> <p>Quadruped Backward Leg Circles</p> <p>Quadruped Out Hip Lift</p>
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<u>STRAIGHT LEG FIGURE 8 4 EACH</u>	<u>Laying Knee Ups fronts</u>
<u>VISION SHIFT TRAINING HI & LOW</u>	<u>Scorpion</u>
<u>FORWARD CROSSOVER WALKING LUNGE</u>	<u>Push Up Stretch</u>
<u>WITH TWIST</u>	<u>Push Up Stretch With Twist</u>
<u>LUMBAR ROLLS</u>	<u>Toe Pikes</u>
<u>Duck Walk</u>	<u>Spread Eagle</u>
<u>X-BEHIND</u>	<u>Laying Knee Ups</u>
<u>SHUFFLE W\ Drag Foot</u>	<u>Bent Leg Hip Rotation</u>
<u>NECK SLIDES</u>	<u>Dynamic Butterfly</u>
<u>SHUFFLE W\ DRAG FOOT LT</u>	<u>Knee To Chest and Roll</u>
<u>CHEST SINKS</u>	<u>Laying Leg Over</u>
<u>LATERAL SHIFTING</u>	<u>Inverted Bike</u>
<u>TRUNK ROLLS</u>	<u>Laying Up and Over</u>
<u>WALKING BACKWARD REACHES</u>	<u>Inverted Leg Swings</u>
<u>LEG SWINGS FOR-BACKWARD</u>	<u>Laying Straight Leg Kicks</u>
<u>STRAIGHT LEG TOE TOUCH WALK</u>	<u>Lying Leg Twist</u>
<u>Hip Swing</u>	<u>Laying Leg Circles</u>
<u>REVERSE FLARE LUNGE PALMS TO CEILING</u>	<u>Hurdler Twist</u>
<u>SQUATTING INTERNAL ROTATION</u>	<u>Hamstring Up and Over</u>
<u>FRANKENSTEIN WITH SKIP</u>	<u>Hurdler Twist Both Legs In</u>
<u>TOE ROLLS</u>	
<u>SINGLE LEG "T" RDL</u>	
<u>REINDEER ELBOW CIRCLES</u>	
<u>LATERAL CROSSOVER LUNGE</u>	
<u>FIGHTER SHOULDER ROLLS</u>	

4.2 Various Types and Kinds of Warm Up

The [Dynamic hurdle warm-up](#) can be placed into your warm-up to increase hip mobility for your athletes.

The [Neurological Reprogramming Dynamic warm-up](#) should be completed before a sport skill learning session, a speed development training, a pre-rehab session, and after a chiropractic and/or manual therapy treatment. These movements should be placed into youth sport dynamic warm-ups daily to encourage proper motor learning patterns.

The [In Place Dynamic warm-up](#) Can be completed in a locker room or other small spaces such as hallways with limited space so your athletes get a proper warm-up when facilities are not readily available.

The [Ground Dynamic warm-up](#) Can be also be completed in a locker room or another tight spaces such as hallways with limited space so your athletes get a proper warm-up when facilities are not readily available.

The [Youth Specific Dynamic Warm-Up](#) was created for younger generations and is a specific warm-up for the development of youth athletes.

Many athlete dynamic warm-ups involve vision training, kinesthetic awareness, mobility training, balance training, and many other performance preparation movements. These movements are vital to achieve proper training and the development of elite athletes.

5.1 Agility Drills

Agility Drill Speed Development Program

Agility and speed development should be done post warm-up.

The following is a list of cone drills that can be used for speed development. A coach can reach the desired adaptations when work to rest ratios are set appropriately. The ability to stop movement, and then begin movement again in a different direction are vital for many sports. Agility drills are one of the most effective methods for developing change of direction abilities. Many coaches have fallen under the belief that agility ladder training helps with change of direction, but when the actions and movements used during agility ladder training are viewed, you can clearly see that these movements do not mimic what happens in sport. All drill examples that you see below are cutting with a single foot. A coach must remember to train the right and left sides of the body equally during change of direction training, which ensures symmetry for each athlete.

List of Agility Drills

[Xlathlete 7 Seconds Agility Speed Development Protocol](#)

[Xlathlete 5 Seconds Agility Speed Development Protocol](#)

[Xlathlete 3 Seconds Agility Speed Development Protocol](#)

[Xlathlete 7 Seconds Take To The Field Agility Drills](#)

[Xlathlete 5 Seconds Take To The Field Agility Drills](#)

[Xlathlete 3 Seconds Take To The Field Agility Drills](#)

[Various Xlathlete Cone Drills](#)

[Composite List of Various xlathlete Cone Drills](#)

Agility Drills for Speed Development

When the goal of agility training is speed development, then the most advantageous time to complete these drills would be directly after the warm-up period, but before going into the weight room or any other type of workout. This is the time where athletes have the greatest ability to adapt, as they will have the greatest ability to complete high quality training.

Personally, I recommend and prefer coaches to complete cone agility drills everyday athletes train because this aspect is so important to sport. The key to developing maximal speed is completing each agility drill at maximal speed and intensity, and then allow full rest times. Full rest times between each repetition allow athletes to repeat high-quality drills of maximal speed, while also improving change of direction.

Pro-Shuttle Comparison- Pre and Post [Triphasic Training](#)

Pre Triphasic training with change of direction strength needed from Triphasic Training Methods

Signs that Triphasic training is needed

- 1) High hips
- 2) Reaching for cone
- 3) Slow turns

Example of [Bad Pro-shuttle](#) –Pre Triphasic Training

Example of [Bad Pro-shuttle End View](#) –Pre Triphasic Training

Post Triphasic training – notice change of direction strength increased to develop speed

Correct form (Optimal triphasic action)

- 1) Low to the ground
- 2) Hips sink to cone
- 3) Explode out of turn

Example of [Good Pro-shuttle](#) –Post Triphasic Training

Example of [Good Pro-shuttle End View](#) – Post Triphasic Training

5.2 Speed Drills for Top End Speed Development

[Flying 60's Speed Development](#)

[Flying 90's Speed Development](#)

Rest Time for Speed Development

The suggested rest time between each 3 second cone agility drill for speed development and quickness is between 30 to 45 second. Once again, this long rest time is given to ensure your athletes are fully recovered between each repetition. An athlete's full recovery is required if top end speed is being attempted to be trained as full recovery is the only way high-quality repetitions can be continually completed.

A brief article on Speed and Rest - [Quickness, Agility and Speed Development](#)

The following article explains, in depth, how to properly implement various agility and speed development drills into your program. It also continues to justify the importance of giving athletes full rest times between repetitions in top end speed development training.

Below is a separate article that emphasizes the importance of giving each athlete full rest times in order to cause an adaptation to maximal speed. It can also be viewed by clicking this link:

[Speed and Skill Optimization - A Proposal for a New Practice Paradigm](#)

5.3 Speed and Skill Optimization - A Proposal for a New Practice

Paradigm

By Cal Dietz and Jonathon Janz

Introduction

It is often said that the best coaches of any sport know precisely when to push their athletes and when to take their foot off the throttle. Exceptions aside, high-level coaches do not simply grind their athletes into the ground each and every practice session, creating a practice culture that overemphasizes sacrifice and grunt labor to the detriment of skill acquisition and the enhancement of speed. Due to the influence of Hollywood movies featuring caricatures of nearly-sadistic football coaches, or the annual idle chat among aging alumni under Friday night lights remembering when “coach ran them till’ they bled or puked,” the vast majority of the public have formed the opinion that hard work, and hard work alone, is the key to sporting success. If the kids do not win, they simply didn’t work hard enough. They’re too soft. They’re too coddled. They’re not committed to doing what it takes to win.

Nothing could be further from the truth.

In reality, high-level sport coaching is a delicate balance of art and science. The human body has finite parameters within which coaches and trainers must work. It only responds and adapts to certain forms and quantities of stress which must be carefully prescribed, monitored, and periodically reassessed. A coach who simply seeks to make his athletes exhausted during each and every practice is a coach lacking all understanding of human physiology and of the nature of sport itself. For sport is not merely a matter of strategy and tactical decision making, but also a matter of skill acquisition and performance. In our experience, many coaches generally understand the former, but almost entirely lack knowledge of the latter. They simply do not understand that all sports and sporting activities are skills, and that in order to elicit optimal performance in their athletes, coaches need to refocus their efforts on effectively improving sport skill performance. Furthermore, speed development is largely lost on many coaches as well, and the ideal means of improving speed is actually linked directly to the enhancement of

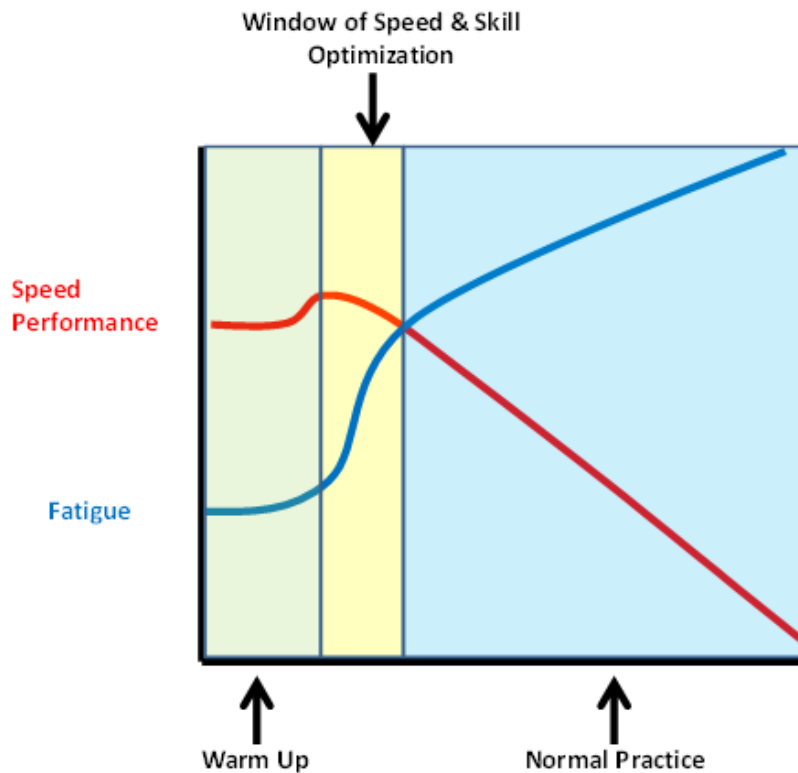
skill performance. There is a small window of time during practice where improvements in both qualities can realistically be made. Outside of this window, gains in speed and skill performance are all but non-existent. The purpose of this essay is to explain how to take advantage of this limited period of practice time where important sport skills can be taught and improved upon, and speed can be developed to levels previously unattained.

The Speed and Skill Training Window

High-level coaches know that the best time to teach a new sporting movement, refine previously-learned skills, or train explosive speed is near the beginning of practice just after the warm-up activities. The reasons why this is so are manifold and largely beyond the scope of this essay. However, it can be pointed out that efforts aimed at skill acquisition and explosive speed enhancement are most effectively performed toward the beginning of a practice session when the athletes have the least amount of fatigue in their neuromuscular systems.[1] When athletes are fresh, particularly when they have been given ample rest from the previous practice session or competition, they are best able to learn and master complex motor skills and withstand the sufficient levels of highly-specific stress required to elicit adaptations in speed performance, especially regarding high-load speed strength. To be frank, a tired athlete is no better than an old dog when it comes to learning new tricks. It is not that his spirit is unwilling, but rather the simple fact that his very physiology limits his ability to learn new skills and achieve higher performance levels of speed when fatigued. Skills are simply outward signs of one's neuromuscular proficiency. When an athlete is rested and ready, he is able to perform the necessary skills with ease and certain mastery that is beautiful to behold. But when an athlete is tired, those same skills become deformed and a mere shadow of their former glory. Elite world champions can be seen to suffer skill performance deficits when they are fatigued. How much more detriment is suffered by young athletes and beginners who have not yet fully mastered the necessary skills for sporting success? Likewise, exhausted athletes never move particularly fast anywhere other than to sit down. A slow and tired athlete cannot achieve the necessary level of speed-specific stress in order to stimulate his body to adapt and improve his speed performance. He will be nothing more than a slow athlete performing slow movements, which

is the antithesis of speed training. A coach that attempts to improve sporting skills and speed performance with fatigued athletes is wasting everybody's time.

Figure 1. *Relationship between Speed Performance, Fatigue, and Portions of Practice*



Optimal Speed Development

For the vast majority of sport, speed is a critical component of success. Teams or individuals may utilize similar strategies and may even possess nearly-identical levels of strength and work capacity, yet one will prevail over the other because of a decisive speed advantage. It is certainly not the only factor in sporting success, but nonetheless it would be foolish for coaches not to address it. The question is how to do so during the limited amount of practice time available. Without delving into the important, yet dense, biomechanical aspects of acceleration, maximum speed, direction change, or even-more-technical discussion of specific sporting movements such as skating, there are many rather general and simple things coaches can do during practice to address the issue of optimal speed development. The key to doing it correctly is to focus on that window of opportunity during practice when speed (and skill)

training can realistically take place. It is important for coaches to understand that this window is not simply the best option among many during practice – it is the only option during practice. A coach cannot hope to improve speed and skill performance outside of a small period of time at the beginning of practice. Human physiology has dictated the terms, and coaches risk precious time and needless injury when fighting against the way the body was built to function.

In order for an athlete to become faster, he must train fast. Now, that incredibly simple statement may seem rather obvious at first, but the truth of the matter is that most coaches have their athletes perform sprints and other workouts at the end of practice, when the only performance quality being improved is work capacity, and even that may be doubtful. In order to force the human body, particularly the neuromuscular system, to build the necessary structures and systems to produce high levels of speed, that body must be subjected to conditions where such levels of speed performance are required. In other words, if a coach wants to train his athletes to be faster, they must be made to move as fast as they possibly can on a regular basis. Only then will their bodies be forced to adapt in response to this new stress. If this still does not seem clear, think about how athletes are trained to become stronger. An individual is given the task of lifting heavy weights on a consistent basis, forcing his body to create new structures and systems (in this case, added muscle size and more efficient neural pathways), in order to cope with the new demand. The result is that the athlete is stronger than he was before. The same holds true for speed. In order to become fast, one must move very fast on a consistent basis.

Most coaches know enough not to prescribe the heaviest weights at the end of a workout session for the simple reason that the athletes will no longer be able to lift them and will be at an increased risk of injury. Heavy weights are needed to stress the athlete, but he must be able to lift them, and do so safely, if he has any hope of forcing his body to adapt and become stronger. Likewise, an athlete cannot achieve the necessary levels of speed required to force his body to adapt and become faster at the end of practice, and any attempts to do so will greatly

increase the odds of catastrophic injury. Again, human physiology has dictated the terms and a wise coach will learn to work within those given parameters.

The start of the window of optimal speed development lies at the beginning of practice just after the warm up. How long that window lasts depends on the athlete's performance. After a finite number of high-quality repetitions, the athletes will begin to slow down. Once slower movement is electronically or even visibly-detected, athletes will no longer be achieving the necessary level of speed performance to stimulate adaptation. Many or even most of the athletes will not be necessarily winded at this point, and may even want to continue. However, any further attempts at improving speed performance will be the equivalent of beating a dead horse. It is simply no longer possible during that practice session. The coach should switch over to other normal practice methods at that point. It is a critical error on the part of coaches to make exhaustion the marker of quality with regard to most forms of training. That may be adequate for improving work capacity, but certainly not speed. The stimulation and fatigue of high-performance neuromuscular systems is the goal, not systemic and general fatigue. Again, a well-trained athlete may not even really notice the moment his structures and systems that govern high-speed performance have fatigued beyond the point of effective trainability. The coach must be confident in his abilities and knowledge of the human body to know when enough is enough.

There are several basic guidelines a coach can follow to maximize the effectiveness of speed training during this small window of time at the beginning of practice. First, it is recommended that you choose a sport-appropriate [agility drill](#) or some form of sport-specific, acceleration-focused drill that lasts between three and eight seconds in total. Perhaps it is prescribing the first five steps of a sprint, fast break, or breakaway in hockey, or maybe it is an agility drill involving a few rapid changes of direction on a football or baseball field. Whatever you choose it is important to make sure that the drill is done with maximum effort and does not last too long. Once the athlete has become visibly slower and has fatigued the neuromuscular system, any further attempts will no longer contribute toward speed development. This is precisely why rest intervals are not merely a good idea, they are required. For a drill lasting five seconds, rest

intervals of 50 to 75 seconds should be prescribed in order to allow for optimum recovery of the physiological systems responsible for short term, high speed movements. The optimal number of repetitions performed by the athletes will vary from team to team and from individual to individual based upon how rapidly or slowly they fatigue and begin to slow, but in general six to eight repetitions of a five-second drill is sufficient for speed development for the vast majority of athletes. For the most part, any speed and/or agility drill will work as long as it is performed with maximum effort and is specific to whatever sport the athletes are engaged in. If a coach decides his team needs more top-end speed, he could prescribe “[flying 60s](#)” or “[flying 90s](#).” Likewise, if the athletes need to improve their ability to accelerate, particularly when changing direction, then a sport-specific [agility drill](#) may provide the necessary stimulation to force performance gains. In order to ease the transition from speed training to normal sport practice, a coach may choose to add a sport implement or specific movement to the end of the final repetition of the drill. For example, a basketball coach may have his athletes receive a pass and take a jump shot at the end of a high-speed drill. By doing so, a coach can help his athletes see the connection between speed and the very same skills necessary for success in their sport. However, there is a limit to how sport- specific a speed drill should be, and using sporting implements such as hockey sticks and basketballs too often can actually slow down the athletes, who instead of focusing on maximum speed performance, begin to worry about how they are handling a puck, football, or basketball. As a result, the athletes are unable to achieve the necessary level of speed to stimulate adaptation and improvement. This defeats the purpose of the drill. It is best to have the athletes remain as focused as possible on maximum effort and speed during the drill, and only toss in a ball or other implement on the last repetition before the rest interval or the transition to normal practice.

Table 1. Guidelines for Duration, Rest Intervals, and Repetitions

Duration of the Drill	Rest Period	Repetition Guidelines
3 seconds	50 to 75 seconds	8 -12
5 seconds	75 to 90 seconds	6 - 8
7 or 8 seconds	90 to 120 seconds	4 - 6

Optimal Skill Development

As stated above, in order to elicit positive in speed and skill performance, both must be trained during that period of time when the athletes are at their neuromuscular and biochemical peak. At first glance, however, it may appear that speed and skill training cannot occur simultaneously, and that time must be added to practice to accommodate both which may preclude other practice activities. In addition, having to choose one form of training over the other, or putting one prior to the other, presents a conundrum. Coaches do not want to sacrifice skill for speed, or vice versa. In reality, both speed and skill development can take place at the same time, during the same window of practice time, without detriment to either. A clever coach will utilize the rest intervals between each repetition of a speed enhancement drill as an opportunity to train a specific skill. This allows for the athlete to remain active during his rest interval, accentuating recovery by boosting venous return among other things, and to make most of his practice time. Using basketball as an example, a coach could prescribe 10 repetitions of a 3-second agility drill with 60 seconds of rest, during which time his athletes perform a low-intensity ball-handling or shooting drill with maximum focus on improving the skill task. Once the athletes begin to slow in their speed drill, or begin to mishandle the ball or miss shots, it is time to move on to other practice activities. In hockey, the athletes could skate with maximum effort and speed through a pattern on the ice for 5 seconds and then work on stickhandling drills during the prescribed rest interval 75 to 90 seconds. By keeping the athletes in a constant state of high-performance, both with regard to speed and skill performance, and by utilizing the optimum period of time at the beginning of practice where each athlete is at his

peak level of readiness for such tasks, a coach can greatly improve the likelihood of his athletes becoming faster and more skilled at the same time. The speed and skill development session comes to an end once the athletes begin to slow down (as measured electronically or visually) and their skill performance begins to suffer (as measured by results).

Installing a Speed and Skill Enhancement Session into a Practice Plan

A normal practice plan typically includes a general-to-specific warm-up to allow the athletes to become engaged in the sport both physically and mentally. In general, warm-up activities consist of some dynamic jogging and walking movements and possibly some dynamic ground exercises as well. Immediately following the warm-up, and prior to other practice activities, coaches should perform eight to twelve minutes of focused and intense speed and skill development using the information above as a guide. Decisions regarding the specific drills to be used are at the discretion of the coach and the specific performance qualities he believes his athletes need to improve upon. During the actual drill, the first athlete (perhaps a captain or veteran member of the team) will perform the activity with maximum effort. Immediately upon completion, he would proceed to a designated area where a very-specific skill, intrinsic to the sport itself, will be performed during the rest interval. If the coach has successfully divided up the team into groups who begin their warm-up at staggered times, or perhaps has set up several of the same stations of the same drill (with other coaches monitoring progress), the first athlete to complete both the speed and skill drills will be properly-rested and ready to perform the second repetition of the speed enhancement drill. Depending on the classification of the athletes a coach is working with (beginner vs. elite veteran), or their present state of preparedness (off-season vs. in-season), the rest interval can be shortened or extended.

Differentiating Speed and Skill Training from Work Capacity Training

It is important to note, once again, that speed and skill training place an entirely different stress on the human body than work capacity training. In other words, the athlete will look and feel very different when training the former as opposed to the latter. Nearly everyone knows what work capacity training looks and feels like. One does not have to work in athletics to know that an athlete seeking to improve his work capacity will perform long intervals of exercise,

numerous repetitions, and appear sluggish, move slowly, and feel very tired when the training is complete. The physiological effects of speed and skill training on the athlete are such that he may not appear winded in the slightest, and may even be eager to continue training with the thought that he has not “done enough” to force his body to adapt. Indeed, many coaches will feel hesitant to stop a drill when skill or speed performance dips the slightest bit, but stop they must! Once speed and skill training begins to resemble work capacity training, one is no longer improving speed or skill and may even be hindering its development. The fact remains that improvement in speed and skill can only become manifest when the athlete is operating at peak neuromuscular and physiological efficiency. He must be fresh and moving as fast as he can in order to yield the desired results. Work capacity training is important as well, and a successful coach knows that he must include it in the training of his athletes. But the best time for such training is at the end of practice, when the athlete can finally empty all of his energy reserves and push his body to its endurance limits, knowing that he will have food and a lengthy rest at the finish line.

5.4 Number of Repetitions for Speed Development

The charts below can be used as guidance when determining the number of repetitions as well as the proper rest times for speed development. The quality of the drill will begin to decrease as athletes are trained beyond these parameters, as athletes will not be fully recovered. This will lead to improving work capacity of the athletes, rather than top end speed.

Level 1 Athlete – A high school or youth that are just beginning their training or are out of shape.

Duration of Drill	Repetitions	Rest
3 Seconds	6 to 8 Reps	30 to 45 Seconds
5 Seconds	5 to 7 Reps	45 to 75 Seconds
7 Seconds	4 to 6 Reps	70 to 110 Seconds

Level 2 Athlete - Any athlete with some training experience working to continue improving.

Duration of Drill	Repetitions	Rest
3 Seconds	8 to 10 Reps	30 to 45 Seconds
5 Seconds	7 to 9 Reps	45 to 75 Seconds
7 Seconds	5 to 7 Reps	70 to 110 Seconds

Level 3 athlete - Advanced and well-conditioned high school athlete.

Duration of Drill	Repetitions	Rest
3 Seconds	10 to 12 Reps	30 to 45 Seconds
5 Seconds	9 to 12 Reps	45 to 75 Seconds
7 Seconds	6 to 8 Reps	70 to 110 Seconds

Administration of Drills

An effective way to set up cone agility drills for a large number of athletes is to first, select the number of drills you want to run, making sure athletes are trained to their left and right. Then, once the drills are set up in the field or the gym have athletes start at each station. This will allow you to have as many athletes completing the drills as possible and will optimize your time. Athletes will each go through their respective stations when the coach gives the start signal. As an athlete finishes the drill they will walk to the next station and wait for their turn, it is important to set the drills up so that athletes are getting proper work to rest ratios.

Coaching points

These cone agility drills never finish where they started or have athletes work back from where they came from, this allows multiple athletes to complete the drill at the same time without a chance of collision. One of the most effective methods for speed development or conditioning is to set your agility drills up next to each other, with one starting line three yards behind the other. This adds a competitive component between the two athletes and allows them to chase each other going through the different drills. Just be sure that the athletes are always competing in these drills in a safe manner that will not lead to any unnecessary injuries.

Articles related to speed and agility training.

[Neural Perplexity](#) - This article is a Training drill, not a speed development method. this can be done during rest period in between your speed and agility drills.

5.5 Transferring Force and Improving Performance through the Foot and Ankle Complex

Over many years of coaching I have witnessed athletes who have made tremendous gains in knee and hip flexion and explosiveness in their training, yet this training time and advancement never seem to transfer into training results for testing. Then one day about 8 years ago I was able to spot the main reason why all this newly developed athletic potential and speed did not transfer over into testing. The question arose with several athletes I made much stronger in the knee and hip joint, along with explosion from those various joints. However, in testing the athletes' 10 and 20-yard dash we didn't see the results that we anticipated based on their gains everywhere else in the weight room and/or vertical jump. When we tested one particular athlete we saw no advancements in the 10 and 20 yd dash, which was a huge concern and misunderstanding on my part. I realized at this point that I must dig into this to its fullest extent.

As I reviewed the tape of the athlete running the starts in the 10 and 20 I was able to spot something that was of key importance. The original reason I was video taping was to rectify some technical flaws that could improve the 10 and 20 times, but since this athlete was a hockey player, just by practicing the skill he got much better. Anyone that has ever trained a hockey athlete for running realizes how poor the technique often is when they start coming right out of the season. What I saw on this day was that as the athlete's foot struck the ground on the second step I saw that the heel lost 2-3 inches from the point when the toes hit the ground. When I say "lost" I mean there was a reversal of direction of the center of mass in the body and the heel thus, became closer to the ground. This indicated a loss of power being, incapable of helping the athlete run faster.

I then reversed the tape and looked at the first step and the same thing was happening with the athletes out of the initial start. I realized what had taken place: I made the hip and knee joint much more powerful and stronger, but the ankle joint (being a hockey player) couldn't absorb the force from the knee and hip. It was as if all the athletes had been running their times on sand. Since I made the hip and knee stronger the ankle, the weak link in the chain, was unable to absorb the force that dampened the stiffness qualities and those particular testing results By

addressing the ankle complex weaknesses that existed to absorb the force and power we were able to within one week make the ankle complex strong enough to withstand the foot striking the ground.

This can often be seen in a number of populations. The aforementioned example of hockey players is obvious because they spend most of the season in the boot. Basketball players are often suspect because their ankles become weakened in the season due to the excessive taping and braces that they wear. I've seen throwers (shotput and/or discus) have this coming across the ring as they change directions. This technique flaw often happens when they start to spin and transfer across the rear of the ring to the front of the ring. You will see their ankle give and at that point many gains can be made in speed and quickness in the ankle and foot.

One must have a full understanding of the foot/ankle complex and its functions many athletes demonstrate dysfunctional patterns in the said area. Hopefully you have a good medical staff that can manipulate the foot (Or are willing to learn if they can't) to better transfer this force into the ground such that performance improves. Fortunately, I have been able to learn a number of techniques to help manipulate the foot so that it functions better. Without functioning correctly you will never get the entire benefits of the training program.

Let's first look at the basic functions of the ankle foot as it's used in sport. As the foot strikes the ground, whether during acceleration or at top speed, near the small toes as it tries to find the ground. What then occurs is a transfer of forces from the small toes over to the big toe at push off. The transference is utilizing the size and strength of the big toe in running; this action must be used in all movements in training. So keep in mind that in every possible action you must use a few key coaching points/actions with your athletes:

1. Focus on pushing through the big toe

You will see a huge improvement in their jumping ability if you add this one component to your jumping/plyometric programs. Also, in any weight lifting movement that applies extension of all three joints (at a slow or high speed) this also must be implemented to transfer weight room performance to the field. So, in your cleans, cue the athletes to push through the big toe at the top of the pull. This is not recommended for Olympic weight lifters; however, for sports performance it would be highly recommended. The walking lunge is another example of how

this should be implemented. As an athlete would push and finish off the movement at the top, all the forces must be transferred off the foot to the big toe to strengthen it and emphasize its mobility and strength at the range of motion.

2. Calf raises for sport training should be done explosively with a knee bend.

That knee bend must be timed with the extension of the foot at the top when completing the exercise. The feet sometimes misfire on the timing at the beginning of sporting movements, but remember it is an absolute necessity to transfer all the actions on the joint to the sporting field. Bodybuilders would not want to implement this. Athletes should execute this exercise at the end of the a training cycle in the last 4-6 weeks. Just completing heavy loads without the knee bend would be fine, but keep in mind you must always finish with the explosive knee bend calf raises, being sure to push through the big toe at the top.

No matter what sport you play, if it involves movement with the legs, you must constantly coach the athletes up on these finer points of foot function. Essentially, what happens is they're losing all the potential power from the main two joints of explosion and not transferring it onto the speed on the field. I've seen too many athletes underutilize their potential and have a simple biomechanical problem that can't be transferred over because of one joint in the kinetic chain in applying power and force to the ground. You lose so much potential.

Having your squatting potential transfer to the sporting field to optimize results:

Many athletes and/or coaches use an Olympic or powerlifting style squat when they are performing front and back squats when training for sport. Let's keep in mind that these are all excellent exercises in gaining strength for athletes to become faster and more explosive. Please keep in mind that I use these various techniques throughout the year, but you can't get the greatest sport results by not changing up these methods once your athletes have become strong enough. When making this statement one must realize that you can't keep squatting heavier and heavier and have performance keep improving. This has never been the case with any athlete that I've seen. You must have a level of strength that is high enough to perform the task at hand. Once the strength has been developed one must use more sports specific methods to transfer the gains made from the Olympic and power-lifting squat over to the field.

This is where the “sport back squat” comes into play. The sport back squat essentially is taking your wider stance squat and moving the feet of the athlete to a very narrow position (shoulder width or slightly within/outside based on size). The reason for this is that during the majority of performances the athlete completes the feet will be in this position. To facilitate the transfer and strength gains from the Olympic and power lifting style back squat, the last 4 to 6 weeks of training (potentially longer during the in season) would use the sport back squat to get the most specific position of your feet when squatting. Some things change in this particular style of squat, especially with athletes that have a long thigh bone; they will not be able to go as deep as before as in the Olympic or power lifting style back squat. Keep in mind when you switch from the Olympic or power lifting style back squat to the sport back squat that you most likely won't have your athletes go as deep for biomechanical reasons. So realizing that your athletes won't go as deep you must increase the glute and hamstring work in your programming because you will not be utilizing the hamstring and glutes as much as you would in the deeper Olympic and power squats.

Many people often ask, “Well is not squatting deep the ideal thing for my athletes?” I would say unless they are going into some type of squatting competition not to worry about it because in sport they rarely ever get into that deep of a position; also, they will not lose much strength in regard to squatting during the transition time utilizing the sport back squat, which again should be the last 4 to 6 weeks of your training cycles to get optimal transfer of sports performance. Dr. Bondarchuck rarely ever squatted his athletes that deep because they never went into those deep positions in their throwing movements. He felt that squatting at the angles that they would compete at was optimal and got the best results. His results speak for themselves, being arguably the greatest coach in the history of the summer games. Just remember when utilizing the sport back squat, one can also come up with some very specific glute and hamstring exercises to help your athletes transfer into their sporting event.

5.6 The Implementation of Running Technique Work in Ground Based Competition in Triphasic Training

Coaches that have implemented Triphasic Training in the past, or those currently applying its means understand the high stress placed upon their training athletes. In many cases stressors experienced in Triphasic Training reach such levels that the addition of high-intensity running technique training, such as acceleration, max velocity, or change of direction is not possible without potentially causing overtraining. The proper addition of these sprinting technique programs leads to improved force production, efficiency of movement, and reduction of injury during sprinting, which results in improved performance in ground based performance sports. All coaches understand “speed kills,” but the proper addition of these running programs has not yet been addressed in regards to Triphasic Training.

The aim of this article is to provide examples and ideas of how to implement these speed technique programs successfully without causing an overtraining effect on athletes. Touches, or ground contacts, are the typical method to measure intensity of a running program. Keeping the number of touches within the desired stress range for each day is imperative to improving performance without causing overtraining. The nature of the design of Triphasic Training allows for some very interesting applications of these speed technique training methods, specifically within the French Contrast method and the undulated block model.

The French Contrast method utilizes training velocities right at, slightly faster, and slightly slower than the speeds seen in competition. Typically plyometric movements such as hurdle hops, accelerated band jumps, and weighted squat jumps are used, respectively, to fulfill the requirements of this velocity based training method. As touches in sprinting are also considered plyometric in nature, they can be applied within the training day to not only increase stress specificity, but also reduce the likelihood of injury due to over prescribing high-intensity movements. Movements programmed during the French Contrast block of training have the ability to be made specific to the desired technique improvements of the running phase being trained.

Before the specifics of this training can be discussed, it is important each coach knows and understands the training principles being used to train each of these three running qualities. Each of these qualities, acceleration, max velocity, and change of direction, must be trained in a specific manner as each requires a different set of skills athletes must learn.

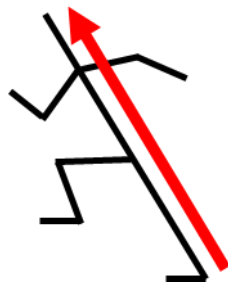
Three Phases of Running in Athletics

Acceleration training is ultimately based around the ability to maintain a forward angle while keeping the hips from falling behind. This position, which is displayed in the graphic below, will look like a falling plank, with the body in a straight line from the extended back leg up through the hips to the neutral position head. By keeping the hips in proper position, power and transfer of force is optimized throughout the kinetic chain used in sprinting by allowing maximal knee drive to be achieved. Knee drive action during sprinting should work in a piston motion with the

ball of the foot striking behind the hip at full extension. An understanding of simple biomechanics shows by striking the ground behind the hip, the athlete is propelled forward while the acceleration angle is maintained. Training of acceleration is associated typically with 10 yard bursts and is highly related to starting strength of the athlete. These short distance bursts are used to ensure acceleration is the only quality being focused on during the session. As an athlete improves their ability to transfer force into the ground, an appropriate angle can be maintained which maximizes the acceleration phase of running

As described in the acceleration paragraph above, the ability to transfer high amounts of force into the ground allows the hips to be locked into a good position while “falling” forward into an acceleration angle. This angle training is crucial to maximizing knee drive, and thus increasing ground reaction forces. When the hips “break” force is lost by the increased needed vertical output to maintain the position. This leads to less force production and less distance being covered with each step. Elite sprinters can accelerate with a greater angle because they have learned the skill of applying more force to support that angle. A coach must be careful when coaching this angle specific training that the hip positioning of an athlete is not “breaking”. If the hips are breaking the athlete does not currently have the force producing capabilities to support running at that angle.

Proper positioning with “hips locked in”



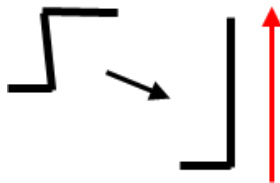
Improper position with “hips breaking”



Maximal velocity training is the ability to maintain proper posture and technique once the acceleration phase has been successfully completed. The ability of the foot to strike directly beneath the hip is of utmost importance to ensuring minimal breaking force is applied through the ground. Throughout technique work shin angle can be used to determine much of the force application direction. It is important that coaches realize the amount of time spent for most team sports in maximal velocity running is relatively small compared to the time spent in the acceleration and change of direction phases of running. Even though this skill is not used often it is important to not overlook the importance of its training. Teaching an athlete how to properly cycle while maintaining an upright posture and strike directly below the hip has the potential to make the difference on an explosive play in any game. Maximal speed is dictated not only by ground reaction forces, but by the ability to produce that force rapidly. It is important to realize speed and rate of force development are both learned qualities and must be trained appropriately to see the desired improvements in maximal speed.

An example of cycling the leg through to ensure foot strike is below the hip can be seen below. The understanding of shin angle and its correlation to force application direction is vital to cueing athletes through these first two phases of running.

Correct Technique: Less braking force is applied due to proper cycling of leg, leads to propulsion forward.



Incorrect Technique: Braking force is applied due to poor cycling of leg, leads to more deceleration.



Change of direction training is improving the ability of athletes to decelerate, or absorb force as they come to a stop, and then reapply that absorbed force in the desired direction, all while utilizing safe mechanics to reduce the likelihood of injury. The eccentric method of training will work in conjunction to improve this ability as no athlete can produce what they cannot absorb in regards to force. Even with this specific training block in the weight room, it is important the skill of absorbing force is applied to the specific means each sport requires. These specific means can range from sprinting and changing direction, shuffling, cross-over running, etc. Ultimately the ability to control your body and the forces while decelerating, and then redirecting those forces through the use of proper edge work of the foot in the desired direction will determine the success of this ability in sport.

The French Contrast Method and the Three Phases of Running

The ability for these three phases of running to be applied in a smooth continuum throughout competition impacts athletic success directly. This ability can be clearly seen in almost any athletic movement or play. An athlete begins their movement (acceleration), must adjust according to the play of the opponent of play (change of direction), and, if a clear opportunity presents itself, must be able to open things up and run at full speed (maximum velocity). As a

performance coach, the knowledge that each of these running qualities requires a separate set of skills leads to the understanding that they will all require different training methods to be improved. As explained above, the implementation of these specific skills in a high-velocity setting, while ensuring athletes avoid being overtrained should be the goal of all coaches. The French Contrast method allows for each of these running skills to be trained without the additional stress of separate training sessions.

The angle of acceleration and the ability to keep the hips “locked in” once that angle is achieved is the deciding factor in maximizing the accelerative abilities of each athlete. The ability to train using angle specific exercises just at, slightly faster, and slightly slower than the velocities seen in competition will lead to increased transfer of training in sport.

The ability to produce force rapidly becomes increasingly important as running velocity increases. This is due to ground contact times being dramatically reduced, particularly in elite sprinters. It is for this reason reactivity is focused on when this quality is being trained. The ability to produce high levels of force in the brief amount of time the foot is in contact with the ground is the ultimate determinant of maximal velocity running.

Absorbing high levels of force and the redirecting that force is imperative for improved change of direction in athletics. The proper use of edges is another vastly important skill in the application of force while changing directions in a high-velocity setting. The implementation of edge work and lateral movements can be incorporated within the French Contrast method to maximize this running based performance quality.

The chart below shows potential methods that can be applied to the three running phases found in athletics while maintaining the potentiating effects of the French Contrast method

French Contrast Method Based on Running Quality			
Velocity	Acceleration	Max Velocity	Change of Direction
Same Velocity	Hurdle Hops for Distance	Hurdle Hops for Distance	Lateral Hurdle Hops
Lower Velocity	Sled Resisted Starts	Resisted Treadmill Run	Band Resisted Shuffle
Higher Velocity	Accelerated Band Bounds	Accelerated Partner Sprints	Accelerated Lateral Band Bounds

Implementation of Training Based on the Weekly Modified Undulated Model

The implementation of these high-intensity stressors must not only coincide with the volume needed for quality adaptation, but must also match the stress and times of training based on the

modified undulated training system used in Triphasic Training. It is not only important these rules are followed closely, but that technique specific training is completed while athletes are fresh. For an article explaining the reasoning for the tactics on the optimization of skill learning [click here](#). The example program shown in this article is based on a five day training model. Coaches must understand this is simply one example that we have implemented and that there are many ways to go about programming these running days into training. Training must always revolve around the needs of the team and the athletes being trained.

Monday – Acceleration day

Acceleration is a highly technical learned skill in running, for this reason the training of this quality is implemented early in the training week, while athletes are fresh and skill learning is optimal. It is also important to ensure quality of reps takes priority over quantity. Coaches can ensure the quality of each rep is high by allowing full recovery between the completed repetitions. The means of this acceleration quality can be trained within the French Contrast method as explained above. This not only increases specificity of the applied stressors, but also improves potentiation of the movement while also avoiding overtraining possibilities. As described above, the goal of acceleration training is to teach the “hips through” position while maintaining a proper acceleration angle. The knee drive in a piston fashion is also of critical importance as this allows the athlete to continually maintain balance and cover ground while the angle is maintained. Coaches should keep in mind the steeper the angle, the stronger the kinetic chain must be to maintain proper hip position. The exercises shown in the French Contrast method above are designed and utilized to specifically improve the desired qualities leading to improvements in the acceleration running phase.

Tuesday – C.O.D. Conditioning for Recovery

After the higher-intensity, quality, skill learning day required by acceleration training, it is important to ensure athletes are not over stimulated on concurrent days in regards to technique work. To ensure athletes are prepared for the next skill learning training, which will occur within the Thursday training session, a lower-intensity training session can be used to improve recovery from the previous day. The targeted quality of training will be change of direction and it will be completed after the lift. Different movement patterns can be used such as shuffling, carioca, cross-over running, back pedaling, etc. to accentuate the edge work involved in transferring force applied while changing directions. Although this method is completed with a generally lower-intensity, the cutting mechanics used when changing direction must remain constant with those used in high-velocity settings. This will prevent bad habits to be formed and reduce the likelihood of injury. A basic example of this training can be seen in [Metabolic Injury Prevention Running](#). However, the times of each rep can be manipulated to match the specific time of Tuesday training.

Wednesday – High Intensity Continuous Training (HICT)

This training quality is a relatively new method that incorporates both anaerobic and aerobic qualities. HICT is completed after the Wednesday training session and functions, in this model, to enhance recovery after the high-intensity training day. This method of training can be completed while coinciding with the modified undulated training model as shorter, but intense, training times applied within the day as HICT incorporates short burst movements and then rest times of 3 seconds. HICT improves blood flow to tissue while also utilizing the high-threshold, type II, explosive muscle fibers that conventional aerobic training will not recruit. Clearly the use of this training can enhance recovery while preventing the explosive muscle fibers from becoming more aerobic in nature.

Thursday – Acceleration, Max Velocity, or C.O.D. High-Intensity Day

Training completed on a Thursday is very similar to that of the Monday session. Exercises specific to the desired quality will be completed during the French Contrast method to increase potentiation. Quality of each repetition is important again, but the set-up of Triphasic, through the use of small, active recovery methods between high-intensity exercises, allows for high-quality repetitions to be completed. The decision of which quality to be trained completely relies on the needs of the team, or individual athlete if you have the staff to support that specificity of training. The training of the qualities could also progress based on the block method. Acceleration could be trained early in the process as it is dictated by strength, with maximal velocity being trained in the later blocks as it relies much more on the reactive ability of the athlete. Change of direction can also be implemented on this day in a high-intensity manner if a coach deems necessary. We personally implement this training quality on Friday.

Friday – C.O.D. Volume Day

As stated above, we have implemented a change of direction day on Friday's in a volume based manner. This method, along with the rest of the week, is set up to work along with the modified undulated training style used within Triphasic Training. It is important to continue to train proper deceleration patterns to maximally reduce potential injuries. Work on this day can be measured using heart rate monitors and should be completed around 70% of maximal heart rate of each individual. This not only allows volume of training to be accumulated but also adds stress to the athlete prior to the weekend recovery period.

The chart below shows just one possible tactic used to implement the training methods as described in the previous paragraphs. A performance coach must remember the purpose of each training quality within each training day and the timing of occurrence for the optimization of skill development.

Weekly Training Based on Modified Undulated Block Model					
	Monday	Tuesday	Wednesday	Thursday	Friday
Intensity/Volume	Moderate/Moderate	Moderate/Moderate	High/Low	High/Low	Low/High
Quality Trained	Acceleration	Change of Direction	High-Intensity Continuous Training	Acceleration/Max Velocity/Change of Direction	Change of Direction
Timing of Training	Applied within French Contrast	Post-lift	Post-lift	Applied within French Contrast	Post-lift
Purpose of Training	Skill Learning High-Intensity	Recovery Method	Recovery Method	Skill Learning High-Intensity	Increased Volume of Training Moderate-Intensity

Progression of Movements through the use of the Block Training Method

With the weekly set up of running shown above based on the modified undulated model, the final aspect a coach must consider is long term progression of exercises, with the ultimate goal of leading to increased performance. The ability to improve transfer of training, through the use of specific velocity based training protocols, becomes of increased importance as the competition approaches. Coaches familiar with the block training method used throughout Triphasic Training understand training is based on the residuals of each performance parameter. Strength of a movement is trained first within the above 80% block, then the same movement is trained within the range of 55 to 80% to maximize power, with the final block being completed training the same movement patterns but at an intensity of below 55% to increase specificity of training. The idea of training just faster, just at, and just slower than the speeds seen in the athletic event should be considered not only in the French Contrast method, but throughout the entire peaking block to continue to increase transfer of training, which leads to improvements in performance.

Progression Based on Block Training			
Block Parameters	Quality Trained		
	Acceleration	Maximal Velocity	Change of Direction
Above 80%	Lighter sleds for technique to start Increase weight to maximize strength	Resisted treadmill running	Resisted lateral training
55-80%	Lighten sled load to increase velocity of training	Flying 40's maintaining proper technique	Decreased resistance lateral training
Below 55%	Unloaded starts for mastery of acceleration technique	Overspeed training with partner	Unloaded lateral training with reactive response

Understand these programs are designed for the collegiate level athletes we, as performance coaches, deal with on a daily basis. These are not designed specifically from world-class speed coaches dealing with elite track and field athletes. All coaches must realize these training plans can be adjusted to fit the specific needs of each group of athletes being trained. These adjustments allow great variability in training all based around the compatible tactics utilized to optimize training and performance between the weight room and running technique requirements needed in athletics.

6.1 The Workout

[Click Here To download a complete 32 week Strength Program](#) used by many high school strength coaches. Place your athletes name and one rep max into the sheet in order to individualize the workout to each athlete.

- If you are having trouble downloading, use a different web browser or click here then under “file” select “Download” [32 Week Strength Program](#)

This program is designed to increase any athlete’s abilities in the weight room, which when periodized correctly will transfer to their sporting event. This training will increase strength, power, and rate of force development. These are all necessary to increase the performance and efficiency of your athletes.

6.1 Maxing Out Without Burning Out

How to calculate an athlete's max 365 days a year

Coaches always want to know exactly where their athletes are at, weight wise, and the progress that they are making. Being able to quantify results with actual data not only motivates the athlete to continue to push himself/herself in the weight room but also validates the methods and practices of the coach. Despite the need and benefits of having up to date numbers for an athlete's 1RM coaches are often hesitant to take the time to perform 1RM testing. Whether it be out of concern for injury to the athlete, interference with normal lifting schedule or excessively taxing the nervous system, coaches tend to shy away from max testing other than once per year.

But what if there was a way for a coach to test an athlete's max that could be added safely and effectively to any workout? One that does not tax the athlete's nervous system. This would enable the coach to make adjustments almost instantly to an athlete's workout, enabling them to maximize gains in a short amount of time. To do this, all the coach has to do is add on additional set to the end of the warm-up at 80% of the current 1RM the day they want to test, or adjust, the athlete's max.

A normal and effective warm-up protocol for the bench press may look something like this:

- 1 x 5reps @ 55% 1RM
- 1 x 3reps @ 70% 1RM
- 1 x 1reps @ 80% 1RM

This allows the athlete to quickly stimulate the central nervous system and activate the large, high-threshold motor units without stimulating fatigue. Now, let's say that it is the first day of a new microcycle and a coach wants to test his athletes to see if their bench numbers need to be

increased for the upcoming phase. To do this the coach would have an athlete perform one set at 80% of their 1RM for 3-reps. For example:

- 1 x 5reps @ 55% 1RM
- 1 x 3reps @ 70% 1RM
- 1 x 3reps @ 80% 1RM (Test Set)

Closely observing the athlete perform the lift by watching the speed of the bar and the level of exertion the athlete exhibits the coach can estimate how many reps the athlete could have actually performed. If the athlete performed the set with ease, maintaining speed throughout the concentric portion of the lift, the coach may infer that the athlete could have performed 5, 6 or more repetitions, in which case the athletes max has increased. If the athlete performs the repetitions but appears to struggle or the bar moves at a slow, steady pace, then their max is likely unchanged and should remain the same.

It should be noted that the athlete does not need to perform all three reps in the testing set. As a coach becomes more proficient at observing the athlete, he/she will be able to estimate the total number of reps that can be performed at a given weight by watching only one or two repetitions. This is beneficial because it diminishes the stress placed on the athlete even further, taking less energy away from their work sets. For example:

- 1 x 5reps @ 55% 1RM
- 1 x 3reps @ 70% 1RM
- 1 x 1-3reps @ 80% 1RM (Test Set)

After the testing set is completed the athlete can proceed with the rest of the scheduled workout with no adverse effects to performance. Once the coach estimates the number of repetitions the athlete could have performed that number can be plugged into the "[Rep Max Calculator](#)" or

http://www.xlathlete.com/view_formula.jsp?formula_id=18&browse_sport_id=0 to calculate the athletes new 1RM.

Being able to watch, evaluate, and change an athlete's max within the outlines of a lifting schedule gives a coach a decisive advantage. It ensures that the athletes are using the correct weights and percentages to maximally tax their system at all times. The biggest factor in dictating progress in the weight room is intensity. If an athlete has adapted to something where the stimulus no longer has a high enough intensity to elicit change, then the athlete will plateau. Being able to continually change and accurately measure an athlete's 1RM enables a coach to maintain the right intensity and make gains 365 days a year.

6.3 An Example Programs

[Click here to Download a Successful `` Week Football Program that your able to put in athletes maxes and print sheet off](#)

Another Sample Workout - Day One

Day 1	Week 1		Week 2		Notes
	Reps	Load	Reps	Load	
Back Squat	5	45	55	1	warm up
pair w/					
Back Squat	3	60	65	1	warm up
pair w/					
Back Squat	1	80	80	1	warm up
Back Squat	3	80	85	4	
pair w/					
Hurdle Hop	4			4	height
pair w/					
Squat Jump With Weight	4			4	
Lunge Hops	3			4	each leg
pair w/					
Hip Flexor Prone Contralateral	6			4	
pair w/					
Cuban Press Incline FB	6			4	
Bench Press	5	45	55	1	warm up
pair w/					
Bench Press	3	60	65	1	warm up
pair w/					
Bench Press	1	80	80	1	warm up
Bench Press	3	80	85	4	
pair w/					
Med Ball Pass One Arm	4			4	
pair w/					
Push Up Drop	6			4	
DB BO Row	5	30	30	3	
pair w/					
DB Step Up	8	10	10	3	
pair w/					
DB Shoulder Press	6	15	20	3	
Glute Ham Hyper	5			3	
pair w/					
Zottman Curls	8			3	
pair w/					
Anterior Tibialis Band	6			3	

Day Two – Sample

Day 2	Week 1		Week 2		Notes
	Reps	Load	Reps	Load	
Back Squat	5,3	50	65	1,1	warm up
pair w/					
Back Squat	1	80	80	1	warm up
pair w/					
Back Squat	1	90	95	5	1:30 rest
Bench Press	5	45	55	1	warm up
pair w/					
Bench Press	3	60	65	1	warm up
pair w/					
Bench Press	1	80	80	1	warm up
Bench Press	1,1	90	90	4	0:0:0:20
pair w/					
Bench Adduction	4			4	
pair w/					
DB SL Calf Raise	10	15	15	4	
Glute Bar Lift	6	75	80	3	
pair w/					
Infraspinatus	6			3	
pair w/					
Pull Up	6	50	50	3	
DB Walking Lunge	6	30	30	3	each leg
pair w/					
Cobra	10			3	
pair w/					
DB Curl To Press	6	15	15	3	
DB Incline Bench	6	25	25	3	
pair w/					
DB RDL	6	25	25	3	
pair w/					
GH Over Head Sit Up	6			3	

Day Three – Sample

Day 3	Week 1			Week 2	
	Reps	Load		Sets	Notes
Front Squat	5	35	45	1	warm up
pair w/					
Front Squat	3	45	50	1	warm up
pair w/					
Front Squat	1	60	65	1	warm up
Front Squat	3	60	65	4	
pair w/					
SL Hurdle Hop	4			4	
pair w/					
Speed Skater For Distance	4			4	
Bench Abduction	6			4	
pair w/					
Face Band Pull Apart	8			4	
pair w/					
Figure 8 Lateral Supine	8			4	
DB Bench	4	25	30	4	
pair w/					
Reactive Bench Toss	4			4	
pair w/					
DB SL Calf Raise	12	15	15	4	
DB Walking Lunge	8	20	25	3	each leg
pair w/					
Alt V Up	8			3	each side
pair w/					
Ankle Pops	12			3	
Seated Row	6	30	35	3	
pair w/					
Ankle Band Work	8			3	
pair w/					
DB Side Lat Raise	8	5	10	3	
SL Glute Bar Lift	8	25	30	3	
pair w/					
DB Curl to Arnold	8	10	10	3	
pair w/					
Anterior Tibialis Band	8			3	

6.4 Videos for high school Triphasic training concepts

Below are examples that will allow a further understanding of the Triphasic Training Method in regards to its use in high school athletics.

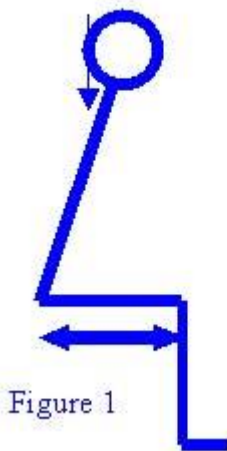
[Triphasic Training for High School Athletes](#)

[Triphasic Training for High School Athletes 3 Day Template Video](#)

7.1 Coaching The Squat For Taller Athletes

When teaching young athletes to squat, coaches need to remember that squatting is not a “cookie-cutter” exercise. Not everyone’s squatting form is going to look the same. This is especially true of taller athletes, or athletes with long thighs (femurs). Figure 1 depicts an athlete of average height with proportional femurs performing a squat. Such an image is often seen accompanying typical textbook-style descriptions of proper squatting form.

However, when training taller athletes, a coach must recognize the inherent biomechanical disadvantage that a taller athlete experiences when squatting compared to the efforts of shorter athletes.

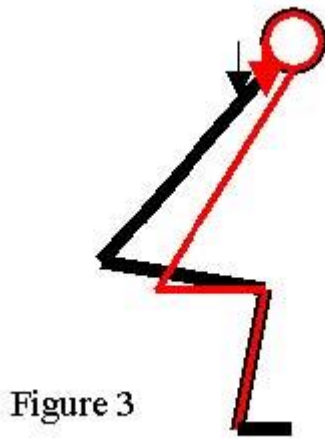


This must be accounted for.

Figure 1: Average-Sized Athlete Squatting

When an athlete performs a squat, there is a great amount of torque about the knee and hip joints. When an athlete has a long thigh (femur), there is considerably more torque about the knee joint when compared to shorter athletes. To counteract that increased amount of torque, it has been said that the athlete should incline the trunk (or bend farther forward) in order to bring the center of gravity closer to the knee joint, thus reducing torque. However, to safely incline the trunk, and athlete must position the bar further down his or her back, which will put

more stress upon the hip joints and hip extensors while lessening the stress on the knee joints. This scenario is depicted in Figure 2.



In order to safely squat an athlete with long thighs, the coach must tell the athlete to spread out his or her feet. This will not actually shorten the length of the thigh, but will help the athlete keep his or her center of gravity closer to the knee joint while performing a safe and effective squat. Being able to squat correctly will allow the athlete to increase the torque about the hip joint and less about the knee joint, thus shifting the stress to the glutes and hip extensors. If an athlete uses a wide stance when squatting, special attention must be paid to the feet as well as how the knees move during the exercise. As a result of utilizing a wide squatting stance, an athlete will tend to place more weight on the medial side of his or her foot, which may cause the knees to move inward. Coaches need to be aware of this, and must correct this error when it appears (by encouraging the athlete to keep his or her knees in line with their legs).

In theory this may seem like a good idea. In practice, however, an athlete who does not possess a strong enough back to lift the weight in such a manner may set him or herself up for injury. The stress applied to the back when the torso is more inclined is much greater than that which is applied to a straighter or more-upright torso. So if this is the case with your athlete, what is the solution?

Squatting with a wide stance will help provide a biomechanical advantage for taller athletes by reducing torque about the knee joints. This has the added benefit of allowing the athlete to more easily reach a parallel squatting depth. Figure 3 helps to illustrate this important point. The picture shows one athlete utilizing two different squatting stances. The figure in black shows this athlete squatting with a more traditional and narrower stance. The same athlete is shown using a wider squatting stance in red. The wider stance allows the athlete to obtain a lower squatting depth than a more traditional and narrower stance.

7.2 Using Cluster Sets

Using cluster sets in training is an excellent way to stress an athlete, especially during phases of considerably intense loading. A cluster set allows for more repetitions to be made at a weight that an athlete would not normally be able to lift two or more times in succession. This type of set requires a short amount of rest to be taken between repetitions in order to restore or partially-restore the short-term energy systems used to produce bursts of highly intense movement (as seen when performing near-maximal lifts in the Back Squat or Snatch). The use of maximum or near-maximum loads stress the systems responsible for neuromuscular coordination, in which the recruitment of faster and larger motor units is increased, rate-coding increases, and the synchronization of motor unit activity becomes optimal for maximum force output. It is therefore beneficial for athletes looking to improve their overall strength levels to train with weights at or near their maximum. However, it can be difficult to perform several repetitions with this type of load in succession, which is where the use of cluster sets becomes warranted.

By including 10 to 30 seconds of rest between repetitions to take place, each repetition is accomplished with maximum or near-maximum energy on the part of the athlete, as opposed to a decreasing amount of energy with each repetition of a continuous set (performing each repetition one-after another without rest in between). This ensures that the athlete is performing more maximum or near-maximum efforts per workout, which may ultimately allow for a greater improvement to take place. The bar should be returned to the floor or rack when resting.

Support for Cluster Sets

In a study by Haff et al, average barbell velocity in the clean pull was significantly higher in the sets which utilized a cluster format, with 30 seconds of recovery between repetitions at both 90% and 120% of maximum than sets performed with a more traditional set-up (each repetition

performed continuously without rest in between). Acute fatigue in the neuromuscular system becomes noticeable when a decrease in force production occurs. The cluster set, with its built-in recovery time in between repetitions, allows for some of the replenishment of phosphocreatine (PCr) energy stores, which are utilized for short and intense movements such as maximal lifts. Traditional set design depletes these stores and does not allow for recovery, leading to lactate production. This reduction in PCr stores and accompanied increases in lactate results in the decrease of muscle force production.

If training with maximum or near-maximum loads is to have the desired effect of improving strength, some rest between repetitions should be implemented in order to ensure that more of these repetitions take place. The more work (or repetitions) that an athlete can perform with these intense loads, the better his or her force producing capabilities may become. Even with as little as 15 seconds of recovery, an individual can perform at near maximum force production capacity. A cluster set allows the athlete to perform greater amounts of work while not experiencing the fatigue and lowered force output normally associated with traditional sets.

Examples

When programming for a particularly intense training session, a coach may decide to use cluster sets in place of more traditional set design. For a workout including the Snatch at 90% of maximum, a coach could use a traditional set format, and prescribe five sets of two repetitions:
 $6 \times 2 @ 90\% = 12$ repetitions at 90%

If the coach wanted to use cluster sets instead, with one-to-two repetitions performed followed by 30 seconds of rest (bar on floor, no hands on bar), the set may appear as follows:
 $6 \times (2+2) @ 90\% = 24$ repetitions at 90% or $6 \times (1+1+1+1) @ 90\% = 24$ repetitions at 90%
The cluster sets could be designated in the program by use of a tempo. In the case of the examples provided the tempo would read:

0:0:0:30

('0' representing the lift phase, catch, and recovery phase of the lift, and the '30' representing how much rest in between reps)

By utilizing cluster sets, the coach can schedule twice the amount of repetitions per set without risking the athlete becoming too fatigued and diminishing his or her force output capacity. The athlete benefits from training with high loads for more repetitions than what could be achieved using traditional set design.

References

Haff, G.G., Whitley, A., McCoy, L.B., O'Bryant, H.S., Kilgore, J.L., Haff, E.E., Pierce, K., & Stone, M.H. (2003). Effects of different set configurations on barbell velocity and displacement during a clean pull. *Journal of Strength and Conditioning Research*, 17 (1). 95-103.

Author: Jonathon Janz, MS, CSCS, USAW

7.3 Managing the Workout

To manage hundreds of athletes at different levels of training, review the **XLathlete Simple Software Program**. This software allows unlimited programming options.

[Download Sample Versions with some Restrictions Here](#) - If having trouble downloading use different web browser.

[Download Tutorial for the Software Here](#) - If having trouble downloading use different web browser.

[Review the 5 Different Options of Software](#)

**TABLE 3.10: CONCENTRIC LOADING
PARAMETERS AND THEIR RESPECTIVE MESOCYCLE**

LOAD	TOTAL TIME OF CONCENTRIC	REP RANGE	SETS	MESOCYCLE
97.5%	REACTIVE	1	1-2	ABOVE 80%
95%	REACTIVE	1	2-3	
90%	REACTIVE	1-2	3-4	
85%	REACTIVE	1-2	3-4	
80%	REACTIVE	1-3	4-5	
75%	REACTIVE	1-3	4-5	55-80%
70%	REACTIVE	2-3	4-6	
65%	REACTIVE	3	4-6	
60%	REACTIVE	3	4-6	
55%	REACTIVE	3	4-6	BELOW 55%
50%	REACTIVE	3	4-6	
45%	REACTIVE	3	4-6	
40%	REACTIVE	4	4-6	
35%	REACTIVE	4	4-6	
30%	REACTIVE	4	4-6	

7. 4 Plyometric

Plyometric training is used consistently throughout Triphasic Training and is the optimal method to improve explosiveness in your athletes. This style of training is the most comparable to a sporting action in regards to the speed of the movement. This plyometric training, in combination with other triphasic methods, leads to a more powerful, efficient athlete.

The Following are key Plyometric for high school athletes that can handle them

Box Jump

Alternate leg Bounding

Power Step Up

Russian Plyo Box

Speed Skater For Distance

Squat Jump

Squat Jump Pause

More Advanced Plyometrics

[Lunge Drop Isometrics With lunge Jump](#)

[Box Drop Reactive Lunge Jump](#)

[Broad Jump](#)

[Broad Jump Multiple](#)

[Depth Jump](#)

[Drop Rebound Box Jump](#)

[Hurdle Hop](#)

[Lunge Box Drop](#)

7.4.2 Accelerated/Assisted Plyometric Programming Considerations

Approximately nine years ago, I was fortunate to come across a motion analysis system that our mechanical engineering department possessed. This device contained nine cameras placed systematically such that it could detect a multitude of human movements and joint angles to find out what was really going on in sport. While utilizing this system, I analyzed a number of athletes in the weight room and on the field with this elite camera system. To be clear, I couldn't set these cameras up myself. Our strength and conditioning staff had to have biomedical engineering students assemble the entire system in order to run these tests and analyze various movements.

One day while analyzing the data, I began to realize that during the second and third step in running and skating, I couldn't mimic the speed qualities that took place during those steps in the weight room by using conventional plyometric exercises. At that point it dawned on me to unload the human body while it did those jumping movements to mimic the speed at which the second, third, fourth, and fifth step in skating and running took place. Keep in mind, I usually use double leg plyometrics with this particular accelerated method because of the speed involved in the extension of the hips and knees. I realize that many strength coaches think single leg plyometrics are more sport-specific because sports are played mainly on one leg. This is an opinion I can't disagree with. However, what I will disagree with is that a single leg plyometric, as shown by this motion analysis machine, is so much slower in producing forces that it doesn't mimic what is taking place in sports. In real life, single leg plyometrics are beneficial in teaching the human body to be more explosive for the same reason that double leg plyometrics teach a constant load (body weight) to accelerate faster. With double leg plyometrics, it must be noted that because the weight per limb is distributed, there is a higher potential for developing speed because of the shorter amortization phase, and thus, a more explosive rebound.

Most coaches are incorrect in their programming because they place single leg plyometrics after double leg plyometrics. They believe this to be the logical training progression because the

single leg requires more strength. Within a block scheme, the programming of plyometric jumps should look like this:

1. Single leg plyometrics
2. Double leg plyometrics
3. Single leg accelerated plyometrics
4. Double leg accelerated plyometrics

Right there you have four blocks of training utilizing the natural progression of least sport specific to most sport-specific for peaking an athlete. Single leg plyometrics should be viewed more as a strength plyometric whereas double leg plyometrics develop speed. In closing, when using the accelerated plyometrics, one must keep in mind that to get the speed and explosive qualities to transfer to the sporting field, you must provide movements that mimic speed and joint angles of what is taking place in the sport you're training.

Below are two various sample of considerations for just Accelerated band jumps

Accelerated Jump Series		
<u>Accelerated Band Jump</u>	<u>Accelerated Band Jump pause</u>	<u>Accelerated Band Jump Reactive</u>
<u>Split Band Jump</u>	<u>Split Band Jump w/ pause</u>	<u>Split Band Jump Reactive</u>
Block 1 – 2 to 3 Weeks	Block 2 – 2 to 3 Weeks	Block 3– 2 to 3 Weeks

- Block 1 [Accelerated Band Split Lunge Pause Jump](#)
- Block 2 [Accelerated Band Split Lunge Jump](#)
- Block 3 [Accelerated Band Split Lunge Jump Reactive](#)
- Block 4 [Accelerated Band Squat Jump Pause](#)
- Block 5 [Accelerated Band Squat Jump](#)
- Block 6 [Accelerated Band Squat Jump Reactive](#)

7.4.3 Other Considerations

Other guidelines and considerations for plyometric training can be viewed through the links below.

[Plyometric Guidelines](#)

[Total Body Shock Plyometric Workout](#)

[Upper body Plyometric Program](#)

8.0 Neck Training

By: Brett Bueker

Introduction

Just about every kid that buckles up the shoulder pads and snaps on the helmet and chin strap, dreams of playing in the NFL someday. They dream of throwing the game winning touchdown pass to win the Super Bowl. They dream of catching the game winning touchdown pass in front of 80,000 screaming fans. They dream of kicking the game winning kick as time expires on the clock. They spend countless hours playing backyard football, drawing up plays in the dirt, wearing their favorite player's jerseys, mimicking those game-like situations with their buddies. The days of backyard football evolves into flag football and pee-wee football leagues. The young aspiring players are continuously taught and reinforced with the proper techniques of tackling, blocking, throwing, catching, route running, and ball carrying. As they progress into the high school and collegiate level, they are taught various offensive and defensive schemes and how to gameplan against opposing offenses and defenses.

What quality makes a football player great? It may not necessarily be talent or God-given ability. Arguably, one of the most important qualities of a successful football player is his ability to think. The ability to think is the first and most important step in a successful play. One must be able to think, process that thought, react to that thought, and move kinesthetically in space to perform a successful play. If a player can do this extraordinarily well (along with having some athletic talent/size/speed), he may get a shot at achieving that childhood dream of playing in the NFL.

What part of the body enables a player to think, process, and react to perform a successful play? The brain. All of the higher cognitive processing abilities we naturally possess occur in the brain and down into the spinal column. In addition to the teaching of proper mechanics and techniques of football related movement patters, we must teach the proper methods of protecting the brain and spinal cord. We must develop a shield of armor for physical contact. In fact, one of the most important and helpful things we can do as coaches for

a player in any sort of contact sport, is off the field: neck, jaw, mandible, trap, and shoulder girdle training.

Think of the head, neck, trap, and shoulder girdle as a tree. A tree has strong roots holding the trunk and branches in place so it can withstand the physical punishments of nature. If a tree does not have strong roots and a strong trunk, the tree will break and/or collapse. Just as a tree has roots, so does the neck. The trapezius, upper back muscles, and entire shoulder girdle act as the roots to the neck, head, and brain. The neck and jaw musculature is the trunk of the tree. The head is the most important branch bearing fruit (cognitive thinking). We must have strong and stable roots (traps, upper back, shoulder girdle) to ensure we have a stable foundation. We also must have a strong trunk (neck, jaw musculature) to help absorb and the outside physical forces. Having these critical pieces will help stabilize and anchor the head and brain, hopefully decreasing the concussion/neck injury rate.

In lieu of all of the recent lawsuits presented by the NFL Players Association regarding concussions and brain damage of current and former players, neck training will most likely become a required part of each strength and conditioning program in the near future.

“Playing Football is Like Getting into 30-50 Car Accidents Within a 3-Hour Period”

-Mark Watts

According to the IMPACT (Immediate Post-Concussion Assessment and Cognitive Testing) Inc., there is an estimated 4 to 5 million reported cases of concussions each year. FOUR to FIVE MILLION. The scary fact is that number is probably even higher due to many cases of concussions going unreported each year due to lack of proper diagnosis and/or no baseline and follow up testing. IMPACT also states the prevalence of concussions in middle school age kids is on the rise as well. An NCAA study shows that football has the highest prevalence rate of concussions in all contact sports. An increase in middle school age concussion rates and football having the highest prevalence rate in all sports is a double edged sword. This is a lawsuit waiting to happen. Neck training needs to be addressed, just as the proper techniques of

tackling, to these youngsters. If this paragraph has not been an eye opener to the importance of preventative measures of concussions, you need to re-evaluate your priorities.

Here at Iowa State, we try to stay up to date with all of the newest and effective methods of training our athletes. Neck, jaw, trap, upper back, and shoulder girdle training has been a staple in our program since Coach Yancy McKnight and Coach Clayton Oyster arrived in the winter of 2009. Our number one goal as a strength staff is to help our players stay healthy so they can perform to their fullest potential out on the football field. We feel neck training has such an important role in protecting our players on the field, such that every strength and conditioning workout conducted with the football team at Iowa State targets neck training in some form or fashion. To help hammer home the importance of neck training in our strength and conditioning program under Coach McKnight, our newly constructed sports performance center is equipped with ten 5-way neck machines located in the center of our room. The 5-way neck machines are equipped with 14 different pin settings to help target all angles, working various musculature of the neck up into the head and jaw. It allows us to work neck flexion, extension, and lateral flexion. The 5-way neck machine is also equipped with handles to perform a shrug while seated on the machine. This machine alone allows us to perform 5 different (actually a lot more by changing the pin settings) methods of neck training: 1) Flexion 2) Extension 3) Lateral-right 4) Lateral-left 5) Shrug.

The Roots

There are multiple ways to train the roots of the neck, a.k.a. the traps, upper back musculature, and shoulder girdle. Any form of shoulder/scapular elevation (shrugging) will help strengthen the trapezius muscles. This can be accomplished by any variation of the following:

- BB Shrug (various grips)
- BB Overhead Shrug (various grips)
- Trap Bar Shrug
- BB Mountain Shrug (upright row to navel, shrug up, retrace shrug, retrace upright row to starting position)

- DB Shrug (with any double or single arm combination, neck extension or lateral flexion)
- Band Shrug (with any double or single arm combination, neck extension or lateral flexion)
- 5-Way Neck Machine Shrug
- DB Inverted Supported Shrug

Trap training is not just limited to shrugging exercises. Many different Olympic movements involving triple extension and shoulder/scapular elevation also produce great trap training. Some may argue that these Olympic style movements involving triple extension and shoulder/scapular elevation will in fact have a greater training effect on the traps because a much larger weight is being lifted with greater force production stimulating more motor units/pathways in the trap area. If you are pressed for time on trap training, keep your Olympic movements in your program because they are a greater “bang for your buck” exercise (involving a larger number of joints and larger muscle groups). These Olympic movements will help with force and power transfer to your specific sport due to the triple extension. The Olympic movements that require shoulder, scapular elevation include:

- Barbell Power Clean (catch or pull, from various scoop/box heights)
- Dumbbell Power Clean (seated or standing, catch or pull)
- Trap Bar Clean Pull (various scoop/box heights)
- Barbell Snatch (catch or pull, from various scoop/box heights)
- Barbell Hang Snatch
- Dumbbell Single Arm Snatch (pull or catch)
- Dumbbell Single Arm Hang Snatch (pull or catch)
- Hang Clean (catch or pull)
- Barbell Dead Lift (various grips/heights)
- Trap Bar Dead Lift (various heights)

Working down deeper into the ground is the upper back root of the neck tree. The upper back musculature is worked by any scapular retraction and/or scapular depression movement. Your muscles are continuous with the rest of your body. By strengthening the musculature of the upper back, your scapula can be set into the proper anatomical position, which will set your trapezius in the proper anatomical position, which will set your neck musculature in the proper anatomical position, which in turn helps maintain proper and safe anatomical head posture. To help set your upper back into proper anatomical positioning, be sure to balance the amount of pushing and pulling exercises throughout the week. By having too many pushing exercises, you will put yourself in position where your shoulders are rolled forward (thoracic kyphosis), putting additional, unwanted stress on the neck. If there is any imbalance throughout the week, error on the side of more pulling movements, so at least your shoulders are pulled back into the proper position. Many different exercises can be implemented to strengthen the upper back musculature:

- Band Retraction
- Mini Band Pull Apart
- Mini Band Overhead Rainbow
- Band/Rope Face Pull
- TRX High Row
- Barbell Bent Row (various grips)
- Dumbbell Bent Row
- DB Single Arm Row
- BB/TRX Inverted Row
- Pull Ups (various grips)
- Lat Pull Down
- Cable Low Row
- Landmine Single Arm Row

The third root of the neck tree is the shoulder girdle. It is important to maintain symmetry within the shoulder girdle to help maintain proper anatomical position. Once again,

everything is connected. When doing various pressing movements such as bench press, incline press, and dips, your anterior deltoid acts as a synergist muscle group to the pectoralis (chest) to help stabilize the shoulder girdle and assist in the pressing movement. So you get lots of anterior deltoid work without even knowing it. Be sure to balance out the shoulder girdle by working the posterior deltoid, teres major, and infraspinatus. Many pulling movements will help strengthen the shoulder girdle and are better “bang for your buck” exercises. Exercises that help strengthen the shoulder girdle include:

- Band Retraction
- Mini Band Pull Apart
- Mini Band Overhead Rainbow
- Band/Rope Face Pull
- TRX High Row (+ Rotation)
- I/Y/T/A/W/L Raise (Dumbbell/TRX/Plate)
- Dumbbell Lateral Raise (Bent/Standing)
- Dumbbell Front Raise (or any variation)
- BB Bradford Press
- DB Arnold Press
- Shoulder Box
- Cuban Press
- Internal/External Rotation

The Trunk

In addition to developing strong roots, we must also develop a strong shield of armor for the trunk of our tree. A football player must be able to absorb the contact forces of repeated physical collision. We must try and strengthen the different neck musculatures to achieve this wanted stabilization of the head and brain. Mark Watts, strength coach and director of education at EliteFTS, breaks down neck musculature movements into eight different categories:

1. Flexion (head forward, chin down)
2. Extension (head backward, chin up)
3. Lateral Flexion (tilting head to side)
4. Protrusion (head & chin forward)
5. Retraction (head & chin backward)
6. Tilt (chin upward)
7. Nod (chin to chest)
8. Rotation (turning head)

Movements in these different planes need to be addressed and implemented into the strength and conditioning programs to help protect your athletes against concussions. Now you may not have room to program all eight of these movements into a mesocycle, so assess your athletes and pick and choose the ones you feel like to need to address. Then you can switch it up the following mesocycle. Don't have time to complete neck training within your workout? Bad excuse. Find time. If you are in a pinch for time with the 8-hour rule, try implementing neck training into your pre-activity preparation (warm-up), pair neck with various movements within your workout as a superset, or at the end of the workout as a group as part of a "cool down". If keeping athletes healthy and injury-free is your number one goal as a strength coach (as it should be), neck training will be a priority to you and your staff.

Whether an athlete is being introduced to neck exercises or they have been training neck for years, proper technique and time under tension during the movements will produce some of the best results. Why time under tension? First of all, increasing the time under tension during a movement slows the athletes down. They are forced to work through a full range of motion and fight through the sticking point in the strength-curve of a muscle. This allows for better technique of the movement. Time under tension also allows for greater motor unit recruitment and development in that particular area of movement. We want the extrinsic and intrinsic musculature and stabilizers of the neck to be activated. Time under tension will force the agonist, synergist, and antagonist muscle groups to act in accordance to one another. We want to increase the size, strength, and stabilization of the neck musculature to absorb the

outside forces acting against the athlete. We want size, girth, and hypertrophy. An important point here: start light then progress to heavier loads as strength levels increase, and always aim for perfect technique.

Not having an adequate abundance of neck machines, or not having the budget to purchase equipment to train the neck is a poor excuse not to implement neck training. Many movements can be done with no equipment at all, or using pre-existing equipment in your facility. Various implements/methods used to train the neck include, but are not limited to:

- 4-Way Neck Machines
- Bands
- Plates
- Physioballs/Medicine Balls
- Manual Resistance
- Bridging

Now let's take a look at various movements we can perform with each of these implements/methods.

4-Way Neck Machines

Flexion



Start



Finish

- Starting position-sit up tall, spine neutral. Flex head forward, chin down to chest. Control back to starting position.

Extension



Start



Finish

- Starting position-sit up tall, spine neutral. Extend head backward, chin up. Control back to starting position.

Lateral Flexion



Start



Finish

- Starting position-sit up tall, spine neutral. Tilt head to side, ear to chest, shoulders as level as possible. Control back to starting position.

Protrusion



Finish



Start

- Starting position-sit up tall, spine neutral. Protrude head and chin forward and straight out. Control back to starting position.

Retraction



Start



Finish

- Starting position-sit up tall, spine neutral. Retract head and chin backward and straight out. Control back to starting position.

Bands

Protrusion-Option 1



Start



Finish

- Starting position-lay on bench, shoulder blades retracted. Band on forehead. Protrude head and chin forward and straight up to ceiling. Control back to starting position.

Protrusion-Option 2



Start



Finish

- Starting position-lay on bench, shoulder blades retracted. Band on forehead. Protrude head and chin forward and straight up to ceiling. Control back to starting position.

Retraction



Start



Finish

- Starting position-seated on bench, shoulder blades retracted. Band underneath feet & around back of head. Extend arms straight out from shoulders. Retract head and chin backwards. Control back to starting position.

Extension



Start



Finish

- Starting position-seated on bench, shoulder blades retracted. Band underneath feet & around back of head. Extend arms straight out from shoulders. Extend head backward, chin up. Control back to starting position.
-

Chin Tuck



Start



Finish

- Starting position-seated on box or kneeling on ground. Shoulder blades retracted. Band hooked around J-hooks of squatting height or higher, shoulder blades retracted. Band underneath chin in neutral position. Nod chin down to chest. Control back to starting position.

Jaw Open



Start



Finish

- Starting position-seated on box or kneeling on ground. Shoulder blades retracted. Band hooked around J-hooks of squatting height or higher, shoulder blades retracted. Band underneath chin in neutral position. Open jaw as wide as possible, keeping head neutral. Control back to starting position.

Plates

Flexion



Start



Finish

- Starting position-lying on bench. Shoulder blades retracted. Hole of plate on forehead. Head off end of bench in neutral position. Flex head forward chin to chest. Control back to starting position.

Towel Extension



Start



Finish

- Starting position-standing up tall. Shoulder blades retracted. Towel looped through plate. Bite towel. Chin to chest. Extend head backward, chin up. Control back to starting position.

Physioball/Medicine Ball

Front Flexion-Iso Hold



Start/Finish

- Starting position-feet under hips. Slight knee and hip bend. Retract shoulder blades. Place physioball/medicine ball on forehead, holding against wall. Flex head forward and chin down to chest as far as possible and hold. Ease out of position when completed.

Extension-Iso Hold



Start/Finish

- Starting position-feet under hips. Slight knee and hip bend. Retract shoulder blades. Place physioball/medicine ball on back of head, holding against wall. Extend head backward and chin up as far as possible and hold. Ease out of position when completed.

Lateral Flexion-Iso Hold



Start/Finish

- Starting position-feet under hips. Slight knee and hip bend. Retract shoulder blades. Place physioball/medicine ball just above ear on side of head, holding against wall. Tilt head to side, ear to chest as far as possible and hold. Keep shoulders level. Ease out of position when completed.

Manual Resistance

Partner Supine Field Goal



Start



Finish

- Starting position-laying on back. Legs extended. Arms at 90° on ground in a field goal position. Retract shoulder blades. Flex head forward and chin up to chest. Partner places

one hand on chest, and one hand on forehead. Both arms locked out. Resist partner's flexion up, and apply pressure on the way back to starting position. Movement is performed in a controlled manner by both partners.

Partner Supine Field Goal Protrusion



Start



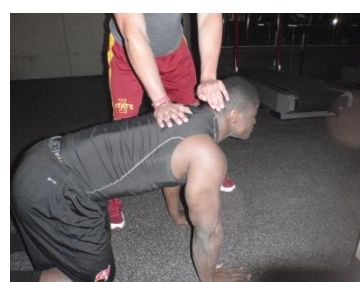
Finish

- Starting position-laying on back. Legs extended. Arms at 90° on ground in a field goal position. Retract shoulder blades. Protrude head and chin straight up to ceiling. Partner places one hand on chest, and one hand on forehead. Both arms locked out. Resist partner's protrusion up, and apply pressure on the way back to starting position. Movement is performed in a controlled manner by both partners.

Partner Quadriped Extension



Start



Finish

- Starting position-quadriped position. Hand under shoulders (arms locked), knees under hips. Retract shoulder blades, trunk tight. Begin with chin down to chest. Extend head backward and chin up. Avoid lumbar extension. Control back to starting position. Partner places one hand on upper back, and one hand on back of head. Both arms locked out. Resist partner's extension up, and apply pressure back to starting position. Movement is performed in a controlled manner by both partners.

Partner Lateral Flexion Iso Hold

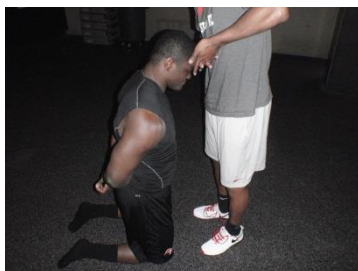


Start/Finish

- Starting position-feet under hips. Slight knee and hip bend. Retract shoulder blades. Maintain an upright and neutral position while pressure is applied. Keep shoulders level. Ease out of position when completed. Partner places hand just above ear, arm locked out. Apply as much pressure as needed to maintain proper position. Movement is performed in a controlled manner by both partners.

Bridging

Partner Forward Flexion Bridge



Start



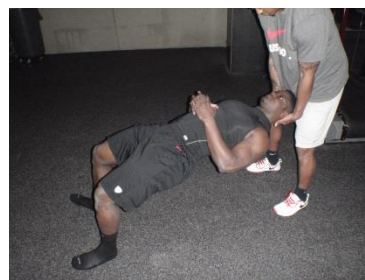
Finish

- Starting position-on knees with hands behind back. Retract shoulder blades. Partner will be in a bent knee, flexed hip position with hands interlocked. Place interlocked hands on forehead. Must be ready to hold up body weight of partner, so get locked in. Guy going will maintain a tight trunk and maintain neutral position as you are lowered into bridge position. Go down as far as possible. Think of flexing head forward and chin down to chest. Working angle will vary from guy to guy. Guy going place hands on ground and ease out when time is up.

Partner Extension Hip Bridge



Start



Finish

- Starting position-sitting on butt, heels tight to butt. Retract shoulder blades. Partner will be in a bent knee, flexed hip position with hands interlocked. Place interlocked hands on back of head. Must be ready to hold up body weight of partner, so get locked in. Guy going will lift hips up as high as possible, driving mid-foot to heel, thinking of extending head backward and chin up to maintain a neutral position. Guy going place hands on ground and ease out when time is up.

Neck Bridge on Bench



Start



Finish

- Starting position-sitting on butt, heels tight to butt. Retract shoulder blades. Place back of head on bench. Lift hips up as high as possible, driving mid-foot to heel, thinking of extending head backward and chin up to maintain a neutral position. Place hands on ground and ease out when time is up.

As you can see, many variations exist of training the trunk of our tree: the neck. There should be no excuse of not having the equipment to implement various forms on neck training into your strength and conditioning program. If your number one goal as a strength coach is to keep your athletes injury free (as it should be), training some form or fashion of the tree (shoulder girdle, upper back, traps, and neck) should be included every single training session. Explain to your athletes the importance of neck training. Get them to buy in. You are doing them a favor to help cut down the risk of getting a concussion, or even worse, sustaining a neck injury that could lead to paralysis. Do your part as a strength coach to help keep your athletes from becoming a concussion/neck related injury statistic.

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9.0 Core Training workout

Typical “core training” is not over emphasized in the triphasic model simply because the core is already receiving all of the stress it needs during the single leg movements. As coaches we must realize the abs seen when doing sit-ups and other “core training” is not mimicking what a sporting event requires of our athletes. We are trying to improve the deep, supporting muscles of the core and prefer to have functionality over looks any day.

[Core Training Workouts](#)

[Core Training Exercises without Equipment](#)

[Core Training Exercises with Equipment](#)

10.0 Proper Breathing for Sports Recovery

An often overlooked component of many programs is restoration and recovery. Coaches attempt to manipulate variables in their workouts, changing intensities, volume, and exercises in order to cause adaptation. However, a training program is most effective if the athlete is able to recover from and adapt to the previous stress/workout. There are numerous techniques used to aid in restoration—recovery baths, contrast showers, proper nutrition, stretching, massage, and recovery rollers. This article will cover a technique seldom employed and even less commonly programmed—breathing.

Slow, deep, breathing has been shown to induce a calming effect on the body, decreasing everything from blood pressure to stress. Deep voluntary belly breathing also has been shown to shift the nervous system from sympathetic dominance to parasympathetic dominance (Jerath et al. 2006). What does this mean for your athletes? It means faster recovery by starting the digestive process sooner, creating stronger and faster athletes while responding better to future stress.

The neural response to training is well documented with an excitatory effect occurring in response to a stressor. Therefore, the key to recovery is being able to switch as soon as possible from the catabolic state brought on by training into a more anabolic state (Chen et al. 2011). The faster an athlete can go from an excited state to a calm one, the more capable he will be recovering from the workout.

This will not only readjust the breathing pattern but also help to decompress the spine. Every breath out should feel the body relax more and more, such that the spine feels longer and the athlete feels zero tension.

11.0 Aerobic Energy System Training

[Drill Sheets: Conditioning In Detail](#)

The program in the article below can be used to increase the work capacity of your athletes, while also decreasing the likelihood of injury. It can also be viewed at the following link:

[Metabolic Running for Injury Prevention](#)

12.2 General Physical Preparedness (GPP) Block 1

General Physical Preparedness (GPP) for Repeated Sprint Ability Sports - such as , Football Soccer, Basketball , Hockey, Baseball and many more.

Block 1 - Two to Three Weeks

Complete any of the following Methods for the Aerobic General Physical Preparedness Block Training

Try a Different browser if the files doesn't download.

[Contralateral Aerobic Circuit](#) Complete 3 times a week -

[5 Minute Isometric Training Block](#) Complete 2 to 3 times a week.

Another option for and advanced strength athlete to build fitness

[Aerobic Strength Endurance EDT](#) - Complete 2 to 3 times a week

The Purpose in this block is to keep Heart rate in aerobic training zone.

12.3 General Physical Preparedness (GPP) Block 2

General Physical Preparedness (GPP) Block 2 for Repeated Sprint Ability Sports - such as , Football Soccer, Basketball , Hockey, Baseball and many more.

Block 2 - Two to Three Weeks

Local Lactate and Global Aerobic - Complet 5 to 6 workouts per week for this phase

Try a Different browser if the files doesn't download.

[30 Second Isometric and Oscillatory Method](#)- Complete 3 Times a week

[EDT Training Method](#) - Complete 2 to 3 Times a week in between above workouts.

Any conditioning methods used during this time need to be 30 seconds in length

12.4 General Physical Preparedness (GPP) Block 3

General Physical Preparedness (GPP) Block 3 for Repeated Sprint Ability Sports - such as , Football Soccer, Basketball , Hockey, Baseball and many more.

Block 3 - Two to Three Weeks

Try a Different browser if the files doesn't download.

[Advance 10 Second Circuit Method](#) - Complete any of the two workouts 3 days a week.

[Extreme Myelination Circuit](#) - complete this workout only twice a week.

Any conditioning methods used during this time need to be 10 seconds in length.

12.5 Triphasic Training Metabolic Injury Prevention Running

Aerobic training lays the foundation upon which all other methods of training are built. If this base aerobic training is ignored, specific, high-intensity training cannot be supported in later training cycles because an athlete will not achieve maximal benefits from the high-intensity work. “Metabolic Injury Prevention Running” enhances an athlete’s aerobic abilities, which is the main objective in the aerobic training cycle, while simultaneously working to reduce injuries to soft-tissue areas of the hip, groin, knee, and ankle. The reduction of injuries should be viewed as the primary goal of any coach and should be consistently and actively pursued. Metabolic injury prevention running focuses on both the reduction of injuries and training of the cardiovascular system, while keeping impact intensities minimal. Impact intensities can be kept relatively low in this aerobic training method due to the focus on movements that use the stabilizing muscles of the hip and groin area, such as shuffling and carioca. The activation and utilization of the stabilizer muscles leads to movement efficiency being reduced significantly when compared to running or sprinting in a straight line, while these commonly underused and injury prone muscles are strengthened and thus, less prone to injury. This method also can be used to prepare elite athletes for pre-season training camps or the competition season. The same movements are utilized as in the base endurance model, just at maximal intensities. This increased intensity further drives adaptations of the cardiovascular system while also continuing to reduce injury likelihood to the small, stabilizer muscles due to training muscle functioning and timing at high, game speed velocities. This high-intensity training prepares athletes with optimal conditioning levels and the increased ability to compete in their training camps.



Sport Performance Pyramid

Base Aerobic Training Aspects

Metabolic injury prevention running is used to drive extremely high levels of aerobic, cardiovascular fitness, which is the foundation upon which all other strength and conditioning abilities are built. This method of training allows for low-impact, high-intensity training by activating stabilizing muscles, particularly those of the hip and groin area. These stabilizer muscles are trained with the completion of non-typical running methods such as shuffling, carioca, and cross-over running. These methods of locomotion cause the body to work at a decreased level of efficiency which causes an elevation of the heart rate. It is important to note that the intensity will appear low at the start of this training piece as the athlete is moving at considerably lower speeds than when sprinting. The use of the commonly inactive and undertrained stabilizer muscles and movement patterns that cause the body to be less efficient than normal will lead to heart rate elevation to an aerobic training zone of 140-150 bpm. This heart rate elevation can be manipulated based on the needs of intensity. The intensity can range from as low as 110 bpm up to the lactate threshold of each individual athlete, which ensures that aerobic intensities are kept and trained. The intensity to reach this training zone will typically fall between the 30 and 60% effort range for athletes. The low impact intensities allow this aerobic training method to be completed barefoot. This aerobic

training method leads to an increase in work capacity which lays the foundation for future, high-intensity training that will be completed in later stages of the block periodization method.

Injury Resistance Aspects

The activation and then training of the stabilizing muscles of the hip and groin lead to increased functioning at higher levels of work, which reduce injury patterns. This is accomplished by training these underused and weak links of the kinetic chain in planes in which they are not typically trained. These stabilizing muscles are commonly the victims of soft-tissue injuries in the lower body simply because they are not strong enough to continue to support the increased strength of the primary movers. As a strength coach and an athlete, it is easy to train the primary movers, such as the glutes, quads, and hamstrings, due to their direct correlation with improved lower body strength and maximal speed. However, the mentality that “an athlete is only as strong as their weakest link” must be remembered at all times. If an athlete has the ability to squat an enormous amount of weight but has not taken the time to strengthen the stabilizing muscles, they will not be able to perform maximally and will deal with soft-tissue, stabilizer muscle injuries. These injuries, although minor in nature, will hinder their performance until the true issue is addressed. This issue is addressed head on with this metabolic injury prevention running method. The low impact intensities allow this aerobic training method to be completed barefoot. Training barefoot leads to increased strength in the plantar and dorsiflexors of the foot, while also strengthening the muscles of the lower leg. This develops and trains the foot to properly absorb impact and prevents shin splints and foot fractures. Barefoot training used in this lower-intensity training continues to contribute to injury prevention by improving strength levels in the commonly weak and underused muscles.

Game Speed Training

As the competition phase approaches and specificity of exercise selection is high, metabolic injury prevention running can be used to peak athletes before the rigors of their long, demanding season. The stabilizer muscles of the hip, groin, knee, and ankle are continually

improved through the same movement patterns as described above, but they are now completed at maximum intensities. These high intensities will drive extremely high levels of cardiovascular fitness, even higher levels of cardiovascular fitness than sprinting, when distance and intensity are compared, as the body is continuing to move using inefficient movements. This game speed training using the methods of metabolic injury prevention running can be implemented during the final four to five weeks prior to the start of camp or the season and can be individualized based on position to increase specificity. Adaptations from this high-intensity method can be seen in as little as two weeks if an athlete is properly trained throughout the rest of the off-season, meaning they have had adequate aerobic training, as well as high-intensity training. The more specific movements made to the position and/or movements that will be completed in competition, the greater the benefits will be in injury reduction. This increased specificity leads to training the commonly underused and injury prone stabilizer muscles in the same planes they will be required to be used in competition.

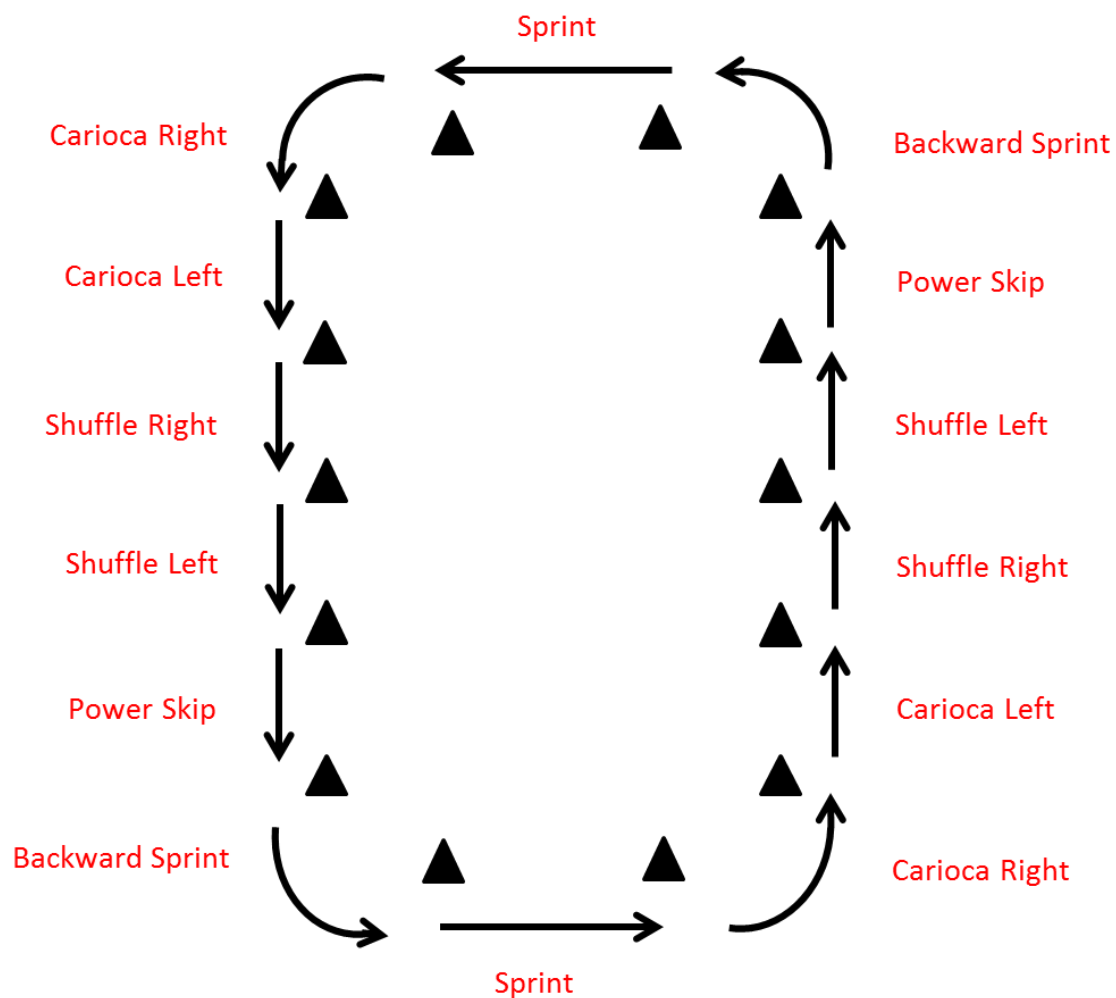
Example Program

The keys of metabolic injury prevention running are the cardiovascular response and the strengthening of the stabilization muscles of the hip, groin, knee, and ankle. The target heart rate zone of this specific aerobic conditioning piece lies within 140-150 bpm. The first phase of metabolic injury prevention running includes three laps of low intensity, continuous jogging. The pace of jogging should give a heart rate response of about 110 bpm, which is an extremely low intensity. After the three laps are completed, the different running techniques such as shuffling, carioca, and backpedaling are implemented at the same pace as the low intensity jogging was completed. The inefficiency of the body through these movements will amplify the intensity and spike the heart rate into the goal aerobic heart rate zone of 140-150 bpm while keeping impact intensities low enough to train barefoot, thus strengthening the muscles of the ankle and foot. The intensity of these movements can be manipulated slightly as needed in order to attain a heart rate within this aerobic training zone. It is important to reiterate the

speed of these movements does not need to be increased from the slow jogging since the heart rate will increase due to the movements being used in this method.

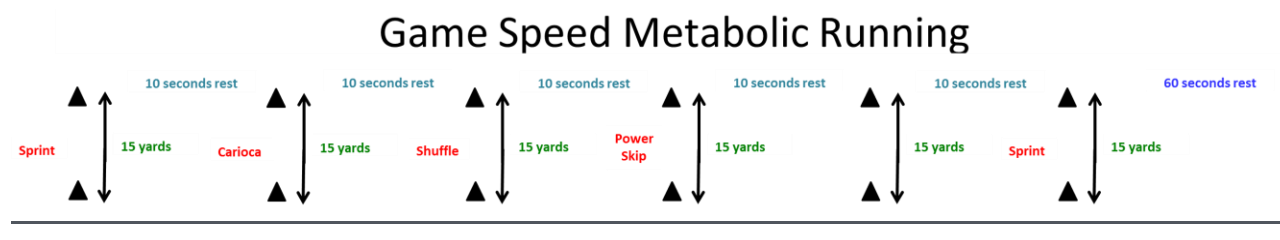
The example below shows how the five exercises used in this metabolic injury prevention running can be cycled through continuously. The cones can be set up anywhere between 20 and 50 yards apart. The key to this exercise is ensuring the lactate threshold of the athlete is not reached which is why an intensity of 140-150 bpm is set as the goal heart rate range. This method of training can be used with any set-up, even just two cones. This example falls in line with the use of metabolic injury prevention running around a concourse of an arena.

Aerobic Base Injury Prevention Running



Game speed training with the metabolic injury prevention running method uses the same movements as above, just at maximal intensities. This high-intensity training method strengthens the stabilizer muscles and trains proper timing and firing rate of the stabilizers to prevent injury during competition. During game speed training, different positions can go through different movements, which increase specificity of training prior to the competition period. It should be noted this training should be completed with shoes on due to the high impact intensities.

The example of game speed training below shows the progression through this phase of training. Repetitions at this point of training can be completed based on time or distance, depending on how training is set up for that specific day. The same movements will be used during this progression, but will be completed at maximum velocities. The distance or time of each rep, rest time between reps and between sets, and the number of sets completed can all be determined based on each athlete's individual needs to prepare them for a successful camp and/or season. In the example below, a single set is shown with the distance set of 15 yards from each other (30 yards there and back), 10 seconds of rest between each rep, with 60 seconds rest allowed after each set. The example shown is one of the more difficult programs of metabolic injury prevention running, as it uses minimal rest times between repetitions as well as between sets.



Set (Rotate Between each Movement):

- Sprint
- Carioca
- Shuffle
- Power Skip
- Backward Sprint
- Sprint

Distance There and Back (Choose One):

- 20 yards
- 25 yards
- 30 yards
- 35 yards
- 40 yards

Rest Time Between Reps (Choose One):

- 10 seconds
- 15 seconds
- 20 seconds
- 25 seconds
- 30 seconds

Rest Time Between Sets (Choose One):

- 60 seconds
 - 90 seconds
 - 120 seconds
 - 150 seconds
-

The off-season can be broken into 3 phases of conditioning training as follows.

Phase 1 – Off-Season Program – Figure 1

During this phase, base running and training are completed. This is the phase in which metabolic injury prevention running will be completed. This first phase of training typically lasts between 2 and 4 weeks, with the goal of creating a solid foundation of training which will allow more intense training as the off-season progresses. Metabolic injury prevention running can be completed between 2 and 3 times per week due to its low impact intensities and overall lower intensity on the body.

Phase 2 – Off-Season

Phase 2 consists of sport specific speed development and includes the qualities of acceleration, top end speed, and change of directions. The majority of the time within this phase will be spent completing as many sport specific drills as possible. This intermediate phase will last between 4 and 8 weeks to allow optimal development, with high quality work being the goal of each repetition.

Phase 3 Off-Season – Figure 2

This final phase of the off-season periodization consists of game speed conditioning. This will be completed 2 to 3 weeks prior to the beginning of training camp or the season. This phase is used as the final peaking method to prepare athletes for camp or an athlete's season. It will offer optimal conditioning and injury prevention using maximal intensities. It should be performed at least twice a week, if not three times, when no other conditioning methods are being utilized. However, if speed development of athletes is still required, this quality can be trained throughout the week.

Below are more examples of aerobic conditioning circuits that can be used to increase the work capacity of your athletes.

[Game Conditioning w/Field](#)

[Game Conditioning w/Gym](#)

[Simple Dumbbell Conditioning Circuit](#)

[Pool Workout](#)

[4 Week Run Program for Mile Time Improvement](#)

[Tabata Intervals for Sport](#)

[TV Workout Circuit](#)

[Plate Workout for Sport 1](#)

[Isometric Conditioning Circuit for Sport](#)

[Isometric Conditioning Circuit 2 for Sport](#)

[Super Endurance General Workout for Sport](#)

[Seated Upper body Circuit](#)

[Gpp Ultimate Single lift workout for Sport](#)

[General Work Capacity Day 1](#)

[General Work Capacity Day 2](#)

[General Work Capacity Day 3](#)

[Coaches Choice Adaptability Circuit](#)

[8 Week Conditioning Plan](#) - this Eight Week conditioning consists of a complete program involving running. It may be incorporated into your existing training, or used as a separate training device in an off-season program.

[Stadium step workouts](#) can be done as a leg workout for conditioning or after a workout to finish up with work capacity training. The difference between these stadium step workouts and others is the fact that these require that athletes NOT to run up the steps. Instead, athletes are required to walk the steps. While running the steps is certainly a different type of workout that can be implemented, the conditioning workouts in this example focus on walking to reduce the impact forces on joints, while increasing the work capacity and leg strength simultaneously.

12.6 Adaptability Circuits

The premise of [adaptability training](#) is exactly what its name implies. The body is incredible at adapting to the stress (exercise) that is loaded on it. In a 5-minute interval, an athlete might do 12-15 sets of 5 reps of each. That is 60 reps of each exercise instead of a more traditional 3x10 or 4x8 workouts. So because the volume has been increased, the body has to adapt to the given stress. As the body adapts to the stress, the athletes are able and capable of handling more intense training without getting hurt. The results are amazing! This is a phenomenal tool to use within a training cycle or at the beginning of a training cycle. When you complete this training of 3 to 4 weeks you should return to general strength training program.

[Adaptability Training](#)

This is a unique type of training that will challenge you to push yourself to another level. Adaptability training is something that you would complete 3 days a week and not longer than 3 or 4 weeks in a row. You will notice that instead of sets and reps, you are given a time frame to lift as many reps and sets as possible in the given time depending on the level you choose.

You can pick a weight that you could perform 15 to 20 reps with maximum effort. After you have picked the weights on the prescribed exercises you are ready to begin that exercise cycle. Select 2 exercises, opposite to each other. An Example would be to start with DB Incline and complete 5 repetitions then quickly go to the Lat Pull Down and complete 5 additional repetitions. Then without rest complete the set again and again for the amount of time on the workout sheet, the time will depend on the level of difficulty you choose. Try to keep the same weight during the exercise sets. Mark off the number of the sets in the box numbered 1-30 after completing the last exercise in each set. Complete as many as possible in this sequence until the time is completed. Then follow the prescribed rest and go on to the next groups of exercise. Print a new sheet every workout to keep track of the sets on a weekly basis. Each week or workout you should increase the sets or increase the weight. Keep your weights the

same throughout the complete cycle for that day, but feel free to try to increase weight and perform the same number of sets in the next workout. Only use this training method 3 to 4 weeks for optimal results.

The premise of adaptability training is exactly what it's name sounds like. The body is incredible at adapting to the stress (Exercise) that is loaded on it. In a 5 minute interval, you might do 12-15 sets of 5 reps of each. That's 60 reps of each instead of a more traditional 3x10 or 4x8 workouts. So because the volume has been increased, the body has to adapt to the given stress. As the body adapts to the stress, the athletes are able and capable of handling more intense training without getting hurt. The results are amazing! This is a phenomenal tool to use within a training cycle or at the beginning of a training cycle. When you complete this training of 3 to 4 weeks you should return to general strength training program.

When going through an adaptability program, remember that you need to keep correct form every set. This is important as you start to get tired towards the end of your time frame. Also, make sure that you start each set as quickly as possible and do not use any rest between the sets. There is time to rest at the end of the time interval.

The most beneficial times of the year to complete this type of training would be as the first 3 or 4 weeks of their post season workouts. The other time would be the 3 or 4 weeks of just prior to the start of the season. Choose the level that best fits your training age and download a Adaptability sheet from xlathlete Drill sheet section.

12.7 Team game Conditioning

Using a conditioning game is an awesome way to train athletes in a fun, yet intense manner. Both of these activities benefit from involving competition, which pushes the athletes harder, as well as elements of fun that keep conditioning fun. Modify directions as needed.

[Russian Basketball](#)

12.8 Trashball

Overview Trashball is a training game that can be used to improve performance in a number of physical qualities. Coaches can train many athletes at the same time in a fun and competitive atmosphere. Some of the primary fitness aspects trained by playing trashball include running and jumping abilities, hand-eye coordination, game strategy, general physical condition, and the ability to see plays develop.

What You Need

- 1.) Ball – Any type will do
- 2.) Two Clean Trash Cans
- 3.) Cones
- 4.) Two Teams
- 5.) Gymnasium or Field

How Trashball Is Played The objective of trashball is to have your team score by shooting/throwing a ball into a basket (a clean trash can works well) that is surrounded by cones, while not letting the opposing team score in your basket. Players are not allowed to enter the ring of cones in order to throw the ball into the basket, and the area of the cones can be expanded or contracted based upon the skill level of the participants. Each team has their own basket to score in, located on either end of a field or gym. You can choose to have the athletes bounce the ball (with dribbling rules similar to basketball), run with the ball, or pass the ball only (as in Ultimate Frisbee). If the ball or athlete goes out of bounds, then possession of the ball changes. Depending on the rules described later, possession can also change for other reasons. Team can play with any number of athletes on the gym or field, and this can change with size of the playing surface. Keep in mind that too many athletes will slow the number of good possessions and reduce the speed of the game.

It is much more effective to have two smaller games going on at once than one larger game that moves more slowly.

Key Rules For Fast-Paced Version the rules can be adjusted for your needs, but if you are looking for a more fast-paced version, you can add the following rules.

You can choose to not allow the ball to touch the playing surface at any time. This way, the athletes must run or pass the ball down the gym or field. If the ball hits the ground, possession is turned over to the opposing team. If the offensive player is touched by a defender while possessing the ball, the ball is also turned over at that point.

You can also choose to limit the number of steps an athlete can take while carrying the ball to between three and five. This increases the amount of passing and speed/agility of running. If you are using this particular rule, however, you may want to eliminate the touch-turnover rule as described above. Have fun!

13.1 [Safe Core Training Series No Equipment](#)

The following workouts are very safe core Training methods for any level.

Workout 1 – Level 1

1. [Bird Dog Alternating](#)
2. [Prone Forearm Bridge](#) – Both Sides
3. [Modified Side Plank](#) – Both Sides
4. [Supine Elbow Bridge](#)

Workout 2 – Level 1

1. [Bird Dog](#) – Both Sides
2. [Plank Single Leg](#) – Both Sides
3. [Modified Side Plank with Leg Raise](#) – Both Sides
4. [Supine Elbow Bridge](#)

Workout 3 – Level 2

1. [Bird Dog Alternating](#)
2. [Plank Single Leg](#) – Both Sides
3. [Modified Side Plank with Leg Raise](#) – Both Sides
4. [Supine Elbow Bridge](#)

Workout 4 – Level 2

1. [Bird Dog](#) – Both Sides
2. [Plank Single Leg](#) – Both Sides
3. [Side Plank Leg Raise Hold](#) – Both Sides
4. [Supine Elbow Bridge](#)

Workout 5 – Level 2

1. [Bird Dog Alternating](#)
2. [Forward Backward Walking Plank](#) – Both Sides
3. [Side Bridge](#) – Both Sides
- 4 [Reverse Plank with Leg Raise](#) – Both Sides

Workout 6– Level 2

1. [Bird Dog](#)– Both Sides
2. [Forward Walking Plank](#)
3. [Side Bridge Leg Circle](#) – Both Sides
- 4.[Reverse Plank with Leg Raise](#)

Workout 7– Level 3

1. [Bird Dog](#) – Both Sides
2. [Forward Backward Walking Plank](#)
3. [Rotational Side Plank](#) – Both Sides
4. [Reverse Plank with Leg Raise](#) – Both Sides

Workout 8– Level 3

1. [Bird Dog Alternating](#)
2. [Inch Worm](#)
3. [Rotational Side Plank](#) – Both Sides
4. [Reverse Plank with Leg Raise](#) – Both Sides

Guidelines for Core Workouts

Sets - 1 to 4 sets

Rest After each Exercise - 10, 20, 30, 45, 60

Length of Exercise - 20 to 90 seconds

Rest after Sets - 30, 60, 90, or 120 seconds

13.2 Hip Strengthening Exercises Series

Complete Each Block for 2 to 3 weeks and Perform 2 to 3 times each Week. Weak hips are often mistaken for a weak core.

Block 1 - Eccentric Hip Series - Perform 2-3 Sets x 3-5 Reps – **3 sec count down each rep**

Partner Bench Abduction Eccentric - Complete Each Side - Rest 20 to 30 Seconds

Partner Bench Adduction Eccentric - Complete Each Side - Rest 20 to 30 Seconds

Partner Single Leg Glute Bench Lift Eccentric - Each Side - Rest 20 to 30 Seconds

Partner Hip Flexor Prone Eccentric - Complete Each Side - Rest 20 to 30 Seconds

Isometric Hip Series - Perform 2-3 sets x 3-5 Reps – **3 sec hold each rep**

Partner Bench Abduction Isometric - Complete Each Side - Rest 20 to 30 Seconds

Partner Bench Adduction Isometric - Complete Each Side - Rest 20 to 30 Seconds

Partner Single Leg Glute Bench Lift Isometric - Each Side - Rest 20 to 30 Seconds

Partner Hip Flexor Prone Isometric - Complete Each Side - Rest 20 to 30 Seconds

Concentric Hip Series - Perform 2-3 Sets x 8-12 Reps

Bench Abduction - Complete Each Side - Rest 20 to 30 Seconds

Bench Adduction - Complete Each Side - Rest 20 to 30 Seconds

Single Leg Glute Bench Lift - Complete Each Side - Rest 20 to 30 Seconds

Hip Flexor Prone - Complete Each Side - Rest 20 to 30 Seconds

14.0 Post -Workout

Post-workout stretching can be used to improve recovery of your athletes and assist to prepare them for the next training session. Refer to the links below for ideas to use to increase the flexibility of your athletes.

[Post Workout Stretching](#)

[Simple post workout mobility Cool Down](#)

[Post Workout Recovery for Sports](#)

[Restorative Show](#)

15.1 Recovery Protocols After Heavy Loading of the Posterior Chain

Inversion is a recovery method that helps by decompressing the spinal column and elongating the spinal discs. There is also some evidence that it can help with CNS recovery by decreasing the amount of time it takes an athlete to return to a parasympathetic state. This proves to be especially important during phases of intense, heavy, posterior chain loading. The following protocols can be performed on either an inversion table or a glute ham machine. In all cases, the key points are to make sure you relax your mouth and tongue, and focus on taking deep belly breaths in through your nose and out through your mouth. This method was first brought to my attention by Dr. Michael Yessis.

1) Used for spinal de-loading. (Total time = 5min)

- 5 minutes of continuous inversion

2) Used for CNS recovery. (Total time = 7—9min)

- 1 minute inverted
- 30 to 60 upright
- 1 minute inverted
- 30 to 60 upright
- 1 minute inverted
- 30 to 60 upright
- 1 minute inverted
- 30 to 60 upright
- 1 minute inverted

3) Used for CNS recovery. (Total time = 7—9min)

- 1 minute Glute ham hang
- 30 to 60 seconds Laying Wall Shakes
- 1 minute Glute ham hang
- 30 to 60 seconds Laying Wall Shakes
- 1 minute Glute ham hang
- 30 to 60 seconds Laying Wall Shakes
- 1 minute Glute ham hang
- 30 to 60 seconds Laying Wall Shakes
- 1 minute Glute ham hang

16.1 Specific Prehab

[Prehab workouts](#) are extremely important in preparing the body for the intensity of practice and competition. These drill sheets focus on the smaller muscle groups that are designed to help stabilize the larger muscle groups, especially during dynamic movements such as throwing. The body is designed in a way that ensures that the smaller muscles will always tire first. The point of prehab exercise is to keep those smaller muscles as intact and strong as possible. They are essentially the body's weakest link. If an athlete has been injured in the past, he or she can use these prehab workouts to help prevent further injury for that specific body area.

Specific Areas:

[Ankle Prehab](#)

[Shin Splint Prehab](#)

[Groin Prehab](#)

[Hip Flexor Prehab](#)

[Knee Prehab](#)

[Shoulder Prehab Circuits](#)

[Shoulder YTWL Prehab Circuit](#)

[Forearm Circuit for Sport](#)

[Lower Back Prehab](#)

16.2 Injury to lower body limb perform the workouts below 5 days a week.

[Seated Upper body Circuit](#)

[Super Endurance Leg Injured for Sport](#)

[Non Spinal Loading Leg Workout](#)

[XL Athlete Suspension Training Workout 3](#)

[XL Athlete Suspension Training Workout 2](#)

[XL Athlete Suspension Training Workout 1](#)

17.1 Conditioning

It is important that we as coaches understand the difference between speed work and conditioning. Speed development drills, as discussed in an earlier section of this book, utilize full rest times to allow each repetition to be completed at a maximal, or near maximal speeds. Conditioning, however, is used to prepare athletes for the rigors of competition, which rarely allow full rest. Conditioning drills should simulate and prepare athletes for the next phase, whether it be a new training block, camp, or the competition season. Conditioning can be completed using many different methods and does not always have to consist of running. A high tempo lift or interval training can also be used as conditioning tools. It is important to note that if conditioning is a desired adaptation, it should be completed at the end of a training session. Conditioning is completed at this time to ensure skill adaptation is not compromised. Conditioning should be completed at only certain times of the year depending on the goals of the phase your athletes are in.

Always keep in mind that too much Conditioning on a weekly or daily model , can decrease strength gains.

17.1.1 Post Practice Training Methods

An Example of a 5 day Conditioning protocol that can be used, however if conditioning 5 days don't use the whole workouts provided below.

TRAINING DAY	CONDITIONING GOAL	SPECIAL INSTRUCTIONS	EXAMPLE OF WORKOUTS
DAY 1	Short Sprints (High Quality Speed)	Sprints under 10 seconds Full recovery: rest 90-120 seconds	Alactic High Quality Workout
			Flying 60s
			16 week short sprint workouts
			Cone agility
DAY 2	Long Sprints or Short Sprints w/ Reduced Rest (Speed Conditioning)	Sprints over 15 seconds or Sprints under 10 recovery under 20 seconds	High Quality Lactic Anaerobic Power Training Builder
			Metabolic Injury Prevention Runs
DAY 3	Short Sprints (High Quality Speed)	Sprints under 10 seconds Full recovery: rest 90-120 seconds	Alactic High Quality Workout
			Flying 60s
			16 week short sprint workouts
			Cone agility
DAY 4	Short Sprints (Anaerobic Conditioning)	Sprints under 10 seconds Limited recovery: 45-60 seconds	Work Capacity Alactic Anaerobic Training Builder
			Flying 60s
			16 week short sprint workouts
			Cone agility
DAY 5	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity	Aerobic Work Capacity Training Builder
			Metabolic Injury Prevention Runs
			Bike Conditioning
			TrashBall

An Example of a 3 day Conditioning Protocol

TRAINING DAY	CONDITIONING GOAL	SPECIAL INSTRUCTIONS	EXAMPLE OF WORKOUTS
DAY 1	Short Sprints (High Quality Speed)	Sprints under 10 seconds Full recovery: rest 90-120 seconds	Alactic High Quality Workout
			Flying 60s
			16 week short sprint workouts
			Cone agility
DAY 2	Short Sprints (High Quality Speed)	Sprints under 10 seconds Full recovery: rest 90-120 seconds	Alactic High Quality Workout
			Flying 60s
			16 week short sprint workouts
			Cone agility
DAY 3	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity	Aerobic Work Capacity Training Builder
			Metabolic Injury Prevention Runs
			Bike Conditioning
			TrashBall

An Example of a 4 day Conditioning Protocol

TRAINING DAY	CONDITIONING	GOAL	SPECIAL INSTRUCTIONS	EXAMPLE OF WORKOUTS
DAY 1	Short Sprints (High Quality Speed)		Sprints under 10 seconds Full recovery: rest 90- 120 seconds	Alactic High Quality Workout
				Flying 60s
				16 week short sprint workouts
				Cone agility
DAY 2	Long Sprints or Short Sprints w/ Reduced Rest (Speed Conditioning)		Sprints over 15 seconds or Sprints under 10 recovery under 20 seconds	Alactic High Quality Workout
				Flying 60s
				16 week short sprint workouts
DAY 3	Short Sprints (Anaerobic Conditioning)		Sprints under 10 seconds Limited recovery: 45-60 seconds	Work Capacity Alactic Anaerobic Training Builder
				Flying 60s
				16 week short sprint workouts
				Cone agility
DAY 4	Longer Sprints or Continuous Running (Oxidative Conditioning)		This day is purely work capacity	Aerobic Work Capacity Training Builder
				Metabolic Injury Prevention Runs
				Bike Conditioning
				TrashBall

Example [Eight Week Conditioning Plan](#)

Conditioning games are a great way to train athletes in a fun, yet intense manner. These games involve increasing work capacity, while also adding the competitive factor. Any time competition is involved any true athlete will immediately begin to work and push that much harder. These games allow for this while also keeping the element of fun for the athletes.

[Russian Basketball](#) and [Trash Ball](#)

17.2 Super Endurance Workouts

[Super Endurance Workouts](#), which are similar to the Adaptability Circuits described earlier, are designed to improve an athlete's work capacity. These workouts are easy to implement, and are very effective. They can be implemented at the beginning of a training cycle in order to prepare each athlete for the high intensity aspects of training. The workouts completed in this cycle are intended to keep each athlete's work capacity at a high level.

17.3 Tabata Intervals

[Tabata Intervals](#) are an excellent way to train athletes in a simplistic and efficient manner. Through short and very intense bursts of exercise, athletes will significantly improve both aerobic and anaerobic systems simultaneously. This will improve performance, as well as recovery in both novice and elite athletes.

[Strip Sets For Sport](#)

[Rope Workout Sheets](#)

[Big arm Circuit for Sport](#)

18.1 Block Periodization & Annual Plan

Block periodization is used in the Triphasic model as it allows all qualities of sport to be peaked simultaneously based on residual effects. Residual effects are based on how long it takes before a quality, or adaptation, begins to have a detraining effect. Aerobic qualities and max strength have the longest residual effects, while the nervous system and max speed have the shortest residuals. For this reason Aerobic adaptations are improved early in the training phase, followed by max strength. This leaves speed techniques to be trained and improved closer to the desired peaking time, usually camp or the first game in a team sport. This also causes the training to progress to a more specific method as the competition time approaches, which increases the transfer of training to the actual sporting event.

TRIPHASIC FOOTBALL ANNUAL PLAN																																																							
Football	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52			
Aerobic																																																							
High-Intensity																																																							
Peaking																																																							
Competition																																																							

Various Graphs For Guidelines in Training Programs

TABLE 5.1												
		MONDAY LOADING (MEDIUM INTENSITY)			WEDNESDAY LOADING (HIGH INTENSITY)			FRIDAY LOADING (HIGH VOLUME)				
7 1-RM	MAXIMUM REPS POSSIBLE	HIGH QUALITY REPS (STRENGTH)	SETS (OFF-SEASON)	SETS (IN-SEASON)	HIGH QUALITY REPS (STRENGTH)	SETS (OFF-SEASON)	SETS (IN-SEASON)	HIGH QUALITY REPS (VOLUME)	SETS (OFF-SEASON)	SETS (IN-SEASON)		
80%	5 - 6				1 - 2	4 - 5	2 - 3					
77.5%	6 - 7				1 - 3	4 - 5	2 - 3					
75%	7 - 8				1 - 3	4 - 5	3 - 4					
72.5%	8 - 9				2 - 3	4 - 5	3 - 4					
70%	9 - 10	2 - 3	4 - 6	3 - 4								
67.5%	11 - 12	2 - 3	4 - 6	3 - 5								
65%	13 - 14	3	4 - 6	3 - 5								
62.5%	14 - 15	3	4 - 6	3 - 5				5 - 8	4 - 6			
60%	15 - 16							5 - 8	4 - 6			IN-SEASON VOLUME COMES FROM PRACTICE
57.5%	17 - 18							5 - 8	4 - 6			
55%	19 - 20							5 - 8	4 - 6			

This table displays my three-day loading variables of 55–80 percent undulated mesocycle. The column on the far left displays the percentage load of the athlete's 1RM with the maximum number of repetitions possible listed in the column to the right. The reps and sets within each training day indicate the number of each that can be performed while maintaining a high quality of work for the athlete. A few things to notice—the rep ranges stay the same regardless of whether the athlete is in-season or in off-season training, the number of sets used for in-season training are fewer than with off-season training because of the high work demands and added stress of practices and games during the season, and all the volume work comes from practices and games (see Friday/Sets (In-Season)). Don't train volume in-season. You'll overtrain your athletes.

TABLE 4.25: ABOVE 80 PERCENT THREE-DAY VERSUS TWO-DAY IN-SEASON MODEL

TRAINING WEEK:		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
THREE-DAY MODEL	FOCUS	TOTAL BODY	OFF	TOTAL BODY	OFF	TOTAL BODY	OFF
	LOAD	82-87%		90-97%		75-80%	
	MEANS APPLIED	TRIPHASIC		DYNAMIC		TRIPHASIC	
TWO-DAY MODEL	FOCUS	TOTAL BODY	OFF	LOWER BODY	OFF	OFF	OFF
	LOAD	82-87%		90-97%			
	MEANS APPLIED	TRIPHASIC		DYNAMIC			

TABLE 5.11: 55-80 PERCENT THREE-DAY VERSUS FOUR-DAY MODEL							
TRAINING WEEK:		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
THREE-DAY MODEL	FOCUS	TOTAL BODY	OFF	TOTAL BODY	OFF	TOTAL BODY	OFF
	LOAD	62-70%		72-80%		55-62%	
	MEANS APPLIED	BIOMETRIC		DYNAMIC/BIOMETRIC		VOLUME	
FOUR-DAY MODEL	FOCUS	LOWER BODY	UPPER BODY	OFF	LOWER BODY	UPPER BODY	OFF
	LOAD	62-70%	62-70%		72-80%	72-80%	
	MEANS APPLIED	BIOMETRIC			DYNAMIC/BIOMETRIC		

TABLE 5.3: PROGRESSIVE LOADING SCHEME FOR 55-80%			
WEEK	MONDAY LOADING (MEDIUM INTENSITY)	WEDNESDAY LOADING (HIGH INTENSITY)	FRIDAY LOADING (LOW INTENSITY)
1	62.5% 3 REPS, 4-6 SETS	72.5% 1-3 REPS, 4-5 SETS	55% 5-6 REPS, 4-6 SETS
2	65% 2-3 REPS, 4-6 SETS	75% 1-3 REPS, 4-5 SETS	57.5% 5-6 REPS, 4-6 SETS
3	67.5% 2-3 REPS, 4-6 SETS	77.5% 1-3 REPS, 4-5 SETS	60% 5-6 REPS, 4-6 SETS
4	70% 2-3 REPS, 4-6 SETS	80% 1-3 REPS, 4-5 SETS	62.5% 5-6 REPS, 4-6 SETS

TABLE 5.2: BLOCK 4 LOADING VARIABLES (55-80%)				
BLOCK	DAY	LOAD	REPS	SETS
BLOCK 4 3-4 WEEKS	MONDAY (MEDIUM INTENSITY)	62-70%	2-3	4-6
	WEDNESDAY (HIGH INTENSITY)	72-80%	1-3	4-5
	FRIDAY (HIGH VOLUME)	75-80%	5-8	4-6

Other Aspects of Training

Possible Pairing of the undulated model – Keep in mind that you make any pairing you want with model.

	Loading Day 1 of week Sub maximal loading		Pairing	Loading Day 2 of week Max loading, Heavy Day, Max Effort		Pairing	Loading Day 3 of week High Volume, Lighter weight day, Work Capacity		Pairing
97.5%				1 Repetition	1 - 2 Sets				
95 %				1 Repetition	2 - 3 Sets				
92.5%				1 Repetition	3 - 4 Sets	A1			
90%				1 Repetition	3 - 4 Sets	B2			
87.%				1 Repetition	3 - 4 Sets	C3			
85%	1-2 Repetitions	4 - 5 Sets	A1	1-2 Repetitions	4 - 5 Sets	D4			
82.5%	1-2 Repetitions	4 - 5 Sets	B2	1-2 Repetitions	4 - 5 Sets	E5			
80%	1-2 Repetitions	4 - 5 Sets	C3	1-2 Repetitions	4 - 5 Sets	F6	3-4 Reps	4-5 sets	A1
77.5%	1-3 Repetitions	4 - 5 Sets	D4	1-3 Repetitions	4 - 5 Sets	G7	3-4 Reps	4-5 sets	A1
75%	1-3 Repetitions	4 - 5 Sets	E5	1-3 Repetitions	4 - 5 Sets	H8	4-5 Reps	4-5 sets	B2
72.5%	2-3 Repetitions	4 - 5 Sets	F6	2-3 Repetitions	4 - 5 Sets	I9	4-5 Reps	4-5 sets	C3
70 %	2-3 Repetitions	4 - 6 Sets	G7				5-6 Reps	4-5 sets	D4

67.5%	2-3 Repetitions	4 - 6 Sets	H8				5-7 Reps	4-5 sets	E5
65%	3 Repetitions	4 - 6 Sets	I9				5-8 Reps	4-6 sets	F6
62.5%	3 Repetitions	4 - 6 Sets	I9				5-8 Reps	4-6 sets	G7
60%							5-8 Reps	4-6 sets	H8
57.5%							5-8 Reps	4-6 sets	H8
55%							5-8 Reps	4-6 sets	I9
52.5%							5-8 Reps	4-6 sets	I9
50%							5-8 Reps	4-6 sets	I9

Schemes for load and Reps for Main Lifts Back Squat, Bench, Olympics

Percent of Maximum load	Maximum Reps in one Set (Rarely done)	Reps For High Quality Strength	Sets of High Quality Reps (use Colum to left) off-season	Sets of High Quality Reps (use 2 Columns to left) in-season	Sets of High Volume for day 3 Training in undulated
97.5%	1-2 Reps	1 Repetition	1 - 2 Sets	1 - 2 Sets	
95 %	2 Reps	1 Repetition	2 - 3 Sets	1 - 2 Sets	
92.5%	2-3 Reps	1 Repetition	3 - 4 Sets	1 - 2 Sets	
90%	3-4 Reps	1 Repetition	3 - 4 Sets	2 - 3 Sets	
87.%	4 Reps	1 Repetition	3 - 4 Sets	2 - 3 Sets	
85%	4-5 Reps	1-2 Repetitions	4 - 5 Sets	2 - 3 Sets	

82.5%	5 Reps	1-2 Repetitions	4 - 5 Sets	2 - 3 Sets	
80%	5-6 Reps	1-2 Repetitions	4 - 5 Sets	2 - 3 Sets	3-4 Reps, 4-5 sets
77.5%	6-7 Reps	1-3 Repetitions	4 - 5 Sets	2 - 3 Sets	3-4 Reps, 4-5 sets
75%	7-8 Reps	1-3 Repetitions	4 - 5 Sets	3 - 4 Sets	4-5 Reps, 4-5 sets
72.5%	8-9 Reps	2-3 Repetitions	4 - 5 Sets	3 - 4 Sets	4-5 Reps, 4-5 sets
70 %	9-10 Reps	2-3 Repetitions	4 - 6 Sets	3 - 4 Sets	5-6 Reps, 4-5 sets
67.5%	11-12 Reps	2-3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-7 Reps, 4-5 sets
65%	13- 14 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets
62.5%	14-15 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets
60%	15-16 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets
57.5%	17-18 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets
55%	19-20 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets
52.5%	20-21 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets
50%	22-24 Reps	3 Repetitions	4 - 6 Sets	3 - 5 Sets	5-8 Reps, 4-6 sets

18.2 The Advantages of Block Training in Athletics

Reaching optimal performance for all athletes in the most efficient manner must remain a top priority for all performance coaches. This goal is exceeded in importance only by reducing injury during competition. Even with the inclusion of injury reduction training tactics, which are commonly congruent with many desired training adaptations, the use of efficient training methods to gain and maintain optimal performance enhancements are vital for successful athletic performance.

Coaches must also realize the perfect training model for athletes only exists in theory and there are never absolute outcomes with the use of various training methods. This is due to the dynamic systems theory and the understanding that all systems of the body, along with their reactions to each stressor would need to be accounted for in a real-time setting for the “perfect training model” to be executed. We, as performance coaches, must deal with athletes’ external stressors such as tests, personal lives, jobs, and even occasionally misguided practice techniques. Even though the perfect training model only exists in completely controlled and understood world, an attempt is made by all coaches to create the ideal model.

Before efficient manners of training can be discussed and argued it is important for all coaches to first have a firm understanding of the meaning of “optimal performance”. Optimal performance can only be achieved when all qualities, or parameters, used within the event are peaked simultaneously, to their appropriate amount for each competition event. The peaking of these parameters relies on each of their individual responses to training, which determines their windows of availability for use in competition. The importance of each of these individual qualities varies depending on the requirements of each sport. However, sports will commonly include the adaptations to parameters in the aerobic system, maximum strength levels, anaerobic endurance or repeat sprint effort, and maximal speed. As stated previously, a coaches understanding of each event and its specific quality requirements of that event will determine the specific training protocol utilized.

There are many known periodization models that have been used throughout the training process. Two of the well-known periodization methods are the block and conjugate models, which will be compared in this article. Both are common practices used within the strength and conditioning world and have their own respective benefits. For those unfamiliar with the differences between the two, block training places a highly specific stress on one of the above mentioned qualities, while conjugate training stresses all qualities within a training cycle. It should be noted here that even when the focus of adaptation is placed on a single quality, as seen in block training, other parameters may be affected due to the training. An example of this occurs when seventy or more high-quality repetitions of 10 seconds or less are completed in a training session, yet a significant aerobic training effect was seen.

Block Training

As stated above, the concentration of training workloads is the most decisive and fundamental principle of block periodization. This concentration of stress based on the specific desired quality allows the organism to place focus on a single adaptation, which greatly reduces the required time to maximize the adaptation. Once the desired adaptation is acquired, a new stimulus is implemented to improve a new, specifically chosen quality. This approach by block training allows all adaptations to be realized with the least amount of required volume, which means athletes do not experience as much “wear and tear” during training. May be placed here

The block training model can be broken into simple components, such as the three specialized phases termed accumulation, transmutation, and realization. However, this model is much more complex when considering the multi-year training model remodeling, which must match the adaptations made by each athlete. Each phase is designed to build upon the adaptations from the previous and ultimately lead to peaking of all abilities. Accumulation is programmed for the development of basic abilities such as aerobic endurance, muscular strength, and general movement patterns. This phase of training will be completed for the longest amount of time as the desired physiological and morphological changes develop the most slowly. These general adaptations are then built upon in the transmutation phase of training in which anaerobic endurance and specialized muscular endurance training takes place. Finally the realization phase is designed as a pre-competitive training phase in which maximal speed and the nervous system are maximized. It is clear these three phases function on a continuum which begins with the most general adaptations occurring in the accumulation phase and becoming more specific as training progresses through the transmutation and finally the realization, or peaking phase.

The block training method further functions on the systematic principles of residual effects, which are based on the amount of time each quality remains in a highly-trained state once training is ceased. This builds on the previous idea that once one parameter is maximized, others can be specifically trained while maintain the adaptations to the previously trained qualities.

The residual effects of each training quality are as follows:

- Aerobic endurance (30±5 days)
- Maximum strength (30±5 days)
- Anaerobic glycolytic endurance (18±4 days)
- Maximum speed (5±3 days)

The knowledge of these training residuals allows for a systematic training of each individual quality, along with the peaking of all qualities simultaneously, which must be the goal for all coaches prior to the competition phase of the annual cycle. Based on the residual effects shown above, aerobic qualities and maximum strength maintain their training effects the longest, while the nervous system, or max speed, have the shortest residuals. It is for this reason aerobic and maximum strength abilities are trained during the accumulation phase, or early in the annual cycle. By stressing and adapting these qualities with longer residuals, the qualities more specific to sport, such as maximal speed, can be improved while the aerobic and strength qualities remain elevated due to their long residual effects. Transfer of training is also improved as more specific training is completed prior to competition, which is also in accordance with the three block training phases. Coaches must understand the importance previous training plays in regards to determining the length of time each quality is stressed. The individual athlete responses to training must be considered at all times, as these will ultimately determine the residual length windows, and thus the optimal results of block periodization can be reached.

Conjugate Training

The conjugate training model takes a different approach as it attempts to train all qualities within a single phase or training session. The majority of conjugate training models follow a similar training session, which begins with maximum strength training, followed by a lighter exercise which is aimed at increasing power and velocity, and then finish with some exercises aimed at improving work capacity, or anaerobic endurance. This model leads to inefficient adaptations and reduced quality of work as the

athlete's body can become confused by the multiple signals being sent as it is being told to be fast, strong, and increase duration all within the same training session.

It is important to understand that this method will lead to performance improvements. However, some adaptations will occur at a much slower rate when multiple stressors are presented within the same cycle. This is due to the fact that not all parameters require the same amount of time to adapt maximally. If one of these qualities adapts at a faster rate than others then that one ability will be maximized. However, the others will lag behind and optimal performance will not be reached in a time efficient manner. Some adaptations occur more quickly than others, which means they are being trained unnecessarily while other qualities are trained with sub-optimal stress levels. This can lead to the continued training of a quality that may already be adapted optimally and will remain adapted due to its residual training effect. This inefficient and elongated adaptation phase leads to an excessive amount of time spent in the preparation phase, which eliminates the ability to execute multiple realization, or peaking, cycles within the annual training cycle.

This model of training is useful, however, for low level athletes that are continuing to improve a strong foundation of abilities if it is completed over multiple cycles. It should be noted that the block method can also be used in low level athletes with great success, it simply depends on the focus of the training completed for the athlete. Block training can also be used in the same annual cycle as conjugate training if an increased focus on a specific adaptation is needed in an athlete. Once that foundation has been created through training athletes will no longer receive the appropriate stimulus for adaptation within the annual cycle when all parameters are stressed simultaneously

Applying the Block Training Model to the Triphasic Annual Plan

In the realm of collegiate and professional athletics, the majority of athletes must reach the stage of optimal performance specific for their individual event multiple times within the annual cycle. Using the idea that optimizing all abilities simultaneously will lead to the greatest chance of a successful performance, specific peaking programs can be created within the annual cycle. These peaking times can be used at any time throughout training, however, they are typically applied at specific phases. Examples of these peaking times are prior to training camps, the beginning of conference play, and post-season competition periods.

Triphasic training takes full advantage of the block system and its benefits of peaking athletes at specific times of the competition calendar. The three phases of the block model can be clearly seen with the above 80% training block, the high-velocity high-load block, and the high-velocity low-load block. The residual effects of each quality are also taken into account, which becomes clear when the entire training calendar is laid out.

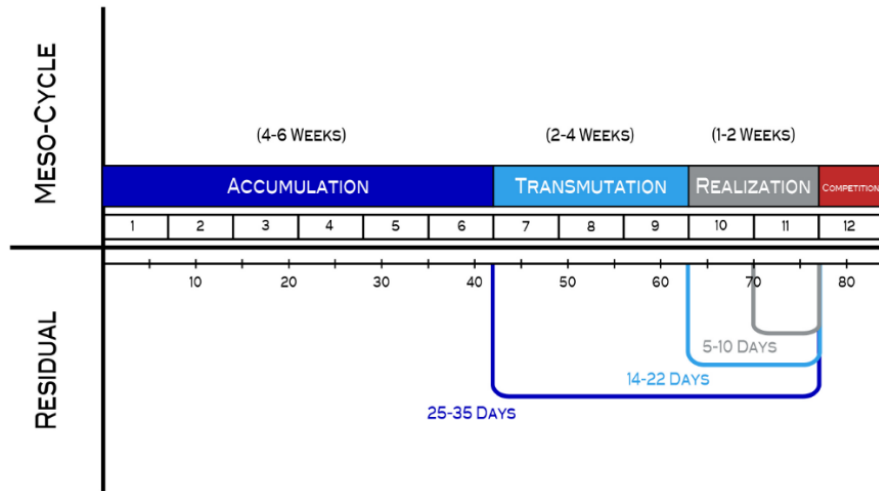
Before the focus of a specific block can be chosen within the training cycle a coach must first determine the competition dates. The knowledge of when athletes must be peaked will allow a coach to set up a plan that will complete all phases of training within the allotted time frame. Once these dates are determined, the duration of each block must be determined. The needs of each athlete must be considered during this planning of each phase. Some athletes will require different stressors due to sport requirements, prior training status, genetics, etc. it is important all of these factors are understood before a program is finalized.

The phases of the block training model, as described previously, include the accumulation, transmutation, and realization stages. Within the Triphasic Training model, the accumulation block consists of the GPP training blocks and the muscle action training at above 80% of one rep max. These two training blocks are aimed at increasing the aerobic capacity and energy systems of the organism and improving maximal strength. These two qualities are very general and non-specific to sport, but they are responsible for creating the foundation upon which all other abilities are able to be built. When the long residual effects of these two qualities (aerobic and maximal strength) are considered, it is clear these abilities are able to be trained, and then maintained for an extended period of time. As stated above, the retention of these qualities allows other parameters such as anaerobic endurance and maximal speed to be trained, ultimately leading to all qualities peaking simultaneously. Due to the physiological adaptations occurring in the body and these qualities building the foundation for others, the greatest amount of time is spent in this accumulation phase.

During the transmutation phase of block training anaerobic endurance, or the ability to repeat high intensity bouts, is trained specifically. Based on the continuum of residual effects training this quality becomes ideal. This phase becomes more specific to sport as energy systems required for competition can be trained more specifically now that a solid foundation has been built. Biometric training, as seen in Triphasic Training, can be completed in this phase to ensure all athletes receive the appropriate stimulus, which also continues to reinforce the previous training completed on the aerobic system. Training percentages are also lowered during this time as power, rather than maximum strength, is now the focus of training. The reduction in percentage also makes training more specific to sport as bar speed is increased.

Finally the realization phase occurs just prior to competition and consists of maximal speed training. This block is executed using lighter-loads, less than 55% of one rep max, at high-velocities. This training is more specific to sport as it most closely mimics the velocities seen throughout competition. The effects of this nervous system training are the shortest, thus this quality must be trained immediately prior to competition.

The picture below depicts the ability of the block training model to peak all qualities simultaneously, ultimately leading to maximized ability to compete and perform. The adaptations of training the aerobic system and maximum strength early in the cycle do not diminish for up to 35 days, especially if the qualities are “touched up” throughout that residual time period. The transmutation phase effects will remain for up to 22 days, which allows the realization phase to take place while remaining adapted.



Ultimately, all qualities for the desired competition event can be trained, adapt, and supercompensate simultaneously when the block model is programmed correctly. This will lead to the greatest opportunity for a successful competition.

19.0 Band Training

Author:

Jonathon Janz, MS, CSCS, USAW

Overview

The use of elastic bands in training has occurred for quite some time, increasing in popularity with each passing year. Initially utilized by “old time strongmen” in the form of [chest expanders](#), elastic resistance has long been a convenient (though sometimes dubious) means of training the muscles. More recently, elastic resistance has taken the form of [bands](#), which are either used on their own or in unison with free weights and/or machines. These loops of durable rubber have many different uses in the weight room.

Support In Research

Studies have suggested support for the use of bands in training, primarily with regard to improvements in peak force and peak power during exercises which combine bands and traditional weight training exercise (such as [back squats](#)) (2). For example, a back squat load of 85% of an athlete’s maximum, combined with resistance bands attached to the barbell, has been shown to significantly increase the athlete’s peak force and peak power output during the exercise (2). This increase in force and power during training may, over time, induce favorable adaptations in the athlete to a greater extent than weight.

Using Bands For Resistance

By far the most common use of bands is in the form of resistance for exercise. Whether they are used alone, such as in the [Bulgarian Band Squat](#) or in combination with weighted implements (barbells and/or dumbbells), bands can supplement nearly any exercise and add greater stress and variety. Increased stress and novel stimuli training without bands (1).

In some cases, the addition of bands in training has increased strength and power levels two- to three-times greater than training that does not include bands (1).

Using Bands For Assistance

There are several different ways of utilizing bands in training. One method is to use them as a means of assisting exercises or other activities. This type of use helps to introduce bands to athletes unfamiliar with them. For example, an athlete may choose to use a band to aid with stretching, known as [band stretching](#). The band essentially replaces the need to have a partner to help with stretching. Athletes may also use bands to assist with exercises, such as the [band pull-up](#) or chin-up. By taking advantage of the band's elasticity, the athlete is able to more easily complete the exercise and perform more repetitions than without the band. help to encourage adaptation, and challenge athletes to develop a higher level of force and power output in such activity.

Using Bands For Resistance

By far the most common use of bands is in the form of resistance for exercise. Whether they are used alone, such as in the [Bulgarian Band Squat](#) or in combination with weighted implements (barbells and/or dumbbells), bands can supplement nearly any exercise and add greater stress and variety. Increased stress and novel stimuli help to encourage adaptation, and challenge athletes to develop a higher level of force and power output in such activity.

Using Bands Alone

The elastic resistance provided by bands alone is often enough to make several exercises much more difficult. The [piston squat](#) becomes decidedly more intense with the addition of a [band](#), as does the [split squat](#). For these normally body weight exercises, resistance is increased with use of the band. The addition of the band also compels the athlete to exert more force throughout the entire range of motion (accommodating resistance) (3). In the piston squat, for example,

the band is lax when the athlete is sitting upon the bench. The most difficult part of this exercise is the initial liftoff phase from the bench, and body weight alone is more than adequate for resistance. As the athlete stands up, the exercise becomes easier as the active muscles move into a range of motion of increased mechanical advantage.

During this part of the exercise, the athlete's own body weight is significantly easier to move. To make this phase more difficult, the band begins to stretch and provide increased resistance. Thus the athlete receives a greater amount of stress throughout the entire range of motion for this exercise with the addition of a band. This scenario may be duplicated with many other body weight exercises, such as push-ups and sit-ups. Once an athlete has adapted to a particular body weight exercise, one may add additional resistance in the form of a band in order to increase the degree of difficulty.

Adding Bands To Weights

Bodyweight exercises are not the only activities that can be made more difficult with the addition of bands. One can attach bands to a weighted barbell and perform back squats, bench presses, and a host of other exercises as well. As mentioned before, the addition of bands to an exercise forces the athlete to exert a greater amount of effort throughout the entire range of motion. This is true for weighted exercises as well. For example, a maximum back squat of 500 lbs represents the amount of weight an athlete can successfully lift from a full squat to an erect position. The limiting factor for success this lift is the highly difficult range of motion near the bottom of the squat. Once this is negotiated, the rest of the range of motion is considerably easier.

This essentially means that the athlete can lift 500 lbs from the bottom of a squat.

As we know from experience, however, athletes can squat considerably more weight in shorter ranges of motion (such as the half squat or quarter squat). As a result, coaches will often prescribe [half rack squats](#) with significantly more weight than the athlete's maximum full squat in order to properly stress the athlete within that range of motion.

While this is certainly an acceptable practice, it may be easier and more efficient to attach bands to the barbell for use during full squats.

The bands will be lax at the bottom of the squat, where the load on the bar is enough to fully stress the athlete, but increase in tension as the athlete stands up (which more adequately trains the stronger portion of the lift).

Bands can be added to numerous exercises, even dumbbell exercises. If a coach seeks a method of making an exercise more difficult, or simply wants to add more variety to a program, band training may be an excellent option.

Band Training Exercise Examples

[2 Way Band Kicks](#)

[Ankle Band Work](#)

[Anterior Tibialis Band](#)

[Back Squat With Bands](#)

[Ball Band Leg Curls](#)

[Band Abduction Speed](#)

[Band Adduction Prehab](#)

[Band Face Pulls](#)

[Band I Band Stretch](#)

[Band Leg Speed Abduction](#)

[Band Leg Speed Adduction](#)

[Band One Arm Tricep Push Down](#)

[Band Pull Through Toes In](#)

[Band Pull Throughs](#)

[Band Rear Delt](#)

[Band Rev Grip Straight Arm Lat Pull Down](#)

[Band Side Lat Pull](#)

[Band Speed Push Backs](#)

[Band Speed Scap Pulls](#)
[Band Squat Jump](#)
[Band Squats](#)
[Band Straight Arm Pull Down](#)
[Band Tricep Extension](#)
[Box Back Squat Bands](#)
[Box Back Squat with Bands](#)
[Box Front Squat with Bands](#)
[Bulgarian Band Squat](#)
[Chest Band Adduction](#)
[Closed Lunge V Band Twist](#)
[Cross Over Step Up Band Dumbbells](#)
[Cross Over Step Up Bands](#)
[Double Step Up Band Dumbbell](#)
[Double Step Up With Band](#)
[Dual Action Bicep Curls](#)
[Dual Action DB Rows](#)
[Dual Action Tricep Band Extension](#)
[Dumbbell Bench Press With Bands](#)
[Dumbbell Step Up Band](#)
[External Rotation Band](#)
[Forward Eccentric Band Jumps](#)
[Front Squat With Bands](#)
[Glute Band Cycle Kicks](#)
[Glute Ham Hyper Incline Band](#)
[Glute Ham Hyper With Band](#)
[Hip Flex Band Pulls](#)
[Hip Flex Band Pulls Lateral](#)
[Incline Dumbbell Press With Bands](#)

[Internal Rotation Band](#)
[Isometric Lunge Band](#)
[Lateral Band Lunge](#)
[Lateral Band Step Up](#)
[Lateral Single Leg Band Jumps](#)
[Lateral Walking Band Lunge](#)
[Open Lunge V Band Twist](#)
[Partner Band Abs](#)
[Piston Squat With Band](#)
[Push Up Scapula Shrug With Bands](#)
[Reverse Band Crunch](#)
[Reverse Hyper On Glute Ham With Band](#)
[Reverse Hyper Wide Leg With Band](#)
[Single Leg Hops Low Box With Bands](#)
[Single Leg Low Box Band Dumbbell Step Up](#)
[Single Leg One Arm Band Row](#)
[Split Squat Band](#)
[Squatting Band Row](#)
[Squatting One Arm Band Row](#)
[Stand Alternating V Band Flexion](#)
[Standing Band Leg Curl](#)
[Step Up Band Glute Kick](#)
[Triangle Terror](#)
[Tricep Push Down Band](#)
[Walking Band Lunge Jumps](#)
[Walking Lunge With Band](#)

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1. Anderson, C.E., Sforzo, G.A., and J.A. Sigg. The effects of combining elastic and free weight resistance on strength and power in athletes. *Journal of Strength and Conditioning Research*, 22 (2): [567-574](#). 2008.
2. Wallace, B.J., Winchester, J.B., and M.R. McGuigan. Effects of elastic bands on force and power characteristics during the back squat exercise. *Journal of Strength and Conditioning Research* 20 (2): 268-272. 2006.
3. ZATSIORSKY, V. *Science and Practice of Strength Training Second Edition*. Human Kinetics Publishers. Champaign, IL. 1995.

20.0 Ramadan and Athletes

I have had a number of people ask about Ramadan and the effects it plays on athletic performance this over the years. Below is a plan to allow for performance gains to be made during this time.

The plan will begin in the evening, when nutrients are allowed to be consumed.

Directly after sunset, when it is permissible to intake liquids, the athlete should consume some mixture that includes the 9 essential amino acids, and glutamine in a carbohydrate drink. After this drink has been finished, a meal high in fat and protein should be eaten. Slow digesting carbohydrates should be consumed to ensure no insulin spike occurs, as an insulin spike could lead to an inability to sleep. If an athlete does not seem to have this issue, I would consume as many carbohydrates as possible.

The middle of the night is another great chance to supply your body the nutrients it will need to perform. During this time a protein shake or snack including whey and casein should be consumed. This will allow the body to continue in an anabolic, or building, state.

Before sunlight it is imperative that you wake up to eat a breakfast including both carbohydrates and protein. This can range from hash browns, or other forms of potatoes, or rice. Along with meat, nuts, eggs or another form of protein. Just prior to sunrise a large protein shake consisting of mostly casein protein should be taken. Carbohydrates should be added to this shake such as honey almond milk or regular milk. This will help the protein to be absorbed more slowly, thus supply the body for a longer amount of time.

These nutritional tactics will allow an athlete to continue competing and training at high intensities while following Ramadan appropriately.

21.0 Performance Calculators

This [Repetition Calculator for Strength Athletes](#) will provide you a tool in which you can type in the Weights Lifted and the Repetitions Completed and you will get your athletes estimated Max Lift numbers

The [Peak Power Vertical Jump Test Calculator](#) will figure the peak power output during the vertical jump movement. This tool can show an athlete that has put on body weight and hasn't increased their vertical they have increased the power output of the vertical jump.

[Back Squat Max and Assisted Lift Weight and Reps Guide](#)- After downloading Excel File click on Yellow "Enable Edit" Button at top of Page to place in your maxes.

[Bench Press Max and Assisted Lift Weight and Reps Guide](#)- After downloading Excel File click on Yellow "Enable Edit" Button at top of Page to place in your maxes.

[Power Clean Max and Assisted Lift Weight and Reps Guide](#)- After downloading Excel File click on Yellow "Enable Edit" Button at top of Page to place in your maxes.

The [Explosive Strength Deficit Test](#) can show an athlete if they need to either work on strength to increase their vertical jump, or if they need work on plyometrics to get faster for improved vertical jump performance.

The [Average Power Vertical Jump Test Calculator](#) will figure the average power output during the full range of the athletes vertical jump. This tool can show an athlete that has put on body weight and hasn't increased their vertical they have increased the power output of the vertical jump.

This [Repetition Calculator for Endurance Athletes](#) will provide you a tool in which you can type in the Weights Lifted and the Repetitions Completed and you will get your athletes estimated Max Lift numbers.

[Max Reps Calculator and Reps Scheme](#) After downloading Excel File click on Yellow “Enable Edit” Button at top of Page to place in your maxes.

Bringing it All Together

The goal of training at all times is to enhance performance of your athletes, no matter what their specific competition event is. Each event and athlete must be considered and trained on an individual basis, but there are some aspects that remain the same through the majority of sports. Increasing max strength, power, and reactivity of your athletes will dramatically improve their performance. All of these qualities will be maximized through the Triphasic Training methods explained in earlier pieces of this book. It is important to note that there are many ways the Triphasic model can be implemented into a program and we have yet to find a program that cannot add Triphasic into it effectively.

A few notes that we want to leave you with as take away points from this book:

- Encourage proper teaching and execution of technique prior to adding weight. We as coaches are often too worried about numbers in the weight room, rather than the effects the training is having on their athletes. We cannot stress the importance of this main point.
- The second take away message builds on the first, and that is that the weight room is only one aspect of training. It is crucial to remember we are training athletes, not weight lifters. Do not make the goal of your training to improve strength. There will, however, be blocks throughout the year in which that is the ultimate goal, but max strength cannot be the purpose of your strength training as it will only improve your athletes to a certain point.
- As coaches we always need to remember that our athletes adapt in the way they are trained. This is especially important when training max speed. We must give full rest times while training max speed, or our athletes will not recover and these drills will become more of a conditioning tool.
- The final take away message we want to leave you is that rest is a weapon! After each phase of training your athletes must be given time to recover or they will not be able to supercompensate. If proper recovery time is not given athletes will eventually become

worn out and over trained. The download weeks as well as the time between workouts are both necessary rest times that must be used wisely. The 23 hours spent during the day are just as much, if not more important in the aspect of performance increase than the single hour spent training. When proper recovery is given through download weeks and your athletes take care of their body between training sessions your athletes will see the benefits of their hard work on the field or in competition.

Want to Learn More?

At XL Athlete, we realize that you strive to provide the best training methods for your athletes and seek to contribute to the overall success of your athletic department. XL Athlete will provide the most up to date, scientifically-based training methods that you can implement in your school's strength and conditioning program. We will also personalize these methods to best fit your school's facilities, athletes and coaching staff. We can format the clinics to consult with your entire coaching staff. Our experienced and certified clinicians across the country can work with your school to design an agenda to make sure you get exactly what your high school needs. Travel may require additional cost.

Here are a few of the topics typically covered at an XL Athlete High School Clinic:

Introduction to and benefits of strength training for high school athletes

Prevention of injury prevalent to high school sport

Improved health of strength training participants

Weight reduction/Loss of fat

Reduce likelihood of chronic pathology to the joints

Improved sporting performance

Improved strength and power performance

Improved speed and explosiveness for all sports

Common misconceptions associated with strength training

Basic strength training concepts

Weight room necessities

Free weights versus machines

Strength training exercises

Olympic lifts

Complex/contrast training

Plyometrics

Sprint training

Acceleration and maximum speed

Planning a strength training program

Recovery/restoration

[One Day xlathlete.com High School Clinic](#)

[Two Day xlathlete.com High School Clinic](#)

In Closing Please e-mail XLathlete@gmail.com and tell us about your issues as a Strength coach and let us write articles to help you and others improve. This is what xlathlete has been built on the request of coaches in need.

Contralateral Aerobic Circuit Method

By xlathlete.com

The following is an aerobic circuit method for the beginning of training to build your base and revisit work capacity and fitness to get ready to train.

Using the circuit

This circuit is to be used to train in the aerobic zone, staying below lactate threshold (LT), lactate inflection point (LIP) or Ventilatory threshold (VT).

You may want to build up using the methods (Levels) below, trying to get to level 4 as fast as possible without training into lactate threshold.

Level 1 - 15 seconds on 10 off

Level 2 - 20 seconds on 10 off

Level 3 - 25 seconds on 10 off

Level 4 - 30 Seconds on 10 off

The following is an excellent online interval timer – [Click here](#)

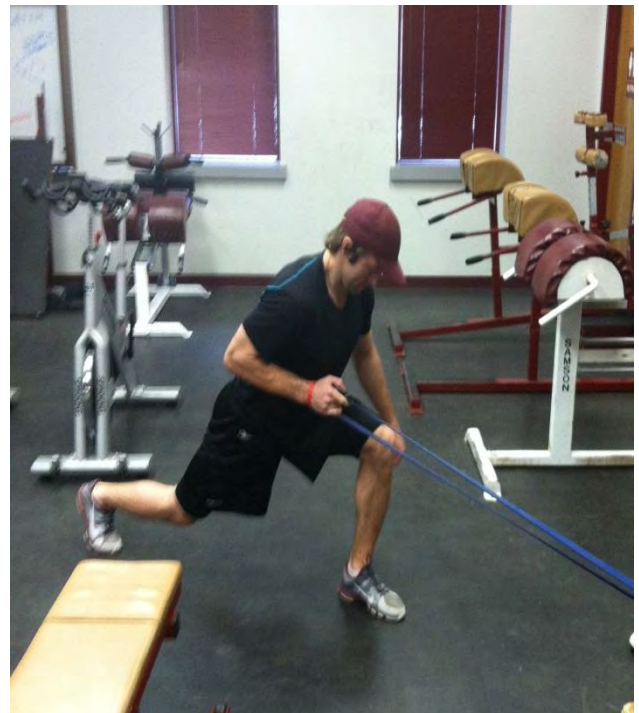
Set-up:

You can do the circuit one station at a time laid out around the training area or you can complete in one spot with the correct set-up. The set-up is pictured on the last page of the circuit. You can type the numbers at the top of the page to change the order of the circuit if needed to fit your weight room.

Reverse Lunge Right with Band Row Left



Reverse Lunge Left with Band Row Right



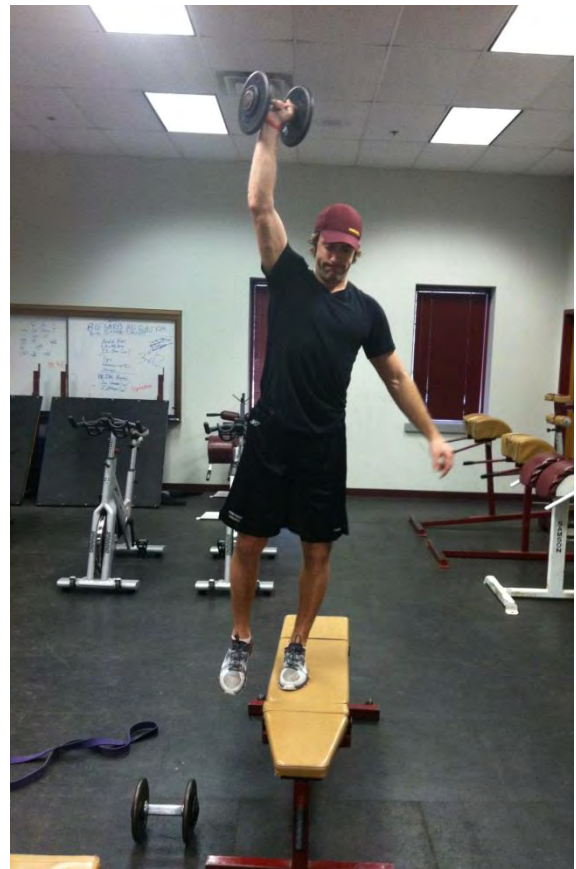
Step up Right with Shoulder Press Left



M – 25

F – 15

Step up Left with Shoulder Press Right



M – 25 F - 15

www.xlathlete.com

Right Leg Deadlift Left Arm Row



M – 35 F – 25

Left Leg Deadlift Right Arm Row



M – 35 F – 35

Piston Squat Right with Left Arm Band Row



Piston Squat Left with Right Arm Band Row



Reverse Lunge Right Shoulder Press Left



M – 25 F – 15

www.xlathlete.com

Reverse Lunge Left with Shoulder Press Right



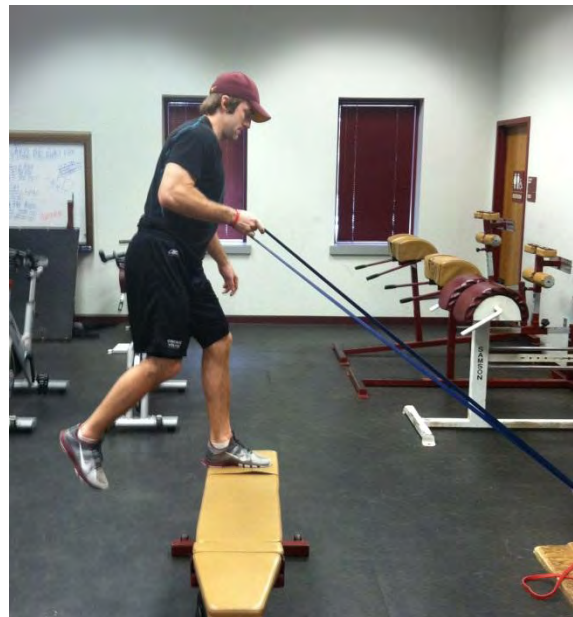
M – 25 F – 15

www.xlathlete.com

Step up Right with Left Arm Band Row



Step up Left with Right Arm Band Row



RDL with Overhead Press



5lbs

Close Leg RDL with Twisting Row



M – 35 F - 25

Step up Right with Band Press Left



Step up Left with Band Press Right



Right Leg RDL with Left Arm Row



M – 30 F – 20

Left Leg RDL with Right Arm Row



M – 30 F – 20

www.xlathlete.com

Split Squat Right with Left Shoulder Press



M – 25 F – 15

www.xlathlete.com

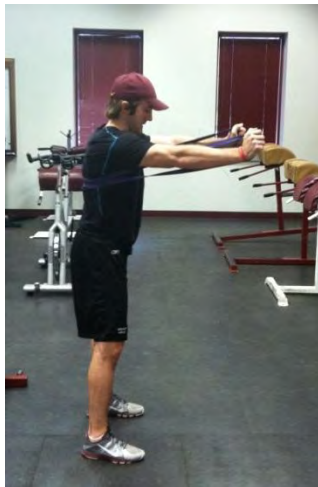
Split Squat Left with Right Shoulder Press



M – 25 F - 15

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Reverse Lunge Right with Band Press Left



Reverse Lunge Left with Band Press Right



RDL with Row



M – 40 F – 30

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Piston Squat Left with Band Press Right



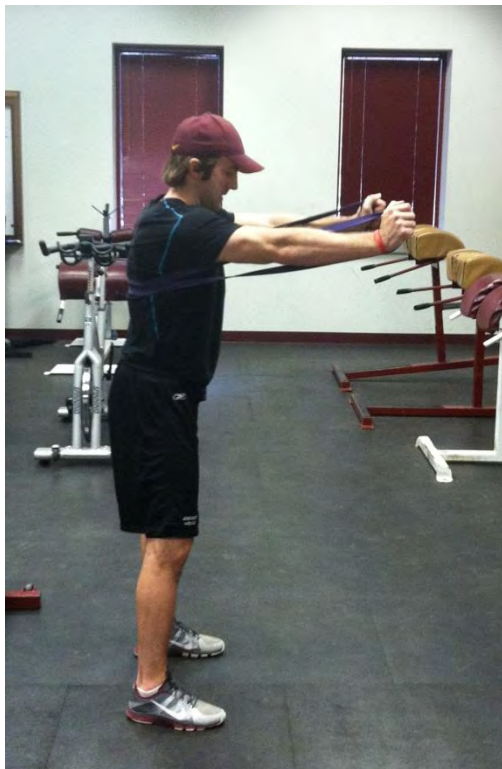
Piston Squat Right with Band Press Left



Bent over Face Pulls



Squat and Band Chest Press



Squat with Band Row



RDL Windmill



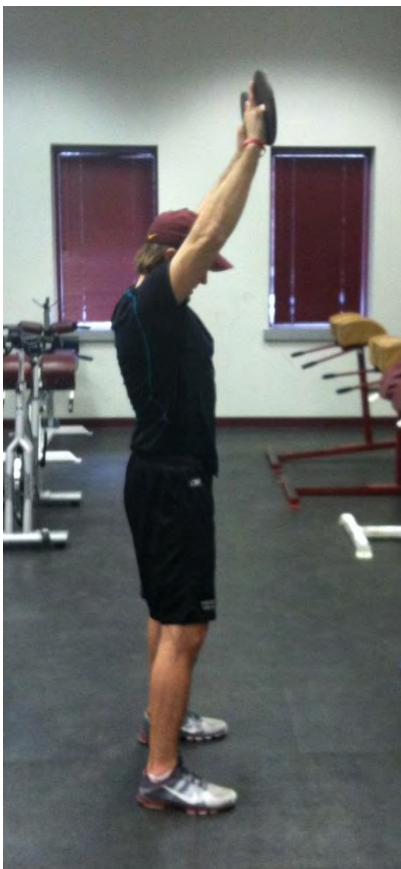
Split Squat Left with Right Arm Band Press



Split Squat Right with Left Arm Band Press



Overhead RDL



Right Leg Deadlift with Left Arm Band Row



Left Leg Deadlift with Right Arm Band Row



Split Squat Right with Left Arm Band Row



Split Squat Left with Right Arm Band Row



Squat with Shoulder Press



M – 35 F – 25

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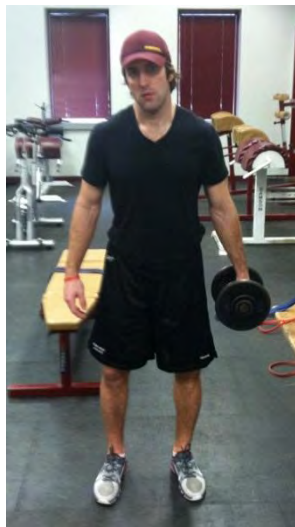
Squat with Right Arm Row



M – 30 F – 20

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Squat with Left Arm Row



M – 30 F – 20

Piston Squat Right with Shoulder Press Left



M – 25 F – 15

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Piston Squat Left with Shoulder Press Right



M – 25 F - 15

Contralateral Aerobic Circuit Method

The following is a Rack setup to complete the circuit at one station.



Aerobic Block Contralateral Circuit Station
Training no pictures

Reverse Lunge Right with Band Row Left
Reverse Lunge Left with Band Row Right
Step up Right with Shoulder Press Left
Step up Left with Shoulder Press Right
Right Leg Deadlift Left Arm Row
Left Leg Deadlift Right Arm Row
Piston Squat Right with Left Arm Band Row
Piston Squat Left with Right Arm Band Row
Reverse Lunge Right Shoulder Press Left
Reverse Lunge Left with Shoulder Press Right
Step up Right with Left Arm Band Row
Step up Left with Right Arm Band Row
RDL with Overhead Press
Close Leg RDL with Twisting Row
Step up Right with Band Press Left
Step up Left with Band Press Right
Right Leg RDL with Left Arm Row
Left Leg RDL with Right Arm Row
Split Squat Right with Left Shoulder Press
Split Squat Left with Right Shoulder Press

Reverse Lunge Right with Band Press Left

Reverse Lunge Left with Band Press Right

RDL with Row

Piston Squat Left with Band Press Right

Piston Squat Right with Band Press Left

Bent over Face Pulls

Squat and Band Chest Press

Squat with Band Row

RDL Windmill

Split Squat Left with Right Arm Band Press

Split Squat Right with Left Arm Band Press

Overhead RDL

Right Leg Deadlift with Left Arm Band Row

Left Leg Deadlift with Right Arm Band Row

Split Squat Right with Left Arm Band Row

Split Squat Left with Right Arm Band Row

Squat with Shoulder Press

Squat with Right Arm Row

Squat with Left Arm Row

Piston Squat Right with Shoulder Press Left

Piston Squat Left with Shoulder Press Right

The following pages were extracted from the [Triphasic Training](#) book so that those who purchased the hard copy can still take advantage of the 3000 hyperlinked videos from the ebook.

- 2) At the time, both athletes had the same bench press max—415 pounds. Because they both had the same max, it eliminated one of the variables that contributes to RFD—max strength. The other variable is time (which we will talk about in short order).

Wanting to see how Ben and Tommy produced force explosively, I used the band method on the bench press so that I could see acceleration throughout the entire range of motion on the lifts. Without the extra band tension at the top of the movement, both athletes would have had to decelerate the bar halfway through the concentric phase or the bar would fly out of their hands. This early deceleration would skew the results. The band tension ensured that both of them, Ben and Tommy, would drive the bar as hard as they could, generating a high rate of force through the entire range of motion. For those of you not familiar with the banded bench method, the [hyperlink](#) gives you a visual of the exercise — [Bench press band method](#)

The bar was loaded with 205 pounds (50 percent of their 1RM) and 90 pounds of band tension (20 percent of their 1RM). At the top of the press, each athlete would be moving 70 percent of their 1RM. Both athletes were instructed to bring the bar down hard and fast, stopping it at their chest, and reaccelerating the bar upward as fast as they could. It should be noted that neither athlete bounced the bar off his chest. (I will talk about the importance of this detail in a moment.)

The graph below shows the results recorded by the force plate. The x-axis (horizontal axis) depicts time in hundredths of a second. The y-axis (vertical axis) represents power in watts. In essence, the graph is showing how much force each athlete absorbed and displaced in a given amount of time. Ben's repetition is shown by the black line while Tommy's is shown by the gray line. The actual repetitions are taking place during the "V" shaped segment of the lines in the middle of the graph. The descending line of the "V" is the eccentric or yielding phase of the bench press. The bottom, or point, of the "V" is the isometric or static phase, and the line ascending from the bottom of the "V" is the concentric or overcoming phase.

workout. This is possible because the athlete has adapted and is able to handle higher levels of stress without excessive fatigue. For example, a more advanced athlete can start a workout with heavy eccentric back squats and then add [eccentric Romanian deadlifts](#) and [single leg eccentric dumbbell squat](#).

2. Never perform slow eccentrics with loads greater than 85 percent of an athlete's 1RM.

This rule is based on my own risk/reward analysis. To me, the risk is far too great to have an athlete with a weight close to, at, or above his 1RM load his body for an extended period of time. I've seen torn pecs and quads, blown backs, and screwed up shoulders. At the end of the day, you can get the same physiological adaptation using lighter loads for longer times with half the risk.

3. Always spot the athlete when performing slow eccentrics.

This is a widely practiced rule when an athlete is trying to lift heavy loads, but some coaches may not see the need when using lighter, submaximal loads. You must remember that when performing eccentrically focused training, you're maximally taxing the eccentric minded nervous system and the physiological structures it supports, even with submaximal loads. As you can see in Table 3.2, as the load decreases, the time of the eccentric increases. The resulting increase in time under tension means an athlete's muscular system could give out at any point during the lift, so proper spotting is crucial.

4. Always finish an eccentric focused lift with an explosive, concentric movement.

As a coach, the most important aspect of performance that you're constantly trying to improve within the athlete is his nervous system. Every jump, cut, and throw an athlete makes begins with an eccentric lengthening of the muscle and ends with an explosive concentric contraction. The neurological pathways that signal these contractions are entirely different and independent of one another. Each time the athlete's nervous system transitions from the eccentric to the concentric phase, it has to change its firing pattern to initiate the next part of the movement. The signal has to jump switchboards, if you will. It is imperative to an athlete's success that this process is as fluid and seamless as possible. The bar will not necessarily move fast, especially using heavy eccentric loads, but the intent to accelerate the

TABLE 3.3: EXAMPLE EXERCISES WITH ECCENTRIC MEANS	
EXERCISE	COACHING POINTS
<u>BACK SQUAT - ECCENTRIC</u>	<ol style="list-style-type: none"> 1. Set up with the bar on the back of the shoulders. 2. Keeping the chest up and the back flat, sit back as if to a chair. 3. Descend into the bottom of the squat in the prescribed time. 4. Once the time has been reached, explosively fire up back to the start.
<u>FRONT SQUAT - ECCENTRIC</u>	<ol style="list-style-type: none"> 1. Set up with the bar on the front of the shoulders. 2. Keeping the chest and elbows up and the back flat, sit back as if to a chair. 3. Descend into the bottom of the squat in the prescribed time. 4. Once the time has been reached, explosively fire up back to the start.
<u>RDL - ECCENTRIC</u>	<ol style="list-style-type: none"> 1. Grab the bar just outside of the thighs with the feet shoulder width apart. 2. Keeping the back flat and the chest up, bend the knees slightly. 3. Allow the bar to slide down the thighs for the prescribed time. 4. Once the time has been reached, explosively fire up back to the start.
<u>BENCH PRESS - ECCENTRIC</u>	<ol style="list-style-type: none"> 1. While laying on your back, grab the bar one thumb length away from the knurling. 2. Unrack the bar, keep the shoulders pulled back, and pull the bar into the chest. 3. Lower the bar in the prescribed time until it touches the chest. 4. Once the time has been reached, explosively fire up back to the start.
<u>DB SHOULDER PRESS - ECCENTRIC</u>	<ol style="list-style-type: none"> 1. Begin standing with a dumbbell in each hand, palms facing each other. 2. Press the dumbbells up explosively to begin the exercise. 3. Lower the dumbbells back to the shoulders in the prescribed time. 4. Once the time has been reached, explosively fire up back to the start.
<u>CAMBERED BAR SQUAT - ECCENTRIC</u>	<ol style="list-style-type: none"> 1. Using a cambered bar, set up just as you would for the back squat. 2. Keeping the chest up and the back flat, sit back as if to a chair. 3. Descend into the bottom of the squat in the prescribed time. 4. Once the time has been reached, explosively fire up back to the start.
<u>CLOSE GRIP BENCH - ECCENTRIC</u>	<ol style="list-style-type: none"> 1. While laying on your back, grab the bar with the pointer on the edge of the knurling. 2. Unrack the bar, keep the shoulders pulled back, and pull the bar into the chest. 3. Lower the bar in the prescribed time until it touches the chest. 4. Once the time has been reached, explosively fire up back to the start.

TABLE 3.7: EXAMPLE EXERCISES WITH HIGH LOAD RESISTED ISOMETRIC MEANS (MAIN COMPOUND, PERFORM AT ONSET OF WORKOUT)	
EXERCISE	COACHING POINTS
<u>BACK SQUAT - ISOMETRIC</u>	<ol style="list-style-type: none"> 1. Set up with the bar on the back of the shoulders, keeping the chest up and the back flat. 2. Sit back and descend into the bottom of the squat rapidly. 3. Once in the bottom, become a statue and pause for the prescribed time. 4. Once the time has been reached, explosively fire up back to the start.
<u>FRONT SQUAT - ISOMETRIC</u>	<ol style="list-style-type: none"> 1. Set up with the bar on the front of the shoulders, keeping the chest up and the back flat. 2. Sit back and descend into the bottom of the squat rapidly. 3. Once in the bottom, become a statue and pause for the prescribed time. 4. Once the time has been reached, explosively fire up back to the start.
<u>RDL - ISOMETRIC</u>	<ol style="list-style-type: none"> 1. Grab the bar just outside of the thighs with the feet shoulder width apart. 2. Keeping the back flat and the chest up, lower the bar rapidly along the thighs. 3. Once the bar passes the knees, become a statue and pause for the prescribed time. 4. Once the time has been reached, explosively fire up back to the start.
<u>BENCH PRESS - ISOMETRIC</u>	<ol style="list-style-type: none"> 1. While laying on your back, grab the bar one thumb length away from the knurling. 2. Unrack the bar and pull it rapidly toward the chest. 3. Right before the bar hits the chest, stop it completely and pause. 4. Once the time has been reached, explosively fire up back to the start.

TABLE 3.8: EXAMPLE EXERCISES WITH LIGHTENED LOAD RESISTED ISOMETRIC MEANS (ASSISTANCE, PERFORMED THROUGHOUT WORKOUT)

EXERCISE	COACHING POINTS
<u>DB WALKING LUNGE-ISOMETRIC</u>	<ol style="list-style-type: none"> 1. Holding a pair of dumbbells, take a moderate step forward. 2. Keeping the chest up and the back flat, descend into the bottom of the lunge. 3. Lower yourself until the back knee is just above the ground and pause. 4. Once the time has been reached, explosively fire through and step forward.
<u>INCLINE DB BENCH</u>	<ol style="list-style-type: none"> 1. Holding a dumbbell in each hand, set up on an inclined bench. 2. Beginning the dumbbells near the shoulders, pause for the prescribed time. 3. Be sure to keep the chest up, the lower back arched, and the eyes toward the ceiling. 4. Once the time has been reached, explosively fire up and back to the start.
<u>DB RDL</u>	<ol style="list-style-type: none"> 1. Holding a pair of dumbbells, begin with the arms just along the thighs. 2. Keep the chest up, the back flat, and the knees slightly bent. 3. Lower the dumbbells along the thighs rapidly until just below the knees and pause. 4. Once the time has been reached, explosively fire up and back to the start.
<u>DB ROW - ISOMETRIC</u>	<ol style="list-style-type: none"> 1. Hold one dumbbell in the hand and use the other to stabilize the body on a bench. 2. Keeping the back flat, pull the dumbbell rapidly into the ribs. 3. Allow the dumbbell to return slightly toward the ground and pause. 4. Once the time has been reached, explosively fire up and back to the start.
<u>BENCH PRESS REACTIVE DROP PAUSE TOSS</u>	<ol style="list-style-type: none"> 1. While laying on your back, grab the bar one thumb length away from the knurling. 2. With a spotter, rapidly drop the bar until it is just about to hit the chest. 3. Pause with the bar right above the chest. 4. Once the time has been reached, explosively throw the bar as high as possible.

TABLE 3.9: EXAMPLE EXERCISES WITH PUSH/PULL ISOMETRIC MEANS	
EXERCISE	COACHING POINTS
<u>ISOMETRIC CHEST HOLD</u>	<ol style="list-style-type: none"> 1. Set up on the three boxes, placing the hands on the edge of the first two. 2. Keeping the abs and back tight, pull into position and pause. 3. While in the bottom, keep the body perfectly still. 4. Once the time has been reached, explosively press yourself up.
<u>BENCH PRESS RACK - ISOMETRIC</u>	<ol style="list-style-type: none"> 1. While laying on your back, grab the bar one thumb length from the knurling. 2. Using a spotter, press the bar into a fixed support in the weakest position. 3. Press as hard as possible for the prescribed time. 4. Once the time has been reached, rack the bar.
<u>HIP FLEXOR ISO PRONE</u>	<ol style="list-style-type: none"> 1. Set up with one foot on a bench and the hands on the ground in the plank position. 2. Keep the foot not on the bench straight. 3. Keep the body in a straight line and be absolutely still. 4. Once the time has been reached, switch legs and repeat.
<u>SINGLE LEG ISO DEADLIFT</u>	<ol style="list-style-type: none"> 1. Set up with a bar under a fixed support and a bench behind. 2. One foot should be elevated to the rear with the other in front of the bar. 3. Grab the bar and pull into the fixed support at the weakest position. 4. Once the time has been reached, switch legs and repeat.
<u>ISOMETRIC BALL GROIN SQUEEZE</u>	<ol style="list-style-type: none"> 1. Using a Swiss ball, place the knees just outside of the edge. 2. In an athletic stance, squeeze the ball using the groin muscles. 3. Squeeze the ball for the prescribed time. 4. Once the time has been reached, rest and repeat for desired sets.
<u>HEX BAR ISO DEADLIFT</u>	<ol style="list-style-type: none"> 1. Set up using a hex bar under a fixed support. 2. Keep the feet shoulder width apart, the back flat, and the chest up. 3. Pull the bar as hard as possible into the fixed support. 4. Once the time has been reached, rest and repeat for desired sets.

concentric contraction is the culmination of every neuromuscular mechanism we have talked about up to this point:

- Golgi tendon organ reflex
- Stretch reflex
- Stretch shortening cycle (SSC)
- Rate coupling
- Motor unit recruitment
- Rate coding
- Reactive ability

As an example, compare the [hang clean](#) to a [Romainian deadlift and shrug](#). A novice athlete can quickly learn and perform a proper Romanian deadlift and shrug. For the most part, it is a slow, controlled movement that allows more time for the athlete's neuromuscular system to interpret, process, and execute instructions from his entire neuromusculature of the posterior chain (calves, hamstrings, glutes, and back). On the other hand, teaching the hang clean, though a very similar movement pattern to that of an Romanian deadlift and shrug, can be a long, arduous process. Decreasing the weight and increasing the speed of the exercise, the athlete's neuromuscular system gets overloaded.

The take home point from this example is that just like the eccentric and isometric phases of dynamic movement, the concentric phase is a learned, trainable skill. Not every concentric dynamic action is as hard to learn as the hang clean. I can teach an athlete to concentrically perform a back squat in a few minutes. It's intuitive—once he squats down I simply tell him to stand up. It is a neuromuscular action that he has likely performed hundreds, if not thousands, of times in his life. Every time he has sat down and stood up, he has performed at least a partial rep. But to teach that athlete to fire all his hip extensors, drive his feet through the floor, and activate his high threshold motor units through afferent neural pathways that are likely underdeveloped all while trying to move the bar like it was just shot out of a cannon—that takes time and lots of training.

TABLE 3.11: EXAMPLE EXERCISES WITH REACTIVE CONCENTRIC MEANS

EXERCISE	COACHING POINTS
<u>BACK SQUAT - REACTIVE</u>	<ol style="list-style-type: none"> 1. Set up with the bar on the back of the shoulders. 2. Keeping the chest up and the back flat, pull yourself down into the bottom of the squat. 3. Once in the bottom, explosively fire out as fast as possible. 4. Repeat for the desired number of repetitions.
<u>SINGLE LEG DB FRONT SQUAT - REACTIVE</u>	<ol style="list-style-type: none"> 1. Holding a pair of dumbbells on the shoulders, keep the chest up and the back flat. 2. One leg should be elevated to the rear. 3. Using the front leg, pull rapidly into the bottom of the squat. 4. Once in the bottom, explosively fire out and repeat for the desired repetitions.
<u>RDL - REACTIVE</u>	<ol style="list-style-type: none"> 1. Grab the bar just outside of the thighs with the feet shoulder width apart. 2. Keeping the chest up and the back flat, lower the bar along the thighs rapidly. 3. Once the bar hits the bottom position, explosively fire up and return to the start. 4. Repeat for the prescribed repetitions.
<u>BENCH PRESS - REACTIVE</u>	<ol style="list-style-type: none"> 1. While laying on your back, grab the bar one thumb length away from the knurling. 2. Using the upper back, pull the bar rapidly into the chest. 3. Once the bar touches the chest, explosively throw it as hard as possible. 4. Repeat for the prescribed repetitions.

drill. In sharp contrast to the SM group, the TM group did not perform any repetitions of the pro-agility drill nor were they coached on technique.

Both groups went through the above protocol for four weeks. At the conclusion, I ran them through the test a second time. Remember:

Standard method (SM): Normal lifting, no eccentric training, practiced drill three times a week

Triphasic method (TM): Eccentric/isometric training, no practice with drill

TABLE 3.12: PRO-SHUTTLE RESULTS			
GROUP	PRE-TEST TIMES	POST-TEST TIMES	DIFFERENCE
STANDARD METHOD	4.8 SEC	4.7 SEC	-0.1
TRIPHASIC METHOD	4.8 SEC	4.4 SEC	-0.3

I don't think I can give you a better example that shows the importance of triphasic training with your athletes. During this experiment, the athletes who trained with the triphasic method improved their time by eight percent compared to a two percent improvement for those who used a traditional training program—a fourfold difference! Instead of focusing on trying to improve dynamic performance through concentric only methods, you need to use a program that physiologically improves the weak links in dynamic human movement. In this case, you need to specifically train the eccentric and isometric portions of the triphasic muscle action. The hyperlinks in table 3.13 show the drastic difference triphasic strength can make in an athletes performance performance.

TABLE 3.13: PRO-SHUTTLE COMPARISON		
INCORRECT FORM (POOR TRIPHASIC ACTION)	1) HIGH HIPS 2) REACHING FOR CONE 3) SLOW TURNS	1. BAD PRO-SHUTTLE 2. BAD PRO-SHUTTLE END VIEW
CORRECT FORM (OPTIMAL TRIPHASIC ACTION)	1) LOW TO THE GROUND 2) HIPS SINK TO CONE 3) EXPLODE OUT OF TURN	1. GOOD PRO-SHUTTLE 2. GOOD PRO-SHUTTLE END VIEW

The question I get asked most often when I talk to people about stress and triphasic training is the “how” question. How do I implement these within my own system? People see the importance of stress. They see the need of applying specific stress to each phase of dynamic movement. They understand the means that can be used to apply it, but they don't have a firm grasp on how to implement it within their own training programs. After reading the first two sections, you, too, should have a good understanding of stress, triphasic training, and the role they play in developing your athletes. Right now, however, these concepts are very fluid. They aren't singularly focused or contained within the confines of an organized system.

In the next section, I will show you how to take these fluid concepts and solidify them by using two different periodization models—a weekly undulating model and a monthly block system. Together, these methods form a framework within which you will be able to manipulate and implement the stress placed on your athletes. So take a deep breath and bear with me. What now seems to be a complicated, insurmountable mountain of information will be by the end of this book a logical and intuitive reference that you will be able to use time and again in helping your athletes reach their athletic potential.

Below are hyperlinks to a video series where I elaborate and explain further the triphasic training principles, methods, and periodization schedule outlined in this section. The videos will serve as a great review, as well as give some additional insights into how to apply triphasic principles with your current programs.

[**TRIPHASIC TRAINING METHODS: PART I**](#)

[**TRIPHASIC TRAINING METHODS: PART II**](#)

[**TRIPHASIC TRAINING METHODS: PART III**](#)

	100%	MONDAY	2-Nov-10			
			REPS	LOAD	SETS	NOTES
	500	Sport Back Squat	5,3	250 - 335	1,1	Pw/ Cuban F8
		2-Min Rest/B-Breath				1band Rollers
	500	Sport Back Squat	3	390 - 400	1	pw/cuban f8
		2-Min Rest/B-Breath				1band Rollers
Compound	500	Sport Back Squat	3	415 - 440	3	6:0:0:0
Plyometric		Hurdle Hop	5	150 - 180	3	Pull Down
		15 rest-BB		150 - 180		
Weighted Jump		1/2 SQ JMP Weighted	4	150 - 180	3	reactive
		15 rest-BB		150 - 180		
Accelerated Plyometric		15 Yard Starts	1	150 - 180	3	4:00 Rest

- Figure 4.15

perform a six-second eccentric sport back squat followed immediately by the hurdle hop, weighted half squat jump, and a 15-yard start, taking fifteen seconds to belly breathe between exercises. After completing a set, the athlete would rest for four minutes before returning to the sport back squat.

Table 4.6 quickly lays out how a coach could alter each exercise in the French contrast method to specialize it for a specific sport, increasing the transferability of gains in the gym to gains on the field. For each sport in the table, two possible substitutions are shown for each exercise.

TABLE 4.6: APPLYING FRENCH CONTRAST METHOD MEANS FOR GREATEST TRANSFER OF SPORT SPECIFIC ABILITIES				
SPORT	COMPOUND EXERCISE	PLYOMETRIC	WEIGHTED JUMP	PLYOMETRIC
FOOTBALL (LINEMAN)	BACK SQUAT	SPLIT SQUAT ALTERNATING JUMP	BB JUMP SQUAT	ASSISTED BAND SQUAT JUMP
	LEG PRESS	SQUAT DROP JUMP	SAND BAG SQUAT JUMP	ACCELERATED BAND SPLIT SQUAT JUMP
FOOTBALL (SKILL PLAYER)	FRONT SQUAT	HURDLE HOP	BB JUMP SQUAT	ASSISTED BAND SQUAT JUMP
	BACK SQUAT	ALTERNATE LEG BOUNDING	SAND BAG SQUAT JUMP	ACCELERATED BAND SPLIT SQUAT JUMP
HOCKEY	BACK SQUAT	RUSSIAN PLYO BOX	POWER STEP-UP W/ BAG	ASSISTED BAND SQUAT JUMP
	LEG PRESS	SQUAT DROP JUMP	BB JUMP SQUAT	ACCELERATED BAND SPLIT SQUAT JUMP
BASKETBALL	LEG PRESS	HURDLE HOP	SAND BAG SQUAT JUMP	ASSISTED BAND SQUAT JUMP
	HEX BAR DEADLIFT	SPLIT SQUAT ALTERNATING JUMP	SPLIT SQUAT W/ SAND BAG	ACCELERATED BAND SPLIT SQUAT JUMP

300	BENCH PRESS	1,1,1	240 - 250	4	0:10:10
	Pair w/rest 30				
	Cuban PRSS INC F8	10		4	

-Figure 4.16

In figure 4.7, an athlete would perform three cluster repetitions per set with a load of 240–250 pounds using a tempo with a one-second isometric pause and ten seconds rest between repetitions. In this box, the athlete would follow the bench press set by resting for thirty seconds before performing a set of ten [Cuban presses](#). The athlete would repeat this cycle for four sets before moving on to the next box.

OSCILLATORY METHOD

The oscillatory method was created from an idea I had several years ago to try and reconcile Sherrington’s law of reciprocal inhibition with training to maximize performance. His law states that in order for the agonist to contract, the antagonist must relax.³⁰ Decades ago, Dr. Matveyev (a Russian scientist) found through his research that the difference between elite athletes and great athletes wasn’t the speed at which they could contract their agonist muscle as one would intuitively think. The difference lied instead with the athlete’s ability to relax the antagonist. The athlete who could do this more quickly was always the superior athlete.³¹

During an explosive contraction in the concentric phase, the antagonist acts as a decelerator, pumping the breaks if you will so that an athlete doesn’t tear a limb off his body. When a pitcher heaves a 95-mph fastball, his entire posterior shoulder complex acts as a decelerator to slow the internal rotation of the arm as it comes across the pitcher’s body. If it weren’t for this system, pitchers would literally throw their arms out of their sockets. Agonist inhibition is a good thing. But like other “good things” we’ve talked about in this book like the Golgi tendon organ, they are a little overprotective. To enhance sport performance, an athlete must train in such a way as to

³⁰ Johnson WR (1960) *Science and Medicine of Exercise and Sports*. New York: Harper & Row Publishers.

³¹ Verkhoshansky Y, Siff M (2009) *Supertraining*. Sixth edition. Ultimate Athlete Concepts.

position (OC-D). Repetitions are short and quick, only traveling over a three- to four-inch range of motion with the athlete consciously pushing and pulling the bar up and down. A great coaching cue that I use is tell the athlete that he is trying to flick the light switch on and off as fast as he can. Every rep is teaching the muscle complex to change from a concentric accelerator to an eccentric decelerator. This increases the speed at which the antagonist muscle learns to relax and improves the rate of relaxation seen in force production.

Oscillatory exercises can be used for two separate applications. First, they can be used as a way to peak an athlete. Using light loads (25–50 percent of a 1RM) and high velocities will help maximize the explosive power of the athlete leading up to competition. This application will be drawn out further in section six. A second way this method can be utilized is to use moderate loads (65–80 percent) at high velocities to increase the force placed on specific parts of the muscle structure. There are several different ways to perform oscillatory exercises. Here, for the above 80 percent blocks, we will look at three different methods of application—OC +1, 2OC +1, and OC-D/OC-A + 1. Remember, OC stands for oscillatory, D for disadvantageous, and A for advantageous. The '+1' at the end is there to remind the athlete that each set should be finished with one complete repetition of the exercise. This serves to teach the nervous system and physiological structure to “finish” through the movement, developing a higher level of force transferability to sport.

TABLE 4.7: OSCILLATORY BENCH PRESS			
OC MEANS:	OC + 1	2OC + 1	OC-D/OC-A + 1
ADVANTAGEOUS	<u>BENCH PRESS OC-A+1</u>	<u>BENCH PRESS 2OC ADVANTAGES</u>	<u>DB BENCH PRESS 2POC</u>
DISADVANTAGEOUS	<u>BENCH PRESS OSCILLATORY</u>	<u>BENCH PRESS 2OC +1</u>	<u>BENCH PRESS 2POC</u>

progression. Some athletes may adapt to one specific sequence better than others, but that is trial and error. As long as athletes keep the load within the specified range, use proper triphasic tempos, and explode, generating as much force as possible during the concentric phase of each rep, they will see definitive, substantial gains.

TABLE 4.10: MONDAY TRIPHASIC EXERCISE SEQUENCING (BACK SQUAT)		
BLOCK 1 (ECCENTRIC)	BLOCK 2 (ISOMETRIC)	BLOCK 3 (CONCENTRIC)
BACK SQUAT ECCENTRIC TEMPO - 6:0:0:0	BACK SQUAT ISOMETRIC TEMPO - 0:3:0:0	BACK SQUAT CONCENTRIC TEMPO - 0:0:0:0
BOX BACK SQUAT TEMPO - 6:0:0:0	BOX BACK SQUAT TEMPO - 0:3:0:0	BACK SQUAT WITH WEIGHT RELEASERS TEMPO - 0:0:0:0
BACK SQUAT WITH WEIGHT RELEASERS TEMPO - 6:0:0:0	BOX BACK SQUAT BANDS TEMPO - 0:3:0:0	BACK SQUAT WITH BANDS TEMPO - 0:0:0:0
SPORT BACK SQUAT TEMPO - 6:0:0:0	BOX BACK SQUAT WITH CHAINS TEMPO - 0:3:0:0	SPORT BACK SQUAT TEMPO - 0:0:0:0

WORKOUTS

Below, you will find Monday’s workout for each block of the three-day, above 80 percent model—the eccentric block, isometric block, and concentric block. The column on the left is the actual workout using our “imaginary” athlete to calculate the loads used on each exercise. The column on the right, labeled “Coaching Points,” gives further explanation about exercise sequencing and important coaching queues to use with your athletes. The coaching points are labeled with the respective workout box that they apply to. In addition, every exercise in each workout is hyperlinked. Don’t know what an exercise is or exactly how to perform it? No problem. Just click on its blue hyperlink in the “Coaching Points” column for a video tutorial of the exercise. At the end of this section, you will find workouts for each block of a four-day, five-day, six-day, and two-day in-season model.

BLOCK ONE, MONDAY

100%	MONDAY	2-Nov-10		REPS	LOAD	SETS	NOTES
		REPS	LOAD				
500	Sport Back Squat	5,3	250 - 335	1,1			Pw/ Cuban F8
	2-Min Rest/B-Breath						1band Rollers
500	Sport Back Squat	3	390 - 400	1			pw/cuban f8
	2-Min Rest/B-Breath						1band Rollers
500	Sport Back Squat	3	415 - 440	3			6:0:0:0
	Hurdle Hop	5	EMG - EMG	3			Pull Down
	15 rest- BB		EMG - EMG				
	1/2 SQ JMP Weighted	4	EMG - EMG	3			reactive
	15 rest- BB		EMG - EMG				
	15 Yard Starts	1		3			4:00 Rest
300	BENCH PRESS	5,3	150 - 200	1,1			Ext Shock
	2-Min Rest/B-Breath						
300	Bench Press	3	█ - 240	1			coach see
	2-Min Rest/B-Breath						Ext Shock
300	BENCH PRESS	4	205 - 210	3			2OC-d+1
	One Leg MB Side Toss	5		3			Pause
	25 rest- BB						
	1 Bent Arm S. LP Down	6		3			3:0:0:0
	25 rest- BB						
	90 90 Jump Twist	5		3			
500	Glute Bar Lift	8	250 - 300	3			
	25 rest- BB						
	Face Band Pulls	8	EMG - EMG	3			
	25 rest- BB		EMG - EMG				
75	1 Arm Lat Pull Supine	10	50 - 55	3			
	GH HYPR	6		3			
	25 rest- BB						
	Iso Ball Groin Squeeze	10S		3			
	25 rest- BB						
	Round House	8		3			
75	DB Shoulder Press	10	50 - 55	2			oc-D+1
	25 rest- BB						
	Hip FLX BND Pulls	6	EMG - EMG	2			
	25 rest- BB		EMG - EMG				
105	Drag Curl	10	70 - 75	2			
45	DB Tri Pro Sup	8	35 - 35	2			
	25 rest- BB						
180	Chin up	6	135 - 145	2			
	25 rest- BB						
	Jobs ECC	6		2			4:0:0:0

COACHING POINTS AND EXERCISE TUTORIAL

Box 1-2

-The sport back squat is a narrow stance squat used for more specific sports training.
 -The first line says that the athlete performs one set of five followed by one set of three reps. Between sets, the athlete performs 1-band rollers and Cuban F8. The second line says that the athlete performs another warm-up set of three reps.

-Notice the six-count eccentric on the way down in the work sets of the sports back squat.

-With this particular load and eccentric method, the squat will need to be assisted each rep by the spotter.

-The assistants will take place on the way up but not on the way down.

-The athlete leaves the sport back squat and goes directly to the hurdle hop and half squat jump and then to the 15-yard starts. This is a sample of the French contrast method.

[Sport back Squat](#); [Sport Back Squat Eccentric](#); [Hurdle Hop](#); [Half Squat Jump Weighted](#); [15 yard Starts](#)

Box 3-4

-The bench press block here on the first line has two sets for the warm up. It is paired with the external rotator shock method in the warm up.

-The second line bench press is a three-rep test that we will estimate to either raise or lower the athletes max.

-The work sets on the bench press are two oscillatory movements at the bottom and then one full range of motion at the top. This will be completed for four reps.

-The block after the bench press will be paired with the bench press to provide the athlete with more rest during the pairing of the three exercises below.

[Bench Press 2OC](#); [One Leg Med Ball Side Toss](#); [One Arm Side Lat Pull Down](#); [90 90 Jump Twist](#)

Box 5

[Glute Bar Lift](#); [Face Band Pulls](#); [1 Arm Lat Pull Supine](#)

Box 6

-For the iso ball groin squeeze, take an athletic stance over a Swiss ball and squeeze the knees together into the ball as hard as possible

[Glute Ham Hyper](#); [Isometric Ball Groin Squeeze](#); [Round House](#)

Box 7

-The DB shoulder press finishes on a complete rep
[DB Shoulder Press](#); [Hip Flex Band Pulls](#); [Drag Curl](#)

Box 8

[DB Tri Pro Sup](#); [Chin Up](#); [Jobs ECC](#)

BLOCK TWO, MONDAY

100%	MONDAY	16-Nov-10			
		REPS	LOAD	SETS	NOTES
500	Sport Back Squat	5,3	250 - 335	1,1	Pw/ Cuban F8
	No Rest/B-Breath				I band Rollers
500	Sport Back Squat	3	390 - 400	1	pw/cuban f8
	No Rest/B-Breath				I band Rollers
500	Sport Back Squat	3	390 - 400	3	0:5:0:0
	Hurdle Hop	5	SPR - SPR	3	Pull Down
	15 rest- BB				
	1/2 SQ JMP Weighted	4	SPR - SPR	3	reactive
	15 rest- BB				
	15 Yard Starts	T		3	
300	BENCH PRESS	5,3	150 - 200	1,1	Ext Shock
	No Rest/B-Breath				
300	Bench Press	3	200 - 240	1	coach see
	No Rest/B-Breath				Ext Shock
300	BENCH PRESS	4	205 - 210	3	2OC-d+1
	One Leg MB Side Toss	5		3	
	25 rest- BB				
	1 Bent Arm S. L.P Down	6		3	
	25 rest- BB				
	90 90 Jump Twist	5		3	
500	Glute Bar Lift	8	250 - 300	3	
	25 rest- BB				
	Face Band Pulls	8		3	
	25 rest- BB				
75	1 Arm Lat Pull Supine	10	50 - 55	3	
	GH HYPR	6		3	oc-A
	25 rest- BB				
	Iso Ball Groin Squeeze	10S		3	
	25 rest- BB				
	Round House	8		3	
75	DB Shoulder Press	10	50 - 55	2	oc-D+1
	25 rest- BB				
	Hip FLX BND Pulls	6		2	
	25 rest- BB				
120	Bar Curl	10	80 - 85	2	
45	DB Tri Pro Sup	8	35 - 35	2	
	25 rest- BB				
180	Chin up	6	135 - 145	2	
	25 rest- BB				
	Jobes ECC	6		2	4;0;0;0;

COACHING POINTS AND EXERCISE TUTORIAL

BOX 1-2

-The sport back squat is a narrow stance squat used for more specific sports training.

-The first line says that the athlete performs one set of five followed by one set of three reps.

-Between sets, the athlete performs I-band rollers and Cuban F8. The second line says that the athlete performs another warm-up set of three reps.

-Notice from the prior block that we went from a six-count eccentric to a five-count isometric. This will also need assistance from the spotter to complete the rep.

-This is still the French contrast protocol, so the three exercises are paired with the sport back squat.

-Fifteen-yard starts are timed and feedback is given to push the athletes harder based upon the results.

[Sport back Squat](#); [Sport Back Squat Isometric](#); [Hurdle Hop](#); [Half Squat Jump Weighted](#); [15 yard Starts](#)

BOX 3-4

[Bench Press 2OC](#); [One Leg Med Ball Side Toss](#); [One Arm Side Lat Pull Down](#); [90 90 Jump Twist](#)

BOX 5

[Glute Bar Lift](#); [Face Band Pulls](#); [1 Arm Lat Pull Supine](#)

BOX 6

-For the iso ball groin squeeze, take an athletic stance over a Swiss ball and squeeze the knees together into the ball as hard as possible

[Glute Ham Hyper](#); [Isometric Ball Groin Squeeze](#); [Round House](#)

BOX 7

-The DB shoulder press finishes on a complete rep
[DB Shoulder Press](#); [Hip Flex Band Pulls](#); [Bar Curl](#)

BOX 8

[DB Tri Pro Sup](#); [Chin Up](#); [Jobes ECC](#)

BLOCK THREE, MONDAY

100%	MONDAY	30-Nov-10			
		REPS	LOAD	SETS	NOTES
500	Sport Back Squat	5,3	250 - 335	1,1	Pw/ Cuban F8
	2-Min Rest/B-Breath				I band Rollers
500	Sport Back Squat	3	390 - 400	1	pw/cuban f8
	2-Min Rest/B-Breath				I band Rollers
500	Sport Back Squat	3	415 - 440	3	0:0:0:0
	Hurdle Hop	5		3	Pull Down
	15 rest- BB				
	1/2 SQ JMP Weighted	4		3	reactive
	15 rest- BB				
	15 Yard Starts	1		3	4:00 Rest
300	BENCH PRESS	5,3	150 - 200	1,1	Ext Shock
	2-Min Rest/B-Breath				
300	Bench Press	3	- 240	1	coach see
	2-Min Rest/B-Breath				Ext Shock
300	BENCH PRESS	4	205 - 210	3	20C-d+1
	One Leg MB Side Toss	5		3	
	25 rest- BB				
	1 Bent Arm S.L.P Down	6		3	
	25 rest- BB				
	90 90 Jump Twist	5		3	
500	Glute Bar Lift	8	250 - 300	3	
	25 rest- BB				
	Face Band Pulls	8		3	
	25 rest- BB				
75	1 Arm Lat Pull Supine	10	50 - 55	3	
	GH HYPR	6		3	oc-A
	25 rest- BB				
	Iso Ball Grion Squeeze	10S		3	
	25 rest- BB				
	Round House	8		3	
75	DB Shoulder Press	10	50 - 55	2	oc-D+1
	25 rest- BB				
	Hip FLX BND Pulls	6		2	
	25 rest- BB				
120	Bar Curl	10	80 - 85	2	
45	DB Tri Pro Sup	8	35 - 35	2	
	25 rest- BB				
180	Chin up	6	135 - 145	2	
	25 rest- BB				
	Jobes ECC	6		2	4:0:0:0;

COACHING POINTS AND EXERCISE TUTORIAL

Box 1-2

-Notice how the sets have become more reactive in the sport back squat work sets without any eccentric to isometrics actions. They are still paired with the three exercises following the sport back squat. If put together and trained for the six-week period, you will see great results. [Sport back Squat](#); [Hurdle Hop](#); [Half Squat Jump Weighted](#); [15 yard Starts](#)

Box 3-4

-You can do the French contrast method with the upper body. However, this particular group of athletes were throwing athletes and it was too much stress for that type of athlete. Sticking with reactive, OC methods improved their throwing distance better than the French contrast methods. [Bench Press 20C](#); [One Leg Med Ball Side Toss](#); [One Arm Side Lat Pull Down](#); [90 90 Jump Twist](#)

Box 5

[Glute Bar Lift](#); [Face Band Pulls](#); [1 Arm Lat Pull Supine](#)

Box 6

-The glute ham hyper was done with an advantageous (top half ROM) oscillatory position. This has proven to be somewhat effective for top end speed running, thus I use it during the concentric phase to help with dynamic neuromuscular adaptation. [Glute Ham Hyper](#); [Isometric Ball Groin Squeeze](#); [Round House](#)

Box 7

[DB Shoulder Press](#); [Hip Flex Band Pulls](#); [Bar Curl](#)

Box 8

[DB Tri Pro Sup](#); [Chin Up](#); [Jobes ECC](#)

**The structure of this program limited the amount of change I allowed from block to block in terms of exercise selection. That is why most of the upper body and assistance exercises remained the same for the entire six-week mesocycle. This particular program was for throwing athletes, and changing too much during a particular transition phase of throwing made them much more sore during the skills acquisition development phase so exercises were kept the same for that reason.

BLOCK ONE, WEDNESDAY

100%	Wednesday	4-Nov-10			
		REPS	LOAD	SETS	NOTES
500	Back Squat	5,3	250 - 335	1,1	
	2-Min Rest/B-Breath				
500	Back Squat	3	- 400	1	
	2-Min Rest/B-Breath				
500	Back Squat	3	440 - 465	4	
	Stndng SQ Drop Jump	4		3	
	25 rest- BB				
	Delt BO Lat Reb Drop	4		3	
	25 rest- BB				
	Thors Hammer	12		3	
300	BENCH PRESS	5,3	150 - 200	1,1	
	2-Min Rest/B-Breath				
300	Bench Press	3	235 - 240	1	
	2-Min Rest/B-Breath				
300	BENCH PRESS	3	270 - 280	3	miss 2 board
	Med Ball Chest Pass	5		3	
	25 rest- BB				
	1 Arm DB Row	6		3	
	25 rest- BB				
	Pike SWB Abs	5		3	
200	DB Walking Lunge	4		3	Band
	Pair w/				Squeeze
	Laying External Rot	6		3	
	Pair w/				
	1 S.A.S. R.G Lat P	10		3	
	GH HYPR	8		3	
	Pair w/				
	Iso Ball Grion Squeeze	10S		3	
	Pair w/				
	Bam Bam	8		3	
	Inc Delt Lat Reb Drop	6		2	
	25 rest- BB				
	Hip FLXor ISO Pull	6		2	
	25 rest- BB				
75	DB Shoulder Press	10	50 - 55	2	oc-D+1
150	Rev Grip Tri Push	8	115 - 120	2	
	25 rest- BB				
	Bicep shock curls	6		2	
	25 rest- BB				
	Blackburn	6		2	

COACHING POINTS AND EXERCISE TUTORIAL

Box 1-2

-Notice that the back squat is a wider stance back squat used to involve the posterior chain during a max effort squat.

-As in the sports back squat, the key coaching point for this movement is press your feet through the ground.

-Even though we have a wider stance, I don't direct the athletes to drive through the hips.

-These work sets are paired with the three exercises below it. This allows for the athlete to rest and recover between high intensity work sets so that the athlete doesn't stand around for four or five minutes.

[Back Squat](#); [Squat Drop Jump](#); [Delt Bent Over Lateral Reactive Drop](#); [Thors Hammer](#)

Box 3-4

-The work sets in the bench press in this particular day are heavy (90-92 percent%).

-If the athlete misses or it is believed that he will miss the next rep of a set, we slide a two-board on to his chest, limiting his range of motion so he can get the rep and finish the set on his own.

-The medicine ball chest pass is always done with one arm. I've found little value in the chest pass because of the lack of stretch reflex and the amount of force generated.

[Bench Press](#); [Med Ball Pass](#); [One Arm Dumbbell Row](#); [Pike Swiss Ball Abs](#)

Box 5

-The dumbbell walking lunge is done with a band tied to the athlete's back. The band is pulling backward while the athlete is walking forward to apply force in the same direction as he does when he runs.

-In this particular phase, the athletes are pausing their lunge at the bottom for a couple seconds and trying to squeeze their legs together as like in the running action.

[Dumbbell Walking Lunge](#); [External Rotation Prone](#); [Single Arm Supine Rev Grip Lat Pull](#)

Box 6

[Glute Ham Hyper](#); [Isometric Ball Groin Squeeze](#); [Bam Bams](#)

Box 7

[Incline Delt Drop](#); [Hip Flexor Isometric Pull](#); [DB Shoulder Press](#)

Box 8

[Reverse Grip Tricep Push Down Adaptability](#); [Bicep Curl Shock](#); [Blackburn](#)

BLOCK TWO, WEDNESDAY

100%	Wednesday	18-Nov-10			
		REPS	LOAD	SETS	NOTES
500	Back Squat	5,3	250 - 335	1,1	
	2-Min Rest/B-Breath				
500	Back Squat	3	█ - 400	1	
	2-Min Rest/B-Breath				
500	Back Squat	3	440 - 465	4	
	Stndng SQ Drop Jump	4	█ - █	3	
	25 rest- BB				
	Delt BO Lat Reb Drop	4	█ - █	3	
	25 rest- BB				
	Thors Hammer	12		3	
300	BENCH PRESS	5,3	150 - 200	1,1	
	2-Min Rest/B-Breath				
300	Bench Press	3	235 - 240	1	
	2-Min Rest/B-Breath				
300	BENCH PRESS	3	270 - 280	3	miss 2 board
	Med Ball Chest Pass	5		3	
	25 rest- BB				
	1 Arm DB Row	6		3	
	25 rest- BB				
	Pike SWB Abs	5		3	
	Walking Band Lunge Jump	6	█ - █	3	Drop
	Pair w/				
	Laying External Rot	6	█ - █	3	
	Pair w/				
	1 S.A.S. R.G Lat P	10	█ - █	3	
	GH HYPR	8	█ - █	3	
	Pair w/				
	Iso Ball Grion Squeeze	10S	█ - █	3	
	Pair w/				
	Bam Bam	8	█ - █	3	
	Inc Delt Lat Reb Drop	6	█ - █	2	
	25 rest- BB				
	Hip FLXor ISO Pull	6	█ - █	2	
	25 rest- BB				
75	DB Shoulder Press	10	50 - 55	2	oc-D+1
150	Rev Grip Tri Push	8	115 - 120	2	
	25 rest- BB				
	Bicep shock curls	6	█ - █	2	
	25 rest- BB				
	Blackburn	6	█ - █	2	

COACHING POINTS AND EXERCISE TUTORIAL

Box 1-2

-Some key points to remember and remind the athletes when performing the back squat: be sure to keep the back flat, chest up, and torso tight. The loads used on this day are heavier so be sure to be aware of technical breakdowns
 -For the standing squat drop jump, pull the body into position using the anterior hip musculature; immediately upon impact with the ground, jump as high as possible
 -For the Thors hammer, keep the elbow tucked into the side

[Back Squat](#); [Squat Drop Jump](#); [Delt Bent Over Lateral Reactive Drop](#); [Thors Hammer](#)

Box 3-4

-Some key points to remember and remind the athletes when performing the bench press: set up as tight as possible on the bench, with an arched back and retracted scapula. The loads used here are heavier so be aware of technical breakdown

[Bench Press](#) ; [Med Ball Pass](#); [One Arm Dumbell Row](#); [Pike Swiss Ball Abs](#)

Box 5

-The biggest change is in the walking band lunge jump. The athlete will actually jump into the lunge drop and then explode forward with the band still attached to him.

--The walking drop lunge jump with a band is a highly reactive exercise; be sure not to put too much tension on the band as it will decrease the athlete's ability to generate force rapidly.

[Walking Drop Lunge Jump](#); [External Rotation Prone](#); [Single Arm Supine Rev Grip Lat Pull](#)

Box 6

-The iso ball groin squeeze is performed with a Swiss ball between the knees in an athletic stance; squeeze the knees together as hard as possible into the ball

[Glute Ham Hyper](#); [Isometric Ball Groin Squeeze](#); [Bam Bams](#)

Box 7

[Incline Delt Drop](#); [Hip Flexor Isometric Pull](#); [DB Shoulder Press](#)

Box 8

-During the bicep shock curl, the athlete must be sure to turn the palms down and away from the bar after they release; when bringing the hands back up, supinate(palm up) the hands and catch the bar rapidly

-The bicep shock curls develop explosiveness of the arms
[Reverse Grip Tricep Push Down Adaptability](#) ; [Bicep Curl Shock](#); [Blackburn](#)

BLOCK THREE, WEDNESDAY

100%	Wednesday	2-Dec-10			
		REPS	LOAD	SETS	NOTES
500	Back Squat	5,3	250 - 335	1,1	
	2-Min Rest/B-Breath				
500	Back Squat	3	- 400	1	
	2-Min Rest/B-Breath				
500	Back Squat	3	440 - 465	4	
	Stndng SQ Drop Jump	4		3	
	25 rest- BB				
	Delt BO Lat Reb Drop	4		3	
	25 rest- BB				
	Thors Hammer	12		3	
300	BENCH PRESS	5,3	150 - 200	1,1	
	2-Min Rest/B-Breath				
300	Bench Press	3	235 - 240	1	
	2-Min Rest/B-Breath				
300	BENCH PRESS	3	270 - 280	3	miss 2 board
	Med Ball Chest Pass	5		3	
	25 rest- BB				
	1 Arm DB Row	6		3	
	25 rest- BB				
	Pike SWB Abs	5		3	
	Walking Band Lunge Jump	6		3	Drop
	Pair w/				
	Laying External Rot	6		3	
	Pair w/				
	1 S.A.S. R.G Lat P	10		3	
	GH HYPR	8		3	
	Pair w/				
	Iso Ball Grion Squeeze	10S		3	
	Pair w/				
	Bam Bam	8		3	
	Inc Delt Lat Reb Drop	6		2	
	25 rest- BB				
	Hip FLXor ISO Pull	6		2	
	25 rest- BB				
75	DB Shoulder Press	10	50 - 55	2	oc-D+1
150	Rev Grip Tri Push	8	115 - 120	2	
	25 rest- BB				
	Bicep shock curls	6		2	
	25 rest- BB				
	Blackburn	6		2	

COACHING POINTS AND EXERCISE TUTORIAL

*The same methods are used in coaching this maximal effort day.

Box 1-2

-Some key points to remember and remind the athletes when performing the back squat: be sure to keep the back flat, chest up, and torso tight. The loads used on this day are heavier so be sure to be aware of technical breakdowns
 -For the standing squat drop jump, pull the body into position using the anterior hip musculature; immediately upon impact with the ground, jump as high as possible
 -For the Thors hammer, keep the elbow tucked into the side.

[Back Squat](#); [Squat Drop Jump](#); [Delt Bent Over Lateral Reactive Drop](#); [Thors Hammer](#)

Box 3-4

-Some key points to remember and remind the athletes when performing the bench press: set up as tight as possible on the bench, with an arched back and retracted scapula. The loads used here are heavier so be aware of technical breakdown.

[Bench Press](#) ; [Med Ball Pass](#); [One Arm Dumbell Row](#); [Pike Swiss Ball Abs](#)

Box 5

-The biggest change is in the walking band lunge jump. The athlete will actually jump into the lunge drop and then explode forward with the band still attached to him.

-The walking drop lunge jump with a band is a highly reactive exercise; be sure not to put too much tension on the band as it will decrease the athlete's ability to generate force rapidly.

[Walking Drop Lunge Jump](#); [External Rotation Prone](#); [Single Arm Supine Rev Grip Lat Pull](#)

Box 6

-In the glute ham hyper, more advanced athletes can focus on dropping as fast as they can to full extension and then rip themselves up. For less advanced athletes, continue to perform the standard glute ham method.

[Glute Ham Hyper](#); [Isometric Ball Groin Squeeze](#); [Bam Bams](#)

Box 7

[Incline Delt Drop](#); [Hip Flexor Isometric Pull](#); [DB Shoulder Press](#)

Box 8

[Reverse Grip Tricep Push Down Adaptability](#) ; [Bicep Curl Shock](#); [Blackburn](#)

undulated block, which is in this case 75–80 percent. For examples of assistance work that should be used to optimize performance gains and for suggested rep ranges of these exercises within each block, refer to the programs throughout this section.

SEQUENCING

The sequencing of these exercises is very similar to Monday's. One point to make here is select a training means that would be considered a less stressful version of the compound exercise chosen on Monday. For example, if the athlete performs a back squat on Monday, have him perform a back squat with weight releasers on Friday. Choose an exercise that is slightly less stressful, as the athlete and his nervous system are fatigued by this point and aren't able to handle high intensities any longer. Below is a second example of triphasic exercise sequencing using the bench press.

TABLE 4.15: FRIDAY TRIPHASIC EXERCISE SEQUENCING (BENCH PRESS)		
BLOCK 1 (ECCENTRIC)	BLOCK 2 (ISOMETRIC)	BLOCK 3 (CONCENTRIC)
BENCH PRESS ECCENTRIC TEMPO - 6:0:0:0	BENCH PRESS ISOMETRIC TEMPO - 0:3:0:0	BENCH PRESS CONCENTRIC TEMPO - 0:0:0:0
BENCH PRESS CLOSE GRIP ECCENTRIC TEMPO - 6:0:0:0	DB BENCH PRESS ISOMETRIC TEMPO - 0:3:0:0	DB BENCH PRESS WITH BANDS TEMPO - 0:0:0:0
	INCLINE DB PRESS ISOMETRIC TEMPO - 0:3:0:0	DB INCLINE PRESS TEMPO - 0:0:0:0
	BENCH PRESS CLOSE GRIP ISOMETRIC TEMPO - 0:3:0:0	CLOSE GRIP BENCH PRESS TEMPO - 0:0:0:0

WORKOUT

Below you will find Friday's workout for each block of the three-day above 80 percent model. Coaching points with their respective hyperlinks to the exercises are in the right-hand column. At the end of this section, you will find workouts for each block of a four-day, five-day, six-day, and two-day in-season model.

BLOCK ONE, FRIDAY

100%	FRIDAY	6-Nov-10			NOTES
		REPS	LOAD	SETS	
200	STEP UP	8	150 - 160	3	5:0:0:0:
	15 Rest-BB				
	INCLINE SIT UP	8	80A - 80A	3	
	15 Rest-BB				
	Ball LG Curl	10		3	
90	DB INCLINE BENCH	15	60 - 65	3	oc-D+1
	15 Rest-BB				
75	DB Twist	15	50 - 55	3	
	15 Rest-BB				
	Jobes	6		3	4:0:0:0
200	Walking Lunge	8	150 - 160	3	Squeeze
	15 Rest-BB				
75	DB Fly	8	40 - 45	3	
	15 Rest-BB				
	Delt Lat Rebound Drop	8		3	
500	Glute Bar Lift	8	250 - 300	3	
	15 Rest-BB				
	Rope Circles	15		3	Each Way
	15 Rest-BB				
180	Gripper	15	115 - 125	3	
120	BAR CURL	8	85 - 90	2	
	15 Rest-BB				
150	TRI PUSH DOWN	8	105 - 115	2	
	15 Rest-BB				
	90 90 Groin ISO Hold	10		2	
60	Zotman Curl	6	45 - 50	2	
	15 Rest-BB				
	Speed Abduction	8		2	
	15 Rest-BB				
240	Close Grip Bench	6	60 - 70	2	3 Board
	Single Leg Iso DL	6 s	80A - 80A	2	
	15 Rest-BB				
	Rope Vertical	15	80A - 80A	2	
	15 Rest-BB				
	Full BCH Curl Up	8	80A - 80A	2	

COACHING POINTS AND EXERCISE TUTORIAL

Box 1

-Notice that there isn't a French contrast method. A third day of this method can be applied with well trained athletes. However, make sure they aren't overworked.

-This particular program shows an example of athletes who may not be able to handle all the loading and shock that exists with the French contrast method, so we did a step-up with an eccentric component.

-Notice that the rest on this particular day is reduced to increase the work capacities of the athlete during this training cycle.

[Step up](#); [Incline sit up](#); [Ball LG curl](#)

Box 2

-Make sure to finish the oscillatory incline DB bench on a full rep

[OC DB Incline Bench](#); [DB twist](#); [Jobes](#)

Box 3

-The delt lat rebound drop develops the explosive capacity of the shoulder, and therefore must be done fast

[Walking Lunge](#); [DB Fly](#); [Delt Lat Rebound Drop](#)

Box 4

-The rope circles are done in various ways—in and out, down and up, and circles in multiple fashions. This is the work capacity component for the shoulder. I truly believe that it provides effective shock training for the posterior shoulder in aiding the athlete.

[Glute bar lift](#); [Rope circles](#); [Gripper](#)

Box 5

-The 90 90 groin iso hold is a prehab exercise for the adductors

[Bar curl](#); [Tri push down](#); [90 90 groin iso hold](#)

Box 6

-Speed abduction: When the athlete pulls the foot in, the toes should come toward the midline of the body. As the athlete pushes the foot back out, the toes should be externally located during this movement.

[Zottman curl](#); [Speed abduction](#); [Close grip bench](#)

Box 7

-The single leg iso deadlift is one of the most effective strength builders in the deep position that I've ever used.

[Single leg iso DL](#); [Rope vertical](#); [Full BCH curl up](#)

BLOCK TWO, FRIDAY

100%	FRIDAY	20-Nov-10			
		REPS	LOAD	SETS	NOTES
225	Single Leg Squat	8	170 - 180	3	0:5:0:0
	15 Rest-BB				
	INCLINE SIT UP	8	80% - 80%	3	
	15 Rest-BB		80% - 80%		
	Ball LG Curl	10		3	
90	DB INCLINE BENCH	15	60 - 65	3	oc-D+1
	15 Rest-BB				
75	DB Twist	15	50 - 55	3	
	15 Rest-BB				
	Jobes	6		3	4:0:0:0
	Walking Drop Lunge Jump	8	80% - 80%	3	
	15 Rest-BB		80% - 80%		
75	DB Fly	8	40 - 45	3	
	15 Rest-BB				
	Delt Lat Rebound Drop	8		3	
500	Glute Bar Lift	8	250 - 300	3	
	15 Rest-BB				
	Rope Circles	15		3	Each Way
	15 Rest-BB				
180	Gripper	15	115 - 125	3	
120	BAR CURL	8	85 - 90	2	
	15 Rest-BB				
150	TRI PUSH DOWN	8	105 - 115	2	
	15 Rest-BB				
	90 90 Groin ISO Hold	10		2	
60	Zotman Curl	6	45 - 50	2	
	15 Rest-BB				
	Speed Abduction	8		2	
	15 Rest-BB				
240	Close Grip Bench	6	60 - 70	2	3 Board
	Single Leg Iso DL	6 s	80% - 80%	2	
	15 Rest-BB		80% - 80%		
	Rope Vertical	15	80% - 80%	2	
	15 Rest-BB		80% - 80%		
	Full BCH Curl Up	8		2	

COACHING POINTS AND EXERCISE TUTORIAL

Box 1

-Notice that I changed from a step-up to a single leg squat for the isometric. It isn't practical to do a step-up in the isometric phase or a step-up in the reactive phase.

[Single Leg Squat](#); [Incline sit up](#); [Ball LG curl](#)

Box 2

-Remember to finish the DB incline bench on a complete rep

[OC DB Incline Bench](#); [DB twist](#); [Jobes](#)

Box 3

-A key component for every plyometric and strength movement with the legs is to drive your foot through the ground.

-The walking drop lunge jump employs principles from the AFSM method, whereby an athlete needs to pull themselves down into position hard and fast, and immediately reverse the direction forward explosively

-The delt lat rebound drop develops the explosive capacity of the shoulder, and must therefore be done as fast as possible

[Walking Drop Lunge Jump](#); [DB Fly](#); [Delt Lat Rebound Drop](#)

Box 4

[Glute bar lift](#); [Rope circles](#); [Gripper](#)

Box 5

-The 90 90 groin iso hold is a prehab exercise for the adductors

[Bar curl](#); [Tri push down](#); [90 90 groin iso hold](#)

Box 6

-Speed abduction: When the athlete pulls the foot in, the toes should come toward the midline of the body. As the athlete pushes the foot back out, the toes should be externally rotated.

[Zottman curl](#); [Speed abduction](#); [Close grip bench](#)

Box 7

-The single leg iso deadlift is one of the most effective strength builders in the deep position that I've ever used.

[Single leg iso DL](#); [Rope vertical](#); [Full BCH curl up](#)

BLOCK THREE, FRIDAY

100%	FRIDAY	4-Dec-10			NOTES
		REPS	LOAD	SETS	
225	Single Leg Squat	8	170 - 180	3	
	15 Rest-BB				
	INCLINE SIT UP	8		3	
	15 Rest-BB				
	Ball LG Curl	10		3	
90	DB INCLINE BENCH	15	60 - 65	3	oc-D+1
	15 Rest-BB				
75	DB Twist	15	50 - 55	3	
	15 Rest-BB				
	Jobes	6		3	
	Walking Drop Lunge Jump	8		3	
	15 Rest-BB				
75	DB Fly	8	40 - 45	3	
	15 Rest-BB				
	Delt Lat Rebound Drop	8		3	
500	Glute Bar Lift	8	250 - 300	3	
	15 Rest-BB				
	Rope Circles	15		3	Each Way
	15 Rest-BB				
180	Gripper	15	115 - 125	3	
120	BAR CURL	8	85 - 90	2	
	15 Rest-BB				
150	TRI PUSH DOWN	8	105 - 115	2	
	15 Rest-BB				
	90 90 Groin ISO Hold	10		2	
60	Zotman Curl	6	45 - 50	2	
	15 Rest-BB				
	Speed Abduction	8		2	
	15 Rest-BB				
240	Close Grip Bench	6	60 - 70	2	3 Board
	Single Leg Iso DL	6 s		2	
	15 Rest-BB				
	Rope Vertical	15		2	
	15 Rest-BB				
	Full BCH Curl Up	8		2	

COACHING POINTS AND EXERCISE TUTORIAL

Box 1

-Some points to keep in mind while doing the single leg squat: as the load increases, athletes are liable to decrease their range of motion; as such, it is important to constantly remind them to sink down towards ground, keeping the back flat and chest up

[Single Leg Squat](#); [Incline sit up](#); [Ball LG curl](#)

Box 2

-The DB incline bench is performed in the oscillatory manner, and finishes on a complete rep

[OC DB Incline Bench](#); [DB twist](#); [Jobes](#)

Box 3

-The walking drop lunge jump is performed without a band; the athlete, just as with any AFSM exercise, pulls themselves into position powerfully. After the athlete is in the lunge position, jump forward as far as possible. This is a highly reactive exercise

[Walking Drop Lunge Jump](#); [DB Fly](#); [Delt Lat Rebound Drop](#)

Box 4

-Rope circles can be performed in many ways, such as side to side, up/down, and in/out

[Glute bar lift](#); [Rope circles](#); [Gripper](#)

Box 5

-The 90 90 groin iso hold is a prehab exercise for the adductors

[Bar curl](#); [Tri push down](#); [90 90 groin iso hold](#)

Box 6

-Speed abduction: When the athlete pulls the foot in, the toes should come toward the midline of the body. As the athlete pushes the foot back out, the toes should be externally rotated.

[Zottman curl](#); [Speed abduction](#); [Close grip bench](#)

Box 7

-The single leg iso deadlift is one of the most effective strength builders in the deep position that I've ever used.

[Single leg iso DL](#); [Rope vertical](#); [Full BCH curl up](#)

✓ COACH'S CORNER

ACCELERATED PLYOMETRICS

BY CAL DIETZ AND BEN PETERSON

EDITED BY DANIEL RAIMONDI

Approximately nine years ago, I was fortunate to come across a motion analysis system that our mechanical engineering department possessed. This device contained nine cameras placed systematically such that it could detect a multitude of human movements and joint angles to find out what was really going on in sport. While utilizing this system, I analyzed a number of athletes in the weight room and on the field with this elite camera system. To be clear, I couldn't set these cameras up myself. Our strength and conditioning staff had to have biomedical engineering students assemble the entire system in order to run these tests and analyze various movements.

One day while analyzing the data, I began to realize that during the second and third step in running and skating, I couldn't mimic the speed qualities that took place during those steps in the weight room by using conventional plyometric exercises. At that point it dawned on me to unload the human body while it did those jumping movements to mimic the speed at which the second, third, fourth, and fifth step in skating and running took place. Keep in mind, I usually use double leg plyometrics with this particular accelerated method because of the speed involved in the extension of the hips and knees. I realize that many strength coaches think single leg plyometrics are more sport-specific because sports are played mainly on one leg. This is an opinion I can't disagree with. However, what I will disagree with is that a single leg plyometric, as shown by this motion analysis machine, is so much slower in producing forces that it doesn't mimic what is taking place in sports. In real life, single leg plyometrics are beneficial in teaching the human body to be more explosive for the same reason that double leg plyometrics teach a constant load (body weight) to accelerate faster. With double leg plyometrics, it must be noted that because the weight per limb is distributed, there is a higher potential for developing speed because of the shorter amortization phase, and thus, a more explosive rebound.

Most coaches are incorrect in their programming because they place single leg plyometrics after double leg plyometrics. They believe this to be the logical training progression because the single leg requires more strength. Within a block scheme, the programming of plyometric jumps should look like this:

1. [Single leg plyometrics](#)
2. [Double leg plyometrics](#)
3. [Single leg accelerated plyometrics](#)
4. [Double leg accelerated plyometrics](#)

4.9: ABOVE 80 PERCENT THREE-DAY PROGRAM OVERVIEW

TABLE 4.16: UNDULATING BLOCK MODEL							
TRAINING WEEK:		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
3-DAY MODEL	FOCUS	TOTAL BODY	OFF	TOTAL BODY	OFF	TOTAL BODY	OFF
	LOAD	82–87%		90–97%		75–80%	
	MEANS APPLIED	TRIPHASIC		DYNAMIC		TRIPHASIC	

TABLE 4.17: ABOVE 80 PERCENT THREE-DAY CONDITIONING MODEL			
TRAINING DAY	CONDITIONING GOAL	SPECIAL INSTRUCTIONS	EXAMPLE WORKOUT
DAY 1	Long Sprints or Short Sprints with Reduced Rest (Speed Conditioning)	<ul style="list-style-type: none"> • Sprints over 15 seconds or • Sprints under 10, recovery under 20 seconds. 	<ul style="list-style-type: none"> • High Quality Lactic Anaerobic Power Training Builder • Metabolic Injury Prevention Runs
DAY 2	Short Sprints (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90–120 seconds. 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 3	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity focused	<ul style="list-style-type: none"> • Aerobic Work Capacity Training Builder • Game Speed Conditioning • Bike Conditioning • TrashBall

*Additional conditioning models for four-day, five-day, and six-day training models are shown in successive sections of this chapter.

QUESTION 5: WHAT IS THE BEST EXERCISE SEQUENCE YOU HAVE FOUND THAT TRAINS THE TRIPHASIC MUSCLE ACTION OF YOUR ATHLETES?

This essentially comes back to the larger muscle groups and readdressing the issue that we aren't necessarily training the muscles but rather the entire nervous system. The more motor units that can be recruited with a particular exercise the better. The overall selection and choice of that exercise would be superior because you're creating a systemic adaption to the stress placed on the organism from the triphasic methods. The best sequencing therefore would be something that involves larger muscle groups being recruited through the exercises being used.

QUESTION 6: WHAT PROGRESSIONS SHOULD I USE WITH OTHER EXERCISES DURING THE TRIPHASIC MESOCYCLE TO MAXIMIZE PERFORMANCE?

TABLE 4.18: ABOVE 80 PERCENT TRIPHASIC EXERCISE SEQUENCING			
EXERCISE	BLOCK 1 (ECCENTRIC)	BLOCK 2 (ISOMETRIC)	BLOCK 3 (CONCENTRIC)
FRONT SQUAT	<u>FRONT SQUAT ECCENTRIC</u>	<u>FRONT SQUAT ISOMETRIC</u>	<u>FRONT SQUAT</u>
LEG PRESS	<u>LEG PRESS SINGLE LEG ECCENTRIC</u>	<u>LEG PRESS SINGLE LEG ISOMETRIC</u>	<u>SINGLE LEG PRESS</u>
DB ROW	<u>DUMBBELL ROW ECCENTRIC</u>	<u>DUMBBELL ROW ISOMETRIC</u>	<u>ONE ARM DUMBBELL ROW</u>
BAND JUMPS	<u>ACCELERATED BAND SQUAT JUMP PAUSE</u>	<u>ACCELERATED BAND SQUAT JUMP</u>	<u>ACCELERATED BAND SQUAT JUMP REACTIVE</u>
RDL	<u>RDL DUMBBELL ECCENTRIC</u>	<u>RDL DUMBBELL ISOMETRIC</u>	<u>RDL DUMBBELL</u>
DB LUNGE	<u>DUMBBELL WALKING LUNGE WITH PAUSE</u>	<u>DUMBBELL WALKING LUNGE</u>	<u>DUMBBELL WALKING LUNGE SWITCH</u>
BENCH PRESS	<u>BENCH PRESS ECCENTRIC</u>	<u>BENCH PRESS ISOMETRIC</u>	<u>BENCH PRESS REACTIVE</u>
HIP FLEXOR	<u>HIP FLEXOR ECCENTRIC PRONE</u>	<u>HIP FLEXOR ISOMETRIC PULL</u>	<u>HIP FLEXOR PRONE CONTRALATERAL</u>

TABLE 4.19: ABOVE 80 PERCENT THREE-DAY VERSUS FOUR-DAY MODEL							
TRAINING WEEK:		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
THREE-DAY MODEL	FOCUS	TOTAL BODY	OFF	TOTAL BODY	OFF	TOTAL BODY	OFF
	LOAD	82-87%		90-97%		75-80%	
	MEANS APPLIED	TRIPHASIC		DYNAMIC		TRIPHASIC	
FOUR-DAY MODEL	FOCUS	LOWER BODY	UPPER BODY	OFF	LOWER BODY	UPPER BODY	OFF
	LOAD	82-87%	82-87%		90-97%	90-97%	
	MEANS APPLIED	TRIPHASIC			DYNAMIC		

Two other important aspects of training that can't be forgotten are speed work and conditioning. Below is a table that shows where in the training week each should be emphasized along with special instructions and example workouts.

TABLE 4.20: ABOVE 80 PERCENT FOUR-DAY CONDITIONING MODEL			
TRAINING DAY	CONDITIONING GOAL	SPECIAL INSTRUCTIONS	EXAMPLE WORKOUT
DAY 1	Short Sprints (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90-120 seconds 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 2	Long Sprints or Short Sprints w/ Reduced Rest (Speed Conditioning)	<ul style="list-style-type: none"> • Sprints over 15 seconds or • Sprints under 10, recovery under 20 seconds 	<ul style="list-style-type: none"> • High Quality Lactic Anaerobic Power Training Builder • Metabolic Injury Prevention Runs

TABLE 4.20: ABOVE 80 PERCENT FOUR-DAY CONDITIONING MODEL			
TRAINING DAY	CONDITIONING GOAL	SPECIAL INSTRUCTIONS	EXAMPLE WORKOUT
DAY 3	Short Sprint (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90–120 seconds 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60s • 16 Week Short Sprint Workouts • Cone Agility
DAY 4	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity focused	<ul style="list-style-type: none"> • Aerobic Work Capacity Training Builder • Game Speed Conditioning • Bike Conditioning • TrashBall

Finally, we need to talk about the different exercises, methods, and means I use in a four-day program that I don't use and didn't show you in the three-day program. By this point, however, I'm sure you're probably a little tired of reading, and I'm certainly tired of writing. So I thought this would be a good point in the book to change it up a little. Instead of reading, let's try listening and watching.

Below is a hyperlink that will take you to a video series where I walk you through the four-day program, explaining some of the exercises and why I use them. I recommend having the program next to you while you watch, so you can follow along and take notes. In advance, yes, my hair is a mess; no, I didn't shave even though my wife told me to; and yes, I am a little heavy right now. We filmed this right around Christmas time, so I had access to cookies galore. No fat jokes, please.

[FOUR-DAY ABOVE 80 PERCENT TRIPHASIC VIDEO](#)

BLOCK ONE (4-DAY): ABOVE 80% ECCENTRIC PHASE
HYPERLINKS

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink	Day 3	Exercise Hyperlink	Day 4	Exercise Hyperlink
Box 1	Back Squat	Box 1	Bench Press	Box 1	Balance Single Leg Squat Lat Pull and Press Leg Press Calf Raise	Box 1	Bench Press
Box 2	Back Squat Eccentric Hurdle Hop Accelerated Band Jump	Box 2	Bench Press Dumbbell Rear Leg Press Calf Raise	Box 2	Back Squat	Box 2	Bench Press Rack Band Push Up KA D1 Pattern
Box 3	90 90 Groin ISO Hold GH HYPR Incline Incline Step Up Toe Raises	Box 3	Dumbbell Incline Fly Dumbbell Bent Over Row Delt Lateral Rebound Drop	Box 3	Back Squat Half Squat Jump Weighted Face Band Pulls	Box 3	Eccentric DB Press KA Squat Twist Dumbbell Rear
Box 4	Hip Flex Ecc Prone Dumbbell Push Backs Supine Glute Ham Back Iso	Box 4	JM Dumbbell Press Bar Curl Chest Reverse Grip ISO	Box 4	90 90 Groin ISO Hold Reverse Hyper DB Walking Lunge	Box 4	JM Dumbbell Press Incline Hammer Curl Chest Rev Grip Iso
Box 5	H-Sq Sh Bi Trap Glute Ham Back Cav Iso	Box 5	Supine Glute Ham Back Iso H-Sq Sh Bi Trap	Box 5	H-Sq Sh Bi Trap Glute Ham Back Cav Iso Supine Glute Ham Back Iso	Box 5	Glute Ham Back Cav Iso Sq Trap Sh Bi Hold
Box 6	Power Clean	Box 6	Deadlift	Box 6	Power Clean	Box 6	Deadlift
Box 7	3:00 Core Test SWB Down TW	Box 7	3:00 Core Test Swiss Ball Down Twist	Box 7	3:00 Core Test SWB Down TW	Box 7	3:00 Core Test SWB Down TW
Box 8	GH HANG Rollers Glutes and Hams Laying Relaxation	Box 8	Glute Ham Hang Rollers Quads & Back Laying Wall Shakes	Box 8	GH HANG Rollers Glutes and Hams Laying Relaxation	Box 8	Glute Ham Hang Rollers Quads & Back Laying Wall Shakes

BLOCK TWO (4-DAY): ABOVE 80% ISOMETRIC PHASE
HYPERLINKS

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink	Day 3	Exercise Hyperlink	Day 4	Exercise Hyperlink
Box 1	Back Squat	Box 1	Bench Press	Box 1	Balance Single Leg Squat Lat Pull and Press Leg Press Calf Raise	Box 1	Bench Press
Box 2	Back Squat Isometric Hurdle Hop Accelerated Band Jump	Box 2	Bench Press Dumbbell Rear Leg Press Calf Raise	Box 2	Back Squat	Box 2	Bench Press Rack Band Push Up KA D1 Pattern
Box 3	90 90 Groin ISO Hold GH HYPR Incline Isometric Incline Step Up Toe Raises	Box 3	Dumbbell Incline Fly Dumbbell Bent Over Row Delt Lateral Rebound Drop	Box 3	Back Squat Half Squat Jump Weighted Face Band Pulls	Box 3	Isometric DB Press KA Squat Twist Dumbbell Rear
Box 4	Hip Flex Prone Isometric Dumbbell Push Backs Supine Glute Ham Back Iso	Box 4	JM Dumbbell Press Bar Curl Chest Reverse Grip ISO	Box 4	90 90 Groin ISO Hold Reverse Hyper DB Walking Lunge	Box 4	JM Dumbbell Press Incline Hammer Curl Chest Rev Grip Iso
Box 5	Hip Flex Prone Isometric Dumbbell Push Backs	Box 5	Supine Glute Ham Back Iso H-Sq Sh Bi Trap	Box 5	H-Sq Sh Bi Trap Glute Ham Back Cav Iso Supine Glute Ham Back Iso	Box 5	Supine Glute Ham Back Iso Sq Trap Sh Bi Hold
Box 6	Power Clean	Box 6		Box 6	Power Clean	Box 6	Deadlift
Box 7	3:00 Core Test SWB Down TW	Box 7	3:00 Core Test Swiss Ball Down Twist	Box 7	3:00 Core Test SWB Down TW	Box 7	3:00 Core Test SWB Down TW
Box 8	GH HANG Rollers Glutes and Hams Laying Relaxation	Box 8	Glute Ham Hang Rollers Quads & Back Laying Wall Shakes	Box 8	GH HANG Rollers Glutes and Hams Laying Relaxation	Box 8	Glute Ham Hang Rollers Quads & Back Laying Wall Shakes

**BLOCK THREE (4-DAY): ABOVE 80% CONCENTRIC PHASE
HYPERLINKS**

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink	Day 3	Exercise Hyperlink	Day 4	Exercise Hyperlink
Box 1	Back Squat	Box 1	Bench Press	Box 1	Glute Bar Lift Lat Pull and Press 3- Way Ham Touch	Box 1	Bench Press
Box 2	Back Squat Power Step up Cycle Kicks	Box 2	Bench Press Dumbbell Rear Leg Press Calf Raise	Box 2	Back Squat	Box 2	Bench Press Clap Push-Up Dumbbell Rear
Box 3	90 90 Groin ISO Hold 3- Way Ham Touch Walking Drop Lunge Jumps	Box 3	Dumbbell Incline Fly Dumbbell Bent Over Row Delt Lateral Rebound Drop	Box 3	Sport back Squat Accelerated Band Jump KA Bent Over Rows	Box 3	DB Bench Dumbbell Bent Over Row DB Shrugs
Box 4	Prone Bench Hip Flex Dumbbell Push Backs Supine Glute Ham Back Iso	Box 4	JM Dumbbell Press Bar Curl Chest Reverse Grip ISO	Box 4	90 90 Groin ISO Hold DB RDL Inline DB Walking Lunge	Box 4	JM Dumbbell Press Incline Hammer Curl Chest Rev Grip Iso
Box 5	Glute Ham Back Cav Iso	Box 5	Supine Glute Ham Back Iso	Box 5	Glute Ham Back Cav Iso Supine Glute Ham Back Iso	Box 5	Glute Ham Back Cav Iso
Box 6	3:00 Core Test SWB Down TW	Box 6	3:00 Core Test Swiss Ball Down Twist	Box 6		Box 6	
Box 7	GH HANG Rollers Glutes and Hams Laying Relaxation	Box 7	Glute Ham Hang Rollers Quads & Back Laying Wall Shakes	Box 7	GH HANG Rollers Glutes and Hams Laying Relaxation	Box 7	Glute Ham Hang Rollers Quads & Back Laying Wall Shakes
Box 8		Box 8		Box 8		Box 8	

TABLE 4.22: ABOVE 80 PERCENT FIVE-DAY CONDITIONING MODEL			
TRAINING DAY	CONDITIONING GOAL	SPECIAL INSTRUCTIONS	EXAMPLE WORKOUT
DAY 1	Short Sprints (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90–120 seconds 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60s • 16 Week Short Sprint Workouts • Cone Agility
DAY 2	Long Sprints or Short Sprints w/ Reduced Rest (Speed Conditioning)	<ul style="list-style-type: none"> • Sprints over 15 seconds or • Sprints under 10, recovery under 20 seconds 	<ul style="list-style-type: none"> • High Quality Lactic Anaerobic Power Training Builder • Metabolic Injury Prevention Runs
DAY 3	Short Sprints (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90–120 seconds 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 4	Short Sprints (Anaerobic Conditioning)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Limited recovery; 45–60 seconds 	<ul style="list-style-type: none"> • Work Capacity Alactic Anaerobic Training Builder • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 5	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity focused	<ul style="list-style-type: none"> • Aerobic Work Capacity Training Builder • Game Speed Conditioning • Bike Conditioning • TrashBall

Finally, we need to talk about the different exercises, methods, and means I use in a five-day program that I don't use and didn't show you in the three-day program. The following hyperlink will take you to a video that explains the five-day program.

[**FIVE-DAY ABOVE 80 PERCENT TRIPHASIC VIDEO**](#)

BLOCK ONE (5-DAY): ABOVE 80% ECCENTRIC PHASE
HYPERLINKS

Day 1	Exercise Hyperlink	Day 3	Exercise Hyperlink	Day 5	Exercise Hyperlink
Box 1	FRONT SQUAT P/w-2 Neck	Box 1	Back Squat P/w-2 Neck	Box 1	Deadlift P/w-2 Neck
Box 2	Eccentric Front Squat Lat Pull Down Cuban PRSS INC F8	Box 2	Back Squat 1 Arm Lat Pull Down Delt Lat Rebound Drop	Box 2	Deadlift Pull up Cuban PRSS INC F8
Box 3	DB Walking Lunge DB BO Row Shrug	Box 3	STEP UP DB Twist DB Shrug	Box 3	Single Leg Squat DB BO Row DB Shrug
Box 4	RDL Incline Hammer Curls Full BCH Curl Up	Box 4	DB RDL InLine Zotman Curl INCLINE SIT UP	Box 4	Assist Noridic Ham Curl DB Curl INCLINE SIT UP
Box 5	Ball LG Curl 90 90 Groin ISO Hold Ez Bar Curl	Box 5	Glute Bar Lifts BAR CURL BND Adduction	Box 5	Glute Bar Lift Revs Curl Iso Ball Grion Squeeze
Box 6	Shrug Closed Lunge V BND TW Wrist Flexion	Box 6	Shrug PRTNR Abs Bam Bam	Box 6	BENCH PRESS DB Shoulder Press TRI PUSH DOWN
Box 7	Sq Trap Sh Bi Hold Glute Ham Back Cav Iso	Box 7	Sq Trap Sh Bi Hold Glute Ham Back Cav Iso	Box 7	Sq Trap Sh Bi Hold Glute Ham Back Cav Iso
Box 8	GH HANG Rollers Glutes and Hams Partner Leg Walks	Box 8	GH HANG Rollers Glutes and Hams Partner Leg Walks	Box 8	GH HANG Rollers Glutes and Hams Partner Leg Walks

**BLOCK ONE (5-DAY): ABOVE 80%
ECCENTRIC PHASE HYPERLINKS**

Day 2	Exercise Hyperlink	Day 4	Exercise Hyperlink
Box 1	BENCH PRESS P/w-2 Neck	Box 1	BENCH PRESS P/w-2 Neck
Box 2	BENCH PRESS DB Rear Delt Calf Raises	Box 2	BENCH PRESS Med Ball Chest Pass INC OH Sit Up
Box 3	DB INCLINE BENCH Infraspinatus DB Side Lat Raise	Box 3	DB Incline Fly Arnold Press Dynamic Lat Pull
Box 4	Jerk Support Iso Hip FLX BND Pulls Glute Swings	Box 4	Close Grip Bench Hip Flex Ecc Prone 90 90 Glute ISO Hold
Box 5	JM DB Press BND Abduction Spider Flips	Box 5	DB Tri Floor Press Iso Abduction Hold Round House
Box 6	Shrug Closed Lunge V BND TW Wrist Flexion	Box 6	Wrist Flexion PRTNR Abs SWB Up TW
Box 7	Chest Rev Grip Iso ISO SPLIT	Box 7	Chest Rev Grip Iso
Box 8	GH HANG Rollers Glutes and Hams Partner Back walk	Box 8	GH HANG Rollers Quads & Back LAYING WALL SHAKES

BLOCK TWO (5-DAY): ABOVE 80% ISOMETRIC PHASE
HYPERLINKS

Day 1	Exercise Hyperlink	Day 3	Exercise Hyperlink	Day 5	Exercise Hyperlink
Box 1	FRONT SQUAT P/w-2 Neck	Box 1	Back Squat P/w-2 Neck	Box 1	Deadlift P/w-2 Neck
Box 2	Isometric Front Squat Lat Pull Down Cuban PRSS INC F8	Box 2	Back Squat 1 Arm Lat Pull Down Delt Lat Rebound Drop	Box 2	Deadlift Pull up Cuban PRSS INC F8
Box 3	DB Walking Lunge DB BO Row Shrug	Box 3	STEP UP Dynamic Lat Pull DB Shrug	Box 3	Single Leg Squat DB BO Row DB Shrug
Box 4	RDL Incline Hammer Curls Full BCH Curl Up	Box 4	Assist Noridic Ham Curl DB Curl INCLINE SIT UP	Box 4	Assist Noridic Ham Curl Bar Curl INCLINE SIT UP
Box 5	Ball LG Curl 90 90 Groin ISO Hold Ez Bar Curl	Box 5	Glute Bar Lifts BAR CURL BND Adduction	Box 5	Glute Bar Lifts Revs Curl Iso Ball Grion Squeeze
Box 6	Shrug Closed Lunge V BND TW Wrist Flexion	Box 6	Shrug PRTNR Abs Bam Bam	Box 6	BENCH PRESS DB Shoulder Press TRI PUSH DOWN
Box 7	Sq Trap Sh Bi Hold Glute Ham Back Cav Iso	Box 7	Sq Trap Sh Bi Hold Glute Ham Back Cav Iso	Box 7	Sq Trap Sh Bi Hold Glute Ham Back Cav Iso
Box 8	GH HANG Rollers Glutes and Hams Partner Leg Walks	Box 8	GH HANG Rollers Glutes and Hams Partner Leg Walks	Box 8	GH HANG Rollers Glutes and Hams Partner Leg Walks

**BLOCK TWO (5-DAY): ABOVE 80% ISOMETRIC
PHASE HYPERLINKS**

Day 2	Exercise Hyperlink	Day 4	Exercise Hyperlink
Box 1	BENCH PRESS P/w-2 Neck	Box 1	BENCH PRESS P/w-2 Neck
Box 2	BENCH PRESS DB Rear Delt Calf Raises	Box 2	BENCH PRESS Med Ball Chest Pass INC OH Sit Up
Box 3	DB INCLINE BENCH Infraspinatus DB Side Lat Raise	Box 3	DB BENCH Arnold Press Dynamic Lat Pull
Box 4	Push Press Hip FLX BND Pulls Glute Swings	Box 4	Close Grip Bench Hip Flex Ecc Prone 90 90 Glute ISO Hold
Box 5	JM DB Press BND Abduction Spider Flips	Box 5	DB Tri Floor Press Iso Abduction Hold Round House
Box 6	Shrug Closed Lunge V BND TW Wrist Flexion	Box 6	Wrist Flexion PRTNR Abs SWB Up TW
Box 7	Chest Rev Grip Iso ISO SPLIT	Box 7	Chest Rev Grip Iso
Box 8	GH HANG Rollers Glutes and Hams Partner Back walk	Box 8	GH HANG Rollers Quads & Back LAYING WALL SHAKES

BLOCK THREE (5-DAY): ABOVE 80% CONCENTRIC PHASE
HYPERLINKS

Day 1	Exercise Hyperlink	Day 3	Exercise Hyperlink	Day 5	Exercise Hyperlink
Box 1	Front squat	Box 1	Back Squat	Box 1	Deadlift
Box 2	Front squat Drop Box Jumps Hip Flex Band Pulls	Box 2	Back Squat USSR Plyo Box Speed Adduction	Box 2	Deadlift Close Grip Bench
Box 3	STEP UP GH HYPR Incline Speed Adduction	Box 3	SL Leg Press Assist Nordic Ham Curl 90 90 Glute Iso Hold	Box 3	Glute Bar Lift Single Leg Iso Deadlift
Box 4	RDL ANT TIB BAND 90 90 Glute Iso Hold	Box 4	ANT TIB BAND PRTNR BND ABS 90 90 Band Twist	Box 4	Power Snatch
Box 5		Box 5		Box 5	
Box 6	Closed Lunge V Band Twist SWB Up TW Band	Box 6		Box 6	DB Shoulder Press Tricep Push Down
Box 7		Box 7		Box 7	
Box 8	GH HANG Rollers Glutes and Hams Traction	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes	Box 8	GH HANG Leg Traction

**BLOCK THREE (5-DAY): ABOVE 80%
CONCENTRIC PHASE HYPERLINKS**

Day 2	Exercise Hyperlink	Day 4	Exercise Hyperlink
Box 1	Power Clean	Box 1	Power Snatch
Box 2	Power Clean	Box 2	Power Snatch
Box 3	Bench Press	Box 3	Bench Press
Box 4	Bench Press 90 90 Band Twist Bench Press	Box 4	Bench Press Bench Throw
Box 5	DB Incline Bench Lat Pull Down DB Side Lateral Raise	Box 5	Push Press EZ Bar Curl Gripper
Box 6	DB Tri Floor Press Bar Curl DB Rear Delt	Box 6	DB Rear Delt DB Bent Over Row Gopher U ABS
Box 7	Delt BO OH Rebound Drops Bam Bam	Box 7	
Box 8	GH HANG Rollers Glutes and Hams Shoulder Traction	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes

TABLE 4.24: ABOVE 80 PERCENT SIX-DAY CONDITIONING MODEL			
TRAINING DAY	CONDITIONING GOAL	SPECIAL INSTRUCTIONS	EXAMPLE WORKOUT
DAY 1	Short Sprints (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90–120 seconds 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60s • 16 Week Short Sprint Workouts • Cone Agility
DAY 2	Long Sprints or Short Sprints w/ Reduced Rest (Speed Conditioning)	<ul style="list-style-type: none"> • Sprints over 15 seconds or • Sprints under 10, recovery under 20 seconds 	<ul style="list-style-type: none"> • High Quality Lactic Anaerobic Power Training Builder • Metabolic Injury Prevention Runs
DAY 3	Short Sprints (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90–120 seconds 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 4	Short Sprints (Anaerobic Conditioning)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Limited recovery; 45–60 seconds 	<ul style="list-style-type: none"> • Work Capacity Alactic Anaerobic Training Builder • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 5	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity focused	<ul style="list-style-type: none"> • Aerobic Work Capacity Training Builder • Game Speed Conditioning • Bike Conditioning • TrashBall
DAY 6	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity focused	<ul style="list-style-type: none"> • Aerobic Work Capacity Training Builder • Game Speed Conditioning • Bike Conditioning • TrashBall

BLOCK ONE (6-DAY): ABOVE 80% ECCENTRIC PHASE
HYPERLINKS

Day 1	Exercise Hyperlink	Day 3	Exercise Hyperlink	Day 5	Exercise Hyperlink
Box 1	OH SQ Rack Press 2 way Neck STR Leg OC Glute lifts	Box 1	Triangle Terror 2 way Neck Piston Squat Band	Box 1	3-way Ham Press 2 way Neck Balance Single Leg Squat
Box 2	Back Squat Back Squat Eccentric	Box 2	Back Squat	Box 2	FRONT SQUAT Eccentric Front Squat
Box 3	Hurdle Hop SQ Jump Weighted ACC Band Jump Pause	Box 3	Alt Inc Power Step Up USSR Plyo Box Power Step up	Box 3	Hurdle Hop USSR Plyo Box ACC Band Jump Pause
Box 4	4 Way Neck Wrist Flexion ANT TIB BND	Box 4	DB Step Up External Rotation Supine DB SL Calf Raise	Box 4	Iso Ball Grion Squeeze LAT SUP F8 Ankle Band Work
Box 5	DB Walking Lunge Cuban PRSS INC F8 Ankle Band Work	Box 5	GH HYPR Incline Hip FLX BND Pulls LAT 90 90 Groin ISO Hold	Box 5	RDL Shrug Hip Flexor Isometric Pull SNGL LG ISO Deadlift
Box 6	Glute Bar Lifts Hip Flex Band Pulls Iso Ball Grion Squeeze	Box 6	Squat ISO Hold Hip Traction	Box 6	GH HANG Partner Leg Walks Hip Traction
Box 7	Hip Traction Partner Leg Walks GH HANG	Box 7	GH HANG	Box 7	
Box 8		Box 8		Box 8	

BLOCK ONE (6-DAY): ABOVE 80% ECCENTRIC PHASE
HYPERLINKS

Day 2	Exercise Hyperlink	Day 4	Exercise Hyperlink	Day 6	Exercise Hyperlink
Box 1	Bench Press P/w-2 Neck	Box 1	Bench Press P/w-2 Neck	Box 1	Bench Press P/w-2 Neck
Box 2	Chain Bench Rack Band Push Up Infraspinatus	Box 2	Bench Press MB Chest Pass SA OH SUP F8	Box 2	Bench Press MB Chest Pass SA OH SUP F8
Box 3	DB INCLINE BENCH Lat Pull Down OH LAT Raise	Box 3	Dumbbell Incline Fly Dynamic Lat Pull DB Curl to Arnold	Box 3	DB incline bench 1 Arm Lat Pull Down DB Curl to Arnold
Box 4	Dips Chin Up ANT TIB BND	Box 4	Close Grip Bench Incline Hammer Curl DB SL Calf Raise	Box 4	DB Tri Floor Press Ez Bar Curl DB SL Calf Raise
Box 5	JM Dumbbell Press Bar Curl Bam Bams	Box 5	Tri push down Concentration Curl Round House	Box 5	Dips Drag Curl Spider Flips
Box 6	Gripper Pike Swiss Ball Abs SWB Down TW	Box 6	Wrist Flexion Gopher U Abs SWB Up TW	Box 6	Wrist Flexion Gopher U Abs SWB Up TW
Box 7	Chest Reverse Grip ISO Shr Sho Bi Cav Iso	Box 7	Chest Reverse Grip ISO Shr Sho Bi Cav Iso	Box 7	Chest Reverse Grip ISO Shr Sho Bi Cav Iso
Box 8		Box 8		Box 8	

BLOCK TWO (6-DAY): ABOVE 80% ISOMETRIC PHASE
HYPERLINKS

Day 1	Exercise Hyperlink	Day 3	Exercise Hyperlink	Day 5	Exercise Hyperlink
Box 1	OH SQ Rack Press 2 way Neck STR Leg OC Glute lifts	Box 1	Triangle Terror 2 way Neck Piston Squat Band	Box 1	3-way Ham Press 2 way Neck Balance Single Leg Squat
Box 2	Back Squat Back Squat Isometric	Box 2	Back Squat	Box 2	FRONT SQUAT Isometric Front Squat
Box 3	Hurdle Hop SQ Jump Weighted ACC Band Jump Pause	Box 3	Alt Inc Power Step Up USSR Plyo Box Power Step up	Box 3	Hurdle Hop USSR Plyo Box ACC Band Jump Pause
Box 4	4 Way Neck Wrist Flexion ANT TIB BND	Box 4	DB Step Up External Rotation Supine DB SL Calf Raise	Box 4	Iso Ball Grion Squeeze LAT SUP F8 Ankle Band Work
Box 5	DB Walking Lunge Cuban PRSS INC F8 Ankle Band Work	Box 5	GH HYPR Incline Hip FLX BND Pulls LAT 90 90 Groin ISO Hold	Box 5	RDL Shrug Hip Flexor Isometric Pull SNGL LG ISO Deadlift
Box 6	Glute Bar Lifts Hip Flex Band Pulls Iso Ball Grion Squeeze	Box 6	Squat ISO Hold Hip Traction	Box 6	BENCH PRESS DB Shoulder Press Chest Rev Grip Iso
Box 7	Hip Traction Partner Leg Walks GH HANG	Box 7	GH HANG	Box 7	GH HANG Partner Leg Walks Hip Traction
Box 8		Box 8		Box 8	

BLOCK TWO (6-DAY): ABOVE 80% ISOMETRIC PHASE
HYPERLINKS

Day 2	Exercise Hyperlink	Day 4	Exercise Hyperlink	Day 6	Exercise Hyperlink
Box 1	Bench Press P/w-2 Neck	Box 1	Bench Press P/w-2 Neck	Box 1	Bench Press P/w-2 Neck
Box 2	Bench Press Rack band push up Delt Lateral Rebound Drop	Box 2	Bench Press MB Chest Pass SA Delt Lateral Rebound Drop	Box 2	Bench Press MB Chest Pass SA OH SUP F8
Box 3	DB Incline OC 1 Arm Lat Pull Down DB Rear Delt	Box 3	Dumbbell Incline Fly Dynamic Lat Pull DB Curl to Arnold	Box 3	DB incline bench 1 Arm Lat Pull Down DB Curl to Arnold
Box 4	Dips Chin Up ANT TIB BND	Box 4	Close Grip Bench Incline Hammer Curl DB SL Calf Raise	Box 4	DB Tri Floor Press Ez Bar Curl DB SL Calf Raise
Box 5	JM Dumbbell Press Bar Curl Bam Bams	Box 5	Tri push down Concentration Curl Round House	Box 5	Dips Drag Curl Spider Flips
Box 6	Gripper Pike Swiss Ball Abs SWB Down TW	Box 6	Wrist Flexion Gopher U Abs SWB Up TW	Box 6	Wrist Flexion Gopher U Abs SWB Up TW
Box 7	Chest Reverse Grip ISO Shr Sho Bi Cav Iso	Box 7	Chest Reverse Grip ISO Shr Sho Bi Cav Iso	Box 7	Chest Reverse Grip ISO Shr Sho Bi Cav Iso
Box 8		Box 8		Box 8	

BLOCK THREE (6-DAY): ABOVE 80% CONCENTRIC PHASE
HYPERLINKS

Day 1	Exercise Hyperlink	Day 3	Exercise Hyperlink	Day 5	Exercise Hyperlink
Box 1	OH SQ Rack Press 2 way Neck Standing Glute Kicks	Box 1	Triangle Terror 2 way Neck Piston Squat Band	Box 1	3-way Ham Press 2 way Neck Balance Single Leg Squat
Box 2	Back Squat Back Squat Isometric	Box 2	Back Squat	Box 2	Hurdle Hop USSR Plyo Box ACC Band Jump
Box 3	Hurdle Hop Squat Jump ACC Band Jump	Box 3	Split SQ Drop Jump USSR Plyo Box Squat Jump	Box 3	Single leg squat SL Reverse Hyper Cuban PRSS INC F8
Box 4	4 Way Neck Wrist Flexion ANT TIB BND	Box 4	Power Step Up External Rotation Supine DB SL Calf Raise	Box 4	Crossover Step Up SWB LG Curl SNGL Leg Thors Hammer
Box 5	Walking Drop Lunge Jump Cuban PRSS INC F8 Ankle Band Work	Box 5	Nordic HAM Curls Hip FLX BND Pulls LAT 90 90 Groin ISO Hold	Box 5	BENCH PRESS DB Shoulder Press TRI PUSH DOWN
Box 6	Glute Bar Lifts Hip Flex Band Pulls Iso Ball Grion Squeeze	Box 6	Squat ISO Hold	Box 6	Nordic HAM Curls Hip FLXor ISO Pull Iso Ball Grion Squeeze
Box 7	Hip Traction Partner Leg Walks GH HANG	Box 7	GH HANG Hip Traction LAYING WALL SHAKES	Box 7	H-sq Shi Bi Trap Glute Ham Back Cav Iso
Box 8		Box 8		Box 8	GH HANG Partner Leg Walks Laying Relaxation

**BLOCK THREE (6-DAY): ABOVE 80% CONCENTRIC PHASE
HYPERLINKS**

Day 2	Exercise Hyperlink	Day 4	Exercise Hyperlink	Day 6	Exercise Hyperlink
Box 1	Bench Press P/w-2 Neck	Box 1	Bench Press P/w-2 Neck	Box 1	Bench Press P/w-2 Neck
Box 2	Bench Press 2POC Reactive Bench Toss Delt Lat Rebound Drop	Box 2	Bench Press 2POC Reactive Bench Toss Delt Lat Rebound Drop	Box 2	Bench Press Med Ball Chest Pass OH SUP F8
Box 3	DB Incline OC DB BO Row Reactive Ext/Flx Shoulder Shock	Box 3	DB Incline OC Dynamic Lat Pull EXT Rot Part Shock	Box 3	DB INCLINE BENCH 1 Arm Lat Pull Down DB Curl to Press
Box 4	Dips Chin Up ANT TIB BND	Box 4	Board Close Grip Bench Press Incline Hammer Curls FRT Raise Drops	Box 4	DB Tri Floor Press Ez Bar Curl DB SL Calf Raise
Box 5	JM DB Press Bicep Curl Shock Plate Flips	Box 5	Tri push down Concentration Curl Wrist Extension	Box 5	Dips Drag Curl Spider Flips
Box 6	Wrist Flexion Pike Swiss Ball Abs SWB Up TW	Box 6	Plate Hold Gopher U Abs SWB Up TW	Box 6	Wrist Flexion Gopher U Abs SWB Up TW
Box 7	Chest Reverse Grip ISO Shr Sho Bi Cav Iso	Box 7	Chest Reverse Grip ISO Shr Sho Bi Cav Iso	Box 7	Chest Reverse Grip ISO Shr Sho Bi Cav Iso
Box 8		Box 8		Box 8	

**BLOCK ONE (2-DAY): ABOVE 80% ECCENTRIC
PHASE HYPERLINKS**

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink
Box 1	Stding SQ Drop P Jump Cuban Press INC F8 ANT TIB BND	Box 1	Sting SQ Drop Jump Tea Cup Stuff Calf Raises
Box 2	Back Squat Eccentric Hip Flex Iso Prone 1 Arm LAT Pull	Box 2	Leg Press Iso Ball Groin Squeeze Dynamic Lat Pull
Box 3	DB Bench GH HYPER Incline OH LAT Raise	Box 3	BENCH PRESS Ball BND LG Curl DB Rear Delt
Box 4	JM DB Press Drag Curl 90 90 Groin ISO Hold	Box 4	DB Tri Pro Sup DB Curl to Press 90 90 Glute ISO Hold
Box 5	H-sq Shi Bi Trap Chest Rev Grip Iso Hex Deadlift	Box 5	Glute Ham Back Cav Iso H-sq Shi Bi Trap
Box 6		Box 6	
Box 7		Box 7	
Box 8	GH Hang Rollers Glutes & Hams Laying Relaxation	Box 8	GH Hang Rollers Quads & Back LAYING WALL SHAKES

**BLOCK TWO (2-DAY): ABOVE 80% ISOMETRIC
PHASE HYPERLINKS**

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink
Box 1	Squat Jump Pause Cuban Press INC F8 Glute Bar Lifts	Box 1	Squat Jump Pause Tea Cup Stuff Calf Raises
Box 2	Back Squat Isometric Hip Flex Iso Prone 1 Arm LAT Pull	Box 2	Leg Press Iso Ball Groin Squeeze Dynamic Lat Pull
Box 3	DB Bench Isometric GH HYPER Incline OH LAT Raise	Box 3	BENCH PRESS Ball BND LG Curl DB Rear Delt
Box 4	DB Tri Floor Press Dual Action Bicep Curls 90 90 Groin ISO Hold	Box 4	DB Tri Pro Sup DB Curl to Press 90 90 Glute ISO Hold
Box 5	H-sq Shi Bi Trap Chest Rev Grip Iso	Box 5	Glute Ham Back Cav Iso H-sq Shi Bi Trap
Box 6		Box 6	
Box 7		Box 7	
Box 8	GH Hang Rollers Glutes and Hams Laying Relaxation	Box 8	GH Hang Rollers Quads & Back LAYING WALL SHAKES

**BLOCK THREE (2-DAY): ABOVE 80%
CONCENTRIC PHASE HYPERLINKS**

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink
Box 1	Squat Jump Cuban Press INC F8 Ankle Band Work	Box 1	Squat Jump Tea Cup Stuff Calf Raises
Box 2	Back Squat Russian Switch Lunge 1 Arm LAT Pull	Box 2	Back Squat Iso Ball Groin Squeeze Dynamic Lat Pull
Box 3	BENCH PRESS GH HYPER Incline OH LAT Raise	Box 3	BENCH PRESS Ball LG Curl Delt Lateral Rebound Drop
Box 4	DB Tri Ext Bicep Shock Curls 90 90 Groin ISO Hold	Box 4	DB Tri Pro Sup DB Curl to Press 90 90 Glute ISO Hold
Box 5	H-sq Shi Bi Trap Chest Rev Grip Iso	Box 5	Glute Ham Back Cav Iso H-sq Shi Bi Trap
Box 6		Box 6	
Box 7		Box 7	
Box 8	GH Hang Rollers Glutes and Hams Laying Relaxation	Box 8	GH Hang Rollers Quads & Back LAYING WALL SHAKES

BLOCK FOUR, MONDAY

100%	MONDAY	21-Jun-10			
		REPS	LOAD	SETS	NOTES
	OH SQ Rack Press	6		2	Eyes Closed
	Pair w/				
	2-WAY NECK	8		2	
	Pair w/				
	STNDING Glute Kicks	6		2	
500	BACK SQUAT	3	275 - 300	Roll I-band	
		2	325 - 350	Spine Rolls	
	Test	2	400 - 415	CW TEST	
	Pair Below	3	350 - 365	0:0:0:0	
	Pair Below	3	350 - 365	0:0:0:0	
	Pair Below	3	350 - 365	0:0:0:0	
	French Contrast	3	350 - 365	0:0:0:0	
	Hurdle Hop	4	*N/A .. *N/A	4	Distance
	Pair w/				
250	Squat Jump	4	200 - 205	4	0:0:0:0
	Pair w/				
	Acc Band Jump	4		4	Rest 5:00
	4 way neck	8		2	
	Pair w/				no Rest
	Wrist Flexion	6		3	
	Pair w/				no Rest
	ANT TIB BND	10		3	Band Medium
	Walking Band Lunge Jump	4		3	Bands
	Pair w/				Speed/Jump
105	DB BENCH	9,7,5	75 - 85	3	Toes
	Pair w/				
225	Lat Pull Down	8	170 - 180	3	
500	Glute Bar Lift	6	375 - 400	3	0:0:0:0
	Pair w/				No Rest
	Hip FLX BND Pulls	6		3	
	Pair w/				No Rest
75	DB Shoulder Press	10S	45 -	3	OC
150	Rev Grip Tri Push	8	115 - 120	3	
	Pair w/				No Rest
	Bicep shock curls	10S		3	
	Pair w/				No Rest
	Bam Bam	10		3	

COACHING POINTS AND EXERCISE TUTORIAL

Box 1

-In the first cluster of exercises, these may often be skipped if a very intense dynamic warm up has been completed that involves a number of disciplines from various sciences to activate the body to train.

[Over head rack squat](#); [Manual 4-way neck](#); [Standing Glute Kicks](#)

Box 2-4

-Back squat: Notice the first three sets are warm up sets and the third set is one that the coach watches to test the fatigue level of the athletes.

-The four work sets at submaximal loads in the back squat are paired with the following six exercises. The first three are used to complete the French contrast method and the last three are used as active rests during the course of training. In this case, the French contrast was used to address various aspects of the particular sport training with these methods.

-Notice that the hurdle hop is for a distance during this program. In the prior programs, the hurdle hops were for height. I feel that distance is a better correlation in sports performance when jumping hurdles, so I save the distance part of this for the latter stages of training.

[Back Squat](#); [Hurdle Hop](#); [Squat Jump](#); [Accelerated Band Jump](#); [4 way neck](#); [Wrist Flexion](#); [Anterior Tib BND](#)

Box 5

-Walking band lunge jumps are done at high speeds, extremely quickly. The athlete is coached to jump in the air and drive through his big toe.

[Walking Band Lunge Jumps](#); [DB Bench](#); [Lat Pull Down](#)

Box 6

-The dumbbell OC shoulder press is used very effectively in this case and doesn't stress the triceps but only isolates the shoulder girdle.

[Glute Bar Lift](#); [Hip Flex Band Pulls](#); [DB Shoulder Press](#)

Box 7

-The bicep shock curl is a reactive exercises for the upper arm; the athlete turns the palms down and away after releasing the bar, and supinates the hand fully when catching it.

[Reverse Grip Tricep Push Down](#); [Bicep Curl Shock](#); [Bam Bams](#)

BLOCK FOUR, WEDNESDAY

100%	WENDESDAY	23-Jun-10			
		REPS	LOAD	SETS	NOTES
	Triangle Terror	6		2	
	Pair w/				
	2-WAY NECK	8		2	
	Pair w/				
	Piston Squat Band	6		2	Bands
500	BACK SQUAT	3	275 - 300	Roll I-band	
		2	325 - 350	Spine Rolls	
		1	400 - 415		
	Speed 95% Drop off	1	390 - 400	1:15 Rest	
		1	390 - 400	1:15 Rest	
		1	390 - 400	1:15 Rest	
		1	390 - 400	1:15 Rest	
		1	390 - 400	1:15 Rest	
		1	390 - 400	1:15 Rest	
		1	390 - 400	1:15 Rest	
		1	390 - 400	1:15 Rest	
		Split SQ Drop Jump	4		4
	Pair w/				Rest 30
	USSR Plyo Box	4		4	Bands
	Pair w/				Rest 30
250	Squat Jump	4	170 - 175	4	Rest 2:00
	Power Step up	4		3	Bands
	Pair w/				Speed/Jump
	Laying External Rot	6		3	5:0:5:0
	Pair w/				Rest 30
100	DB SL Calf Raise	10	65 - 70	3	Knee Bend
	Nordic HAM Curls	8		3	Assist
	Pair w/				Rest 30
90	DB INCLINE BENCH	9,7,5	65 - 70	3	
	Pair w/				Rest 30
105	DB BO Row	8	80 - 85	3	Rest 1:00
200	DB RDL InLine	6	150 - 160	3	
	Pair w/				
	Hip FLX BND Pulls	6		3	
	Pair w/				
75	DB Shoulder Press	10S	45 -	3	
150	Rev Grip Tri Push	8	115 - 120	3	
	Pair w/				
	Bicep shock curls	10S		3	
	Pair w/				
	Bam Bam	10		3	

COACHING POINTS AND EXERCISE TUTORIAL

Box 1

-The first box can be skipped if an intense dynamic warm up has been completed.

[Over head rack squat](#); [Manual 4-way neck](#); [Standing Glute Kicks](#)

Box 2

-More advanced athletes will use 8 percent of the drop-off during this time, which will be the indicator of how many sets must be completed.

[Back Squat](#)

Box 3

-The next cluster of exercises are split squat jumps, Russian plyos, and loaded squat jumping, which is just a combination of plyometrics post-maximal effort squat.

[Split Squat Drop Jump](#); [USSR Plyo Box Bands](#); [Squat Jump](#)

Box 4

-The power step up is performed with bands attached around the athlete's waist; the athlete should drive the foot through the box forcefully. The coach holding the band should not hold so tight as to reduce the speed of the movement

-For the DB SL calf raise, cue the athletes to push through the big toe

[Power Step Up](#); [Laying Eccentric External Rotation](#); [DB SL Calf Raise](#)

Box 5

-Adjust the band tensin with the nordic hamstring curl; athletes generally should use between a light and mini band
[Nordic Ham Curls Assisted](#); [DB Incline Bench](#); [DB BO Row](#)

Box 6

-The hip flexor band pull is an explosive exercise for the anterior hip musculature

[DB RDL InLine](#); [Hip Flexor Band Pulls](#); [DB Shoulder Press](#)

Box 7

-The bicep shock curl is an explosive exercise for the upper arm; the athlete should turn the palms down and away after releasing the bar. When bring the hands up, the athlete should fully supinate the hand and catch the bar. This is done as fast and explosively as possible.

[Reverse Grip Triceps Push-Down](#); [Bicep Curl Shock](#); [Bam Bams](#)

✓ COACH'S CORNER

PROPER BREATHING FOR SPORTS RECOVERY

BY: CAL DIETZ & DANIEL RAIMONDI

EDITED BY: BEN PETERSON

An often overlooked component of many programs is restoration and recovery. Coaches attempt to manipulate variables in their workouts, changing intensities, volume, and exercises in order to cause adaptation. However, a training program is most effective if the athlete is able to recover from and adapt to the previous stress/workout. There are numerous techniques used to aid in restoration—[recovery baths](#), [contrast showers](#), proper nutrition, [stretching](#), massage, and [recovery rollers](#). This article will cover a technique seldom employed and even less commonly programmed—breathing.

Slow, deep, breathing has been shown to induce a calming effect on the body, decreasing everything from blood pressure to stress. Deep voluntary belly breathing also has been shown to shift the nervous system from sympathetic dominance to parasympathetic dominance (Jerath et al. 2006). What does this mean for your athletes? It means faster recovery by starting the digestive process sooner, creating stronger and faster athletes while responding better to future stress.

The neural response to training is well documented with an excitatory effect occurring in response to a stressor. Therefore, the key to recovery is being able to switch as soon as possible from the catabolic state brought on by training into a more anabolic state (Chen et al. 2011). The faster an athlete can go from an excited state to a calm one, the more capable he will be recovering from the workout.

So what exactly constitutes good belly breathing? Well, it's basically as simple as it sounds—deep breathing into the naval. Take a deep breath into your belly through the nose and exhale slowly through the mouth. Another useful tip is to take longer to exhale than to inhale. So an example of a good, deep breath might be a four-second inhale held for seven seconds with eight seconds taken to exhale (Weil). Repeat this process three to four times, letting your body calm itself, relax, and adjust to the new breathing pattern.

The last piece of this breathing puzzle is simply how to program it into your workout. Most coaches are raising an eyebrow. With time restrictions, most agree that the focus of the workout should be the workout. I'd contend that taking five to ten minutes at the end of the training session to include something as simple as deep, belly breathing can have huge impacts on future training sessions. One could also combine this type of breathing with a stretch (think yoga). An example might be a simple bar hang with slow, relaxing, rhythmic breaths. Another variation would be to perform a [glute ham hang](#). To do this, have the athlete lie face down on a glute ham machine, hang over the edge, and let the body completely relax.

BLOCK FOUR, FRIDAY

100%	FRIDAY	25-Jun-10			NOTES
		REPS	LOAD	SETS	
	3 - WY Ham PRSS	9		2	Eyes Closed
	Pair w/				no rest
	2-WAY NECK	8		2	
	Pair w/				no rest
	BAL SNGL LG SQ	6		2	Air Max
	Hurdle Hop	4		3	
	Pair w/				Rest 30
	USSR Plyo Box	4		3	
	Pair w/				Rest 30
	Acc Band Jump	4		3	
225	Single Leg Squat	12	145 - 160	3	
	Pair w/				Rest 30
150	SL Reverse Hyper	7	105 - 115	3	
	Pair w/				Rest 30
	Cuban PRSS INC F8	6		3	*****
	Cross Over STEP Up	4		3	Bands
	Pair w/				Rest 30
	SWB LG Curl SNGL Leg	8		3	
	Pair w/				Rest 30
	Thors Hammer	8		3	*****
300	BENCH PRESS	FFFF	195 - 105	4	Rest 45
	Pair w/				
75	DB Shoulder Press	FFF	55 - 30	3	OC
	Pair w/				Rest 45
150	TRI PUSH DOWN	FFF	105 - 60	3	Rest 45
	Nordic HAM Curls	6		2	
	Pair w/				
	Hip FLXor ISO Pull	6		2	
	Pair w/				
	Iso Ball Grion Squeeze	10S		3	
	Hindu Squat Iso	180s		1	
	Glute Ham Back Cav Iso	180s		1	
	GH HANG	120S		1	Relax Mouth
	Pair w/				
	Partner Leg Walks	120S		1	
	Pair w/				
	LAYING RELAXATION	120S		1	Relax Mouth

COACHING POINTS AND EXERCISE TUTORIAL

**On day three, I will often address some more plyometrics even in a fatigued state but still try to keep the quality high, however with an understanding that this block in particular could be my tenth to twelfth week into training.

Box 1

[3 Way Hamstring Press](#); [Manual 4-way neck](#); [Balance Single Leg Squat](#)

Box 2

[Hurdle Hop](#); [Russian Plyo Box](#); [Accelerated Band Jump](#)

Box 3

-With this high volume day, I have selected exercises that will increase work capacity and paired them together with the single leg squat and the single leg reverse hyper.

[Single Leg Squat](#); [Reverse Hyper](#); [Cuban Press Incline Figure 8](#)

Box 4

[Cross Over Step Up](#); [Single Leg Ball Curl SL](#); [Thors Hammer](#)

Box 5

-The bench press, dumbbell shoulder press, oscillatory movement, and triceps push-down are all done to failure (signified by the FFF). The latter part of the week is the only time that I do sets to failure in my undulated model.

[Bench Press](#); [DB Shoulder Press](#); [Tri push down](#)

Box 6

[Nordic Hamstring Curl](#); [Hip Flexor Isometric Pull](#); [Isometric Ball Groin Squeeze](#)

Box 7

-Once into training, I've found little value in long duration isometrics and have found the only place they can be inserted into a program to address the qualities that may increase for these types of movements are in the latter part of the week during fatigued states to increase work capacity quality.

[Isometric Hindu Squat Trap Shoulder Bicep Hold](#); [Isometric Glute Ham Back Iso](#)

Box 8

[Glute Ham Hang](#); [Partner Leg Walks](#); [Laying Relaxation](#)

5.8: 55-80 PERCENT THREE-DAY PROGRAM OVERVIEW

TABLE 5.9: UNDULATING BLOCK MODEL							
TRAINING WEEK:		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
THREE-DAY MODEL	FOCUS	TOTAL BODY	OFF	TOTAL BODY	OFF	TOTAL BODY	OFF
	LOAD	62-70%		72-80%		55-62%	
	MEANS APPLIED	BIOMETRIC		DYNAMIC/BIOMETRIC		VOLUME	

TABLE 5.10: 55-80 PERCENT THREE-DAY CONDITIONING MODEL			
TRAINING DAY	CONDITIONING GOAL	SPECIAL INSTRUCTIONS	EXAMPLE WORKOUT
DAY 1	Long Sprints or Short Sprints with Reduced Rest (Speed Conditioning)	<ul style="list-style-type: none"> Sprints over 15 seconds or Sprints under 10, recovery under 20 seconds. 	<ul style="list-style-type: none"> High Quality Lactic Anaerobic Power Training Builder Metabolic Injury Prevention Runs
DAY 2	Short Sprints (High Quality Speed)	<ul style="list-style-type: none"> Sprints under 10 seconds Full recovery; rest 90-120 seconds. 	<ul style="list-style-type: none"> Alactic High Quality Workout Flying 60's 16 Week Short Sprint Workouts Cone Agility
DAY 3	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity focused	<ul style="list-style-type: none"> Aerobic Work Capacity Training Builder Game Speed Conditioning Bike Conditioning TrashBall

TABLE 5.12: 55–80 PERCENT FOUR-DAY CONDITIONING MODEL			
TRAINING DAY	CONDITIONING GOAL	SPECIAL INSTRUCTIONS	EXAMPLE WORKOUT
DAY 1	Short Sprints (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90–120 seconds. 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 2	Long Sprints or Short Sprints with Reduced Rest (Speed Conditioning)	<ul style="list-style-type: none"> • Sprints over 15 seconds or • Sprints under 10, recovery under 20 seconds. 	<ul style="list-style-type: none"> • High Quality Lactic Anaerobic Power Training Builder • Metabolic Injury Prevention Runs
DAY 3	Short Sprint (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90–120 seconds. 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 4	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity focused	<ul style="list-style-type: none"> • Aerobic Work Capacity Training Builder • Game Speed Conditioning • Bike Conditioning • TrashBall

Finally, we need to talk about the different exercises, methods, and means that I use in a four-day program that I don't use and didn't show you in the three-day program. The following hyperlink will take you to a video that explains the four-day program in detail.

[**FOUR-DAY 55–80 PERCENT VIDEO**](#)

**TABLE 5.14: 55–80 PERCENT FIVE-DAY
CONDITIONING MODEL**

TRAINING DAY	CONDITIONING GOAL	SPECIAL INSTRUCTIONS	EXAMPLE WORKOUT
DAY 1	Short Sprints (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90–120 seconds. 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 2	Long Sprints or Short Sprints w/ Reduced Rest (Speed Conditioning)	<ul style="list-style-type: none"> • Sprints over 15 seconds or • Sprints under 10, recovery under 20 seconds. 	<ul style="list-style-type: none"> • High Quality Lactic Anaerobic Power Training Builder • Metabolic Injury Prevention Runs
DAY 3	Short Sprints (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90–120 seconds. 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 4	Short Sprints (Anaerobic Conditioning)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Limited recovery; 45–60 seconds 	<ul style="list-style-type: none"> • Work Capacity Alactic Anaerobic Training Builder • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 5	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity focused	<ul style="list-style-type: none"> • Aerobic Work Capacity Training Builder • Game Speed Conditioning • Bike Conditioning • TrashBall

Finally, we need to talk about the different exercises, methods, and means that I use in a five-day program that I don't use and didn't show you in the three-day program. The following hyperlink will take you to a video that explains the five-day program.

[**FIVE-DAY 55–80 PERCENT VIDEO**](#)

BLOCK FOUR (5-DAY): HIGH FORCE AT HIGH VELOCITY
HYPERLINKS

Day 1	Exercise Hyperlink	Day 3	Exercise Hyperlink	Day 5	Exercise Hyperlink
Box 1	Hurdle Hop Single Leg Split SQ Drop Jump Acc Split Jump	Box 1	Sport back Squat	Box 1	3 Way Ham Press Balance Single Leg Squat
Box 2	Hex Deadlift	Box 2	Sport back Squat Single Leg Bench Hops Split SQ Drop	Box 2	Hurdle Hop Single Leg Squat Jump
Box 3	Hex Deadlift Speed Abduction	Box 3	Hip Flexor Iso Pull Speed Adduction Ankle Band Work	Box 3	Single Leg Squat Cuban Press INC F8
Box 4	Cuban Press Speed Adduction Ankle Band Work	Box 4	Walking Band Lunge Jump USSR Plyo Box DB Single Leg Calf Raise	Box 4	Lateral Band Lunge SWB Leg Curl Single Leg Thors Hammer
Box 5	SL Leg Press DB Straight Leg DL DB Single Leg Calf Raise	Box 5	Nordic Ham Curls Power Step up 90 90 Groin ISO Hold	Box 5	Messier Front Squat Figure 8 Lateral Supine Ankle Band Work
Box 6	Glute Bar Lift Hip FLX BND Pulls LAT Iso Ball Groin Squeeze	Box 6	Glute Bar Lift Manual Clam Glutes Depth Drop	Box 6	DB RDL Inline Hip Flexor Iso Pull Iso Ball Groin Squeeze
Box 7	Cross Swing Abs Hip Traction	Box 7	Glute Ham Back Cav Iso	Box 7	Bench Press DB Shoulder Press Tricep Push Down
Box 8	GH HANG Rollers Glutes and Hams Laying Relaxation	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes	Box 8	GH HANG Partner Leg Walks Laying Relaxation

BLOCK FOUR (5-DAY): HIGH FORCE AT HIGH VELOCITY HYPERLINKS

Day 2	Exercise Hyperlink	Day 4	Exercise Hyperlink
Box 1	Bench Press	Box 1	Bench Press
Box 2	Bench Press Med Ball Chest Pass Delt BO OH Rebound Drops	Box 2	Bench Press Push Up Drops Delt Lateral Rebound Drop
Box 3	DB Incline Bench DB Bent Over Row OH LAT Raise	Box 3	DB Incline Bench Dynamic Lat Pull DB Shoulder Press
Box 4	JM DB Press Bicep Shock Curls ANT TIB BAND	Box 4	Close Grip Bench Incline Hammer Curls DB Single Leg Calf Raise
Box 5	Reverse Grip Tri Pushdown Reverse Curl Spider Flips	Box 5	DB Tri Floor Press Drag Curl Round House
Box 6	Shoulder Shrug Closed Lunge V Band Twist Gripper	Box 6	Gopher U ABS SWB Up TW
Box 7	Chest Reverse Grip Iso Shr Sho Bi Cav Iso Iso Split	Box 7	Chest Reverse Grip Iso Shr Sho Bi Cav Iso GH HANG
Box 8	GH HANG Rollers Glutes and Hams	Box 8	Rollers Quads and Back Laying Wall Shakes

**TABLE 5.16: 55–80 PERCENT SIX-DAY
CONDITIONING MODEL**

TRAINING DAY	CONDITIONING GOAL	SPECIAL INSTRUCTIONS	EXAMPLE WORKOUT
DAY 1	Short Sprints (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90–120 seconds. 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 2	Long Sprints or Short Sprints with Reduced Rest (Speed Conditioning)	<ul style="list-style-type: none"> • Sprints over 15 seconds or • Sprints under 10, recovery under 20 seconds. 	<ul style="list-style-type: none"> • High Quality Lactic Anaerobic Power Training Builder • Metabolic Injury Prevention Runs
DAY 3	Short Sprints (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90–120 seconds. 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 4	Short Sprints (Anaerobic Conditioning)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Limited recovery; 45–60 seconds 	<ul style="list-style-type: none"> • Work Capacity Alactic Anaerobic Training Builder • Flying 60's • 16 Week Short Sprint Workouts • Cone Agility
DAY 5	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity focused	<ul style="list-style-type: none"> • Aerobic Work Capacity Training Builder • Game Speed Conditioning • Bike Conditioning • Trash Ball
DAY 6	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity focused	<ul style="list-style-type: none"> • Aerobic Work Capacity Training Builder • Game Speed Conditioning • Bike Conditioning • Trash Ball

BLOCK FOUR (6-DAY): HIGH FORCE AT HIGH VELOCITY HYPERLINKS

Day 1	Exercise Hyperlink	Day 3	Exercise Hyperlink	Day 5	Exercise Hyperlink
Box 1	Power Clean	Box 1	Power Clean	Box 1	Power Clean
Box 2	Power Clean	Box 2	Power Clean	Box 2	Power Clean
Box 3	Bench Press	Box 3	Incline Press	Box 3	Bench Press
Box 4	Bench Press INC OH Sit Up Bench Press	Box 4	Incline Press Bench Throw	Box 4	Bench Press Med Ball Chest Pass
Box 5	DB INCLINE BENCH Lat Pull Down DB Side Lateral Raise	Box 5	Push Press DB Curl	Box 5	
Box 6	DB Tri Ext Bar Curl DB Rear Delt	Box 6	EZ tri Ext 1 Arm Lat Pull Down Gopher U Abs	Box 6	
Box 7	Bam Bam	Box 7		Box 7	
Box 8	GH HANG Rollers Glutes and Hams Laying Wall Shakes	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes

BLOCK FOUR (6-DAY): HIGH FORCE AT HIGH VELOCITY
HYPERLINKS

Day 2	Exercise Hyperlink	Day 4	Exercise Hyperlink	Day 6	Exercise Hyperlink
Box 1	FRONT SQUAT	Box 1	Back Squat	Box 1	Deadlift
Box 2	Front squat Drop Box Jumps Hip Flex Band Pulls	Box 2	Back Squat USSR Plyo Box Speed Adduction	Box 2	Deadlift Close Grip Bench
Box 3	STEP UP GH HYPR Incline Speed Adduction	Box 3	SL Leg Press Assist Nordic Ham Curl 90 90 Glute Iso Hold	Box 3	Nordic HAM Curls Calf Raises OH LAT Raise
Box 4	RDL ANT TIB BAND 90 90 Glute Iso Hold	Box 4	ANT TIB BAND PRTNR BND ABS SWB Down TW	Box 4	Bar Curl JM Dumbbell Press Cuban Press INC F8
Box 5		Box 5		Box 5	
Box 6	Closed Lunge V Band Tw SWB Up TW Band	Box 6		Box 6	
Box 7		Box 7		Box 7	Power Snatch
Box 8	GH HANG Rollers Glutes and Hams	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes	Box 8	Power Snatch

BLOCK FOUR (2-DAY): HIGH FORCE AT HIGH VELOCITY HYPERLINKS

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink
Box 1	Squat Jump Cuban Press INC F8 Ankle Band Work	Box 1	Tea Cup Stuff Calf Raises
Box 2	Back Squat Hip Flex Iso Prone 1 Arm LAT Pull	Box 2	Back Squat Isometric Ball Groin Squeeze Dynamic Lat Pull
Box 3	BENCH PRESS GH HYPER Incline OH LAT Raise	Box 3	Bench Press Ball Leg Curls Dumbbell Rear Delt
Box 4	DB Tri Ext Bicep Shock Curls 90 90 Groin ISO Hold	Box 4	Supinate Pronate Tricep Extention Dumbbell Curl to Press 90 90 Glute ISO Hold
Box 5	H-sq Shi Bi Trap Chest Rev Grip Iso	Box 5	Isometric Glute Hamstring Back Hold Isometric Hindu Squat Trap Shoulder Bicep Hold
Box 6		Box 6	
Box 7	Pike Swiss Ball Abs	Box 7	Partner Band Abs
Box 8	GH Hang Rollers Glutes and Hams Laying Relaxation	Box 8	Glute Ham Hang Laying Wall Shakes

possible. By being able to withstand the load of the barbell and lift it up with an average velocity near or exceeding one meter per second² (this can be quantified using a Tendo unit if one is available to the coach), he is truly maximizing the SSC in his strength training. When looking at the workout sheets, assume that every exercise is to be performed with this method unless otherwise noted.

TABLE 6.4: AFSM HIGH VELOCITY STRENGTH TRAINING EXAMPLES		
EXERCISE	CONVENTIONAL METHOD	AFSM METHOD
BACK SQUAT	HYPERLINK	HYPERLINK
BENCH PRESS	HYPERLINK	HYPERLINK

AFSM OSCILLATORY METHOD

Another method that can be employed with high velocity strength training is the use of oscillatory contractions. We talked about these briefly in section four. The main difference here is that they are now performed with the addition of a time parameter. Oscillatory contractions work to enhance the intermuscular coordination of opposing muscle groups. Intermuscular coordination is the efficiency in which different groups of muscle can contract and relax in order to perform a given motor task. This becomes possible because of the principle of reciprocal inhibition where the SSC will excite one group of muscles while relaxing another group of muscles. Being able to efficiently make use of reciprocal inhibition is another method that will then facilitate the high velocity relaxations that are fundamental to Matveyev's research findings.

Oscillatory contractions are performed with light loads in the 20–55 percent 1RM range in order to maintain the high velocity component. The contractions are performed at one of two points in the athlete's range of motion—an advantageous joint angle (specific point in the athlete's range of motion where he is strongest) or a disadvantageous joint angle (specific point in the athlete's range of motion where he is the weakest). When the joint angle is identified, the athlete will

bring the weight to that specific joint angle, lift it explosively over a very small range (about 3–4 inches), and then pull the load very explosively in the opposite direction. These contractions are repeated as rapidly as possible for the amount of reps prescribed by the coach.

As an example, when performing a single leg oscillatory squat (table 6.5), the athlete would be using a load of 30 percent of his single leg squat 1RM. The athlete would position the bar on his back with one foot elevated behind him. When performing the single leg oscillatory squat at a disadvantageous point, he would squat so that his femur on the front leg is parallel with the ground. In this position, the athlete would raise and lower the hips as rapidly as possible over the small range of motion (about 4–6 inches) for the duration of the set. The coach will instruct the athlete to “pull himself down with his glutes and hamstrings and drive up through his heel” as fast as he possibly can.

While performing the single leg oscillatory squat in the advantageous position (table 6.5), the athlete would position himself so that his femur sits above parallel at about a 45- to 60-degree angle. The oscillatory contractions would then be performed at the advantageous joint angle where the athlete is strongest. These extremely rapid contractions and relaxations throughout opposing muscle groups help to better enhance intermuscular coordination as well as high velocity relaxation that Masters of Sport have shown.

TABLE 6.5: AFSM OSCILLATORY TRAINING EXAMPLES			
EXERCISE	CONVENTIONAL METHOD	AFSM METHOD	
SINGLE LEG BACK SQUAT	HYPERLINK	ADVANTAGEOUS	HYPERLINK
		DISADVANTAGEOUS	HYPERLINK
BENCH PRESS	HYPERLINK	ADVANTAGEOUS	HYPERLINK
		DISADVANTAGEOUS	HYPERLINK

The most crucial aspect of coaching any type of AFSM training is that you are able to tell if the athlete is withstanding the impact of the drop while maintaining joint stiffness (ability to keep the same joint angle when experiencing impact during shock training) and minimizing ground contact time. If the athlete isn't able to maintain joint stiffness, the coach must go back and address the athlete's lack of eccentric and/or isometric strength.

TABLE 6.6: AFSM PLYOMETRIC TRAINING EXAMPLES		
EXERCISE	CONVENTIONAL METHOD	AFSM METHOD
SQUAT DROP JUMP	HYPERLINK	HYPERLINK
HURDLE HOP	HYPERLINK	HYPERLINK

AFSM SHOCK METHOD

The methods of AFSM shock training are very similar to those outlined in AFSM plyometric training. However, as indicated earlier, the AFSM shock training methods are significantly more forceful due to the height of the drop and the brief ground contact time. When performing the drop box jump in AFSM shock training, the athlete will begin on a box at a height of at least twelve inches while standing upright. The athlete will then fall off the front of the box, not step off the box. During the athlete's descent, he will pull himself into a power position. Joint stiffness must be maintained with the power position that is achieved while falling through the air. The very instant that the athlete strikes the ground, he must work to reverse the action and jump on to the next box.

It's essential in the shock training that the coach cues the athlete in a similar way to the AFSM plyometric training, telling the athlete to pull himself down while he's falling through the air and to drive off the ground as explosively as possible as soon as he hits. Because the height that the athlete is falling from is greater than that of the AFSM plyometric training, the laws of physics dictate that AFSM shock training will be significantly more forceful than AFSM plyometrics.

The one exception within my below 55 percent high velocity peaking method is that time isn't used as a parameter. Instead, this method is performed using conventional set/rep parameters. Due to the increased time it takes to perform a single repetition of this method (the drop time from the box and the additional time to step down from the box the athlete jumped on to and back on to the box the athlete jumped from), it is impossible to complete quickly while keeping quality height. This method, therefore, is performed typically as 2–8 sets of 2–5 reps.

TABLE 6.7: AFSM SHOCK TRAINING EXAMPLE		
EXERCISE	CONVENTIONAL METHOD	AFSM METHOD
DEPTH JUMP	HYPERLINK	HYPERLINK

BLOCK FIVE, MONDAY

COACHING POINTS AND EXERCISE TUTORIAL

100%	MONDAY				
		REPS	LOAD	SETS	NOTES
575	Hex Deadlift	T		2	0:0:0:5:10
	PW/ 15 Rest BB	EU		EU	ISO
	Cpress Ext Rot rev Band OC	T	\$N/A .. \$N/A	2	0:0:0:0:7:10
	PW/ 15 Rest BB	EDT			Each side
	Ankle Band Work	T		2	0:0:0:0:7:10
	Squat Drop Jump	C1T	\$N/A .. \$N/A	2	2% - Tendo
	PW/ 15 Rest BB	EU		EU	Set Drop off
	4 way neck	6	\$N/A .. \$N/A	2	
				ELIA	Reactive
375	SL Leg Press	T	150 - 170	2	0:0:0:0:7:10
375	SL Leg Press	T	115 - 130	3	0:0:0:0:7:10
	PW/ 30 Rest BB	EUA			
	Hip Flex Prone OC CL	T	\$N/A .. \$N/A	3	0:0:0:0:7:10
	PW/ 30 Rest BB	EDT		EUA	OC-D
105	DB BO Row	T	55 - 60	3	0:0:0:0:7:10
	Cpress Int Rot Band OC	T	\$N/A .. \$N/A	2	0:0:0:0:7:10
	PW/ 30 Rest BB	EU			
	Med Ball Pass	5	\$N/A .. \$N/A	2	ONE ARM
	PW/ 30 Rest BB			ED	OC-D
105	DB BENCH	T	40 - 45	2	0:0:0:0:7:10
105	DB BENCH	T	40 - 45	2	0:0:0:0:7:10
	PW/ 30 Rest BB			ED	OC-D
	GH HYPR Incline	T	\$N/A .. \$N/A	3	0:0:0:0:7:10
	PW/ 30 Rest BB	EUA		ED	OC-A
38	DB Side Lat Raise	T	15 - 15	3	7 - OC-D
	Band Tricep Extension	T	\$N/A .. \$N/A	2	0:0:0:0:7:10
	PW/ 30 Rest BB	EDT		EU	OC-D
	Bicep shock curls	T	\$N/A .. \$N/A	2	0:0:0:0:7:10
	PW/ 30 Rest BB	EDT			
	OC Ball Grion Squeeze	T		2	0:0:0:0:7:10
	GH HANG	120S	\$N/A .. \$N/A	1	
	Pair w/				
	Rollers Glutes & Hams	120S	\$N/A .. \$N/A	1	
	Pair w/				
	LAYING RELAXATION	120S		1	

Box 1

-This hex deadlift is a 5 second isometric in the advantageous position, pulling against the fixed rack with slightly bent knees
 -The maximal isometric simulates a hormonal and nervous system response crucial for the rest of the workout
 -This cuban press variant stimulates the rotator cuff at higher velocities for more experienced athletes
 -For the ankle band work, each side is done for 7 seconds
[Hex Deadlift](#); [Cpress Ext Rot Rev Band Oc](#); [Ankle Band Work](#)

Box 2

-For the squat drop jump, pull into an athletic jumping position forcefully; reverse direction immediately upon impact
 -If using a Tendo, a 2% dropoff point is used such that after an athlete drops below 98% of his/her maximal jump, the set is finished
 -On the SL leg press, pull the leg down violently (so fast it separates from the machine); the athlete catches the leg press and throws it up reactively
[Squat Drop Jump](#); [4 way neck](#); [SL Leg Press](#)

Box 3

-The prone hip flex OC CL is a high speed hip flexor movement using contralateral limbs to mimic sports specific hip involvement
 -For the dumbbell bent over row, cue the athlete to push and pull the dumbbell with the elbow near the ribs
[SL Leg Press](#); [Hip Flex OC Prone CL](#); [DB BO Row](#)

Box 4

-Perform the DB bench in the disadvantageous position (near the chest); Push and pull the dumbbells as fast as possible (Note: some athletes push so violently they come off of the bench)
[Cpress Int Rot Band OC](#); [Med Ball Chest Pass](#); [DB Bench](#)

Box 5

-The GH hyper incline is done in the advantageous position in the peaking cycle; the torso and knee should form a straight line
 -The DB side lat raise educates the deltoids to fire and re-fire
[DB Bench](#); [GH HYPR Incline](#); [DB Side Lat Raise](#)

Box 6

-The band tricep extension utilizes the AFMS principles
[Band Tricep Extension](#); [Bicep Shock Curls](#); [OC Ball Groin Squeeze](#)

Box 8

[GH HANG](#); [Rollers Glutes and Hams](#); [Laying Relaxation](#)

✓ COACH'S CORNER

RECOVERY PROTOCOLS AFTER HEAVY LOADING OF THE POSTERIOR CHAIN

BY: CAL DIETZ

Inversion is a recovery method that helps by decompressing the spinal column and elongating the spinal discs. There is also some evidence that it can help with CNS recovery by decreasing the amount of time it takes an athlete to return to a parasympathetic state. This proves to be especially important during phases of intense, heavy, posterior chain loading. The following protocols can be performed on either an inversion table or a glute ham machine. In all cases, the key points are to make sure you relax your mouth and tongue, and focus on taking deep belly breaths in through your nose and out through your mouth. This method was first brought to my attention by Dr. Michael Yessis.

1) Used for spinal de-loading. (Total time = 5min)

- 5 minutes of continuous inversion

2) Used for CNS recovery. (Total time = 7—9min)

- 1 minute inverted
- 30 to 60 upright
- 1 minute inverted
- 30 to 60 upright
- 1 minute inverted
- 30 to 60 upright
- 1 minute inverted
- 30 to 60 upright
- 1 minute inverted

3) Used for CNS recovery. (Total time = 7—9min)

- 1 minute [Glute ham hang](#)
- 30 to 60 seconds [Laying Wall Shakes](#)
- 1 minute [Glute ham hang](#)
- 30 to 60 seconds [Laying Wall Shakes](#)
- 1 minute [Glute ham hang](#)
- 30 to 60 seconds [Laying Wall Shakes](#)
- 1 minute [Glute ham hang](#)
- 30 to 60 seconds [Laying Wall Shakes](#)
- 1 minute [Glute ham hang](#)

BLOCK FIVE, FRIDAY

100%	FRIDAY				
		REPS	LOAD	SETS	NOTES
575	Hex Deadlift	T	115 - 145	2	0:0:0:0:5:10
	PW/ 15 Rest BB			EU	ISO
	Delt BO OH Reb Drop	T	#N/A .. #N/A	2	0:0:0:0:10:10
	PW/ 15 Rest BB				
	Calf Raises	T		2	0:0:0:0:10:10
	Squat Drop Jump	T	#N/A .. #N/A	2	0:0:0:0:10:10
	PW/ 15 Rest BB				
	OC Ball Grion Squeeze	T	#N/A .. #N/A	2	0:0:0:0:10:10
		OC			
	BAL SNGL LG SQ	T		2	0:0:0:0:10:10
575	Hex Deadlift	T	290 - 315	3	0:0:0:0:10:10
	Pair w/				
	OC Ball Grion Squeeze	T	#N/A .. #N/A	3	0:0:0:0:10:10
	Pair w/				
105	DB BO Row	T	55 - 60	3	0:0:0:0:10:10
300	BENCH PRESS	5,3	150 - 200	1,1	0:0:0:0:10:10
	Pair w/				
	Med Ball Pass	3	#N/A .. #N/A	2	one arm
		OC			
105	DB BENCH	T	55 - 60	2	0:0:0:0:10:10
105	DB BENCH	T	55 - 60	2	0:0:0:0:10:10
	Pair w/	OC			
500	Glute Bar Lift	T	250 - 275	3	0:0:0:0:10:10
	Pair w/	OC			
	Delt BO Lat Reb Drop	T		3	0:0:0:0:10:10
	Tri PPress Band ASFM	T	#N/A .. #N/A	2	
	Pair w/				
	Curl Band ASFM	T	#N/A .. #N/A	2	
	Pair w/				
	STR Leg OC Glute Lifts	T		2	
	Pair w/				
	GH HANG	120S		1	Relax Mouth
	Pair w/				
	Rollers Quads & Back	120S		1	
	Pair w/				
	LAYING WALL SHAKES	120S		1	Relax Mouth

COACHING POINTS AND EXERCISE TUTORIAL

Box 1

-This hex deadlift is a 5 second isometric in the advantageous position, pulling against the fixed rack with slightly bent knees
 -The delt BO OH reb drop improves reactive ability of the shoulder

-For the calf raises, cue the athlete to push through the big toe and use a slight knee bend

[Hex Deadlift](#); [Delt BO OH Reb Drop](#); [Calf Raises](#)

Box 2

-For the squat drop jump, pull into an athletic jumping position forcefully; reverse direction immediately upon impact

-With a Swiss ball between the knees, powerfully contract and relax the groin for the prescribed time

-The balance single leg squat is a controlled movement in which the athlete lowers the unsupported foot towards the ground, keeping the foot on the bench flat

[Squat Drop Jump](#); [OC Ball Groin Squeeze](#); [BAL SNGL LG SQ](#)

Box 3

-In the standard hex deadlift, keep the butt down and chest up, completing as many reps as possible in the prescribed time

-Perform the DB BO row through a full range of motion

[Hex Deadlift](#); [OC Ball Groin Squeeze](#); [DB BO Row](#)

Box 4

-The bench press and med ball pass are performed as described on previous days

-Perform the DB Bench through a full range of motion

[Bench Press](#); [Med Ball Chest Pass](#); [DB Bench](#)

Box 5

-The glute bar lift is performed as an oscillatory movement near the top of the lift to contract and relax the glutes as fast as possible

-The delt BO lat reb Drop is designed to improve the explosiveness of the shoulder

[DB Bench](#); [Glute Bar Lift](#); [Delt BO Lat Reb Drop](#)

Box 6

-The tricep band press ASFM is performed as a press and curl in which the athlete presses the band down (palm down) and curling the band (palm up) to the start

-The Curl band ASFM and straight leg OC glute Lifts are performed as described on previous days

[TriPress Band ASFM](#); [Curl Band ASFM](#); [STR Leg OC Glute Lifts](#)

Box 8

[GH HANG](#); [Rollers Quads and Back](#); [Laying Wall Shakes](#)

TABLE 6.12: BELOW 55 PERCENT THREE-DAY CONDITIONING MODEL			
TRAINING DAY	CONDITIONING GOAL	SPECIAL INSTRUCTIONS	EXAMPLE WORKOUT
DAY 1	Long Sprints or Short Sprints with Reduced Rest (Speed Conditioning)	<ul style="list-style-type: none"> • Sprints over 15 seconds or • Sprints under 10 seconds and recovery under 20 seconds. 	<ul style="list-style-type: none"> • High Quality Lactic Anaerobic Power Training Builder • Metabolic Injury Prevention Runs
DAY 2	Short Sprints (High Quality Speed)	<ul style="list-style-type: none"> • Sprints under 10 seconds • Full recovery; rest 90–120 seconds. 	<ul style="list-style-type: none"> • Alactic High Quality Workout • Flying 60s • 16-Week Short Sprint Workouts • Cone Agility
DAY 3	Longer Sprints or Continuous Running (Oxidative Conditioning)	This day is purely work capacity focused.	<ul style="list-style-type: none"> • Aerobic Work Capacity Training Builder • Game Speed Conditioning • Bike Conditioning • Trash Ball

Be sure to notice in the programs that as the metabolic and neural demands of a sport change, the timed parameters of the exercises—not just the exercises—change as well. It doesn't do a lineman any good to perform sets over twenty seconds. Their plays are completed in 1–3 seconds. Below are two hyperlinks to a conference talk I gave at the University of Richmond in 2011, about my high velocity peaking method. It will serve as a great review, as well as give some additional insights into how to peak your athletes.

[**HIGH VELOCITY PEAKING METHODS AND TECHNIQUES IN SPORT SPECIFICITY: PART I**](#)

[**HIGH VELOCITY PEAKING METHODS AND TECHNIQUES IN SPORT SPECIFICITY: PART II**](#)

BLOCK FIVE (3-DAY): HIGH VELOCITY PEAKING FOR GENERAL ATHLETE HYPERLINKS

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink	Day 3	Exercise Hyperlink
Box 1	Hex Deadlift Cpress Ext Rot Rev Band Ankle Band Work	Box 1	Hex Deadlift Cpress Ext Rot rev Band Calf Raises	Box 1	Hex Deadlift Delt BO OH Reb Drop Calf Raises
Box 2	Squat Drop Jump 4 way neck SL Leg Press	Box 2	Squat Drop Jump OC Ball Groin Squeeze Hex Deadlift	Box 2	Squat Drop Jump OC Ball Groin Squeeze BAL SNGL LG SQ
Box 3	SL Leg Press Hip Flex OC Prone CL DB BO Row	Box 3	Hex Deadlift Hip Flex Prone OC DB BO Row	Box 3	Hex Deadlift OC Ball Groin Squeeze DB BO Row
Box 4	Cpress Int Rot Band OC Med Ball Chest Pass DB Bench	Box 4	Bench Press Med Ball Chest Pass Bench Press	Box 4	Bench Press Med Ball Chest Pass DB Bench
Box 5	DB Bench GH HYPR Incline DB Side Lat Raise	Box 5	Bench Press Glute Bar Lift Delt BO Lat Reb Drop	Box 5	DB Bench Glute Bar Lift Delt BO Lat Reb Drop
Box 6	Band Tricep Extension Bicep Shock Curls OC Ball Groin Squeeze	Box 6	TriPress Band ASFM STR Leg OC Glute Lifts	Box 6	TriPress Band ASFM Curl Band AFSM STR Leg OC Glute Lifts
Box 7		Box 7		Box 7	
Box 8	GH HANG Rollers Glutes and Hams Laying Relaxation	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes

**BLOCK FIVE (3-DAY): HIGH VELOCITY PEAKING FOR FOOTBALL
(LINEMAN) HYPERLINKS**

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink	Day 3	Exercise Hyperlink
Box 1	Hex Deadlift Cpress Ext Rot Rev Band Ankle Band Work	Box 1	Hex Deadlift Cpress Ext Rot rev Band Calf Raises	Box 1	Hex Deadlift Cpress Ext Rot rev Band Calf Raises
Box 2	Squat Drop Jump 4-way Neck OC Ball Single Leg Squat	Box 2	Squat Drop Jump Hip Flex OC Prone CL SL Leg Press	Box 2	Squat Drop Jump Hip Flex OC Prone CL SL Hex Deadlift
Box 3	Single Leg Squat Hip Flex Prone OC DB BO Row	Box 3	SL Leg Press OC Ball Groin Squeeze DB BO Row	Box 3	SL Hex Deadlift OC Ball Groin Squeeze DB BO Row
Box 4	Cpress Int Rot Band OC Med Ball Chest Pass DB Bench	Box 4	Bench Press Med Ball Chest Pass Bench Press	Box 4	Bench Press Med Ball Chest Pass Bench Press
Box 5	DB Bench GH HYPH Incline Inc Delt Lat Reb Drop	Box 5	Bench Press Glute Bar Lift Delt BO Lat Reb Drop	Box 5	Bench Press Glute Bar Lift Delt BO Lat Reb Drop
Box 6	Band Tricep Extension Bicep Shock Curls OC Ball Groin Squeeze	Box 6	TriPress Band ASFM Curl Band AFSM STR Leg OC Glute Lifts	Box 6	TriPress Band ASFM Curl Band AFSM STR Leg OC Glute Lifts
Box 7		Box 7		Box 7	
Box 8	GH HANG Rollers Glutes and Hams Laying Relaxation	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes

**BLOCK FIVE (3-DAY): HIGH VELOCITY PEAKING FOR FOOTBALL
(SKILL PLAYER) HYPERLINKS**

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink	Day 3	Exercise Hyperlink
Box 1	Hex Deadlift Cpress Ext Rot Rev Band Ankle Band Work	Box 1	Hex Deadlift Cpress Ext Rot rev Band Calf Raises	Box 1	Hex Deadlift Cpress Ext Rot rev Band Calf Raises
Box 2	Squat Drop Jump 4-way Neck OC Ball Single Leg Squat	Box 2	Squat Drop Jump Hip Flex OC Prone CL SL Leg Press	Box 2	Squat Drop Jump Hip Flex OC Prone CL SL Hex Deadlift
Box 3	Single Leg Squat Hip Flex Prone OC DB BO Row	Box 3	SL Leg Press OC Ball Groin Squeeze DB BO Row	Box 3	SL Hex Deadlift OC Ball Groin Squeeze DB BO Row
Box 4	Cpress Int Rot Band OC Med Ball Chest Pass DB Bench	Box 4	Bench Press Med Ball Chest Pass Bench Press	Box 4	Bench Press Med Ball Chest Pass Bench Press
Box 5	DB Bench GH HYPH Incline Inc Delt Lat Reb Drop	Box 5	Bench Press Glute Bar Lift Delt BO Lat Reb Drop	Box 5	Bench Press Glute Bar Lift Delt BO Lat Reb Drop
Box 6	Band Tricep Extension Bicep Shock Curls OC Ball Groin Squeeze	Box 6	TriPress Band ASFM Curl Band AFSM STR Leg OC Glute Lifts	Box 6	TriPress Band ASFM Curl Band AFSM STR Leg OC Glute Lifts
Box 7		Box 7		Box 7	
Box 8	GH HANG Rollers Glutes and Hams Laying Relaxation	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes

**BLOCK FIVE (3-DAY): HIGH VELOCITY PEAKING FOR BASEBALL
HYPERLINKS**

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink	Day 3	Exercise Hyperlink
Box 1	Sport Back Squat Sport Back Squat 1/2 SQ JMP Weighted	Box 1	Back Squat Back Squat 1/2 SQ JMP Weighted	Box 1	Single Leg Squat Hip Flex OC Prone CL Ball LG Curl
Box 2	Hurdle Hop 1/2 SQ JMP Weighted 15 Yard Starts	Box 2	Standing Squat Drop Jump Delt BO Lat Reb Drop Plate Pincher	Box 2	DB Incline Bench 1 Arm DB Row Reactive Jobs
Box 3	Bench Press Bench Press Bench Press	Box 3	Bench Press Bench Press Bench Press	Box 3	Speed Switch Lunge with Ju DB Fly Delt BO Lat Reb Drop
Box 4	One Leg MB Side Toss DB BO Row 90 90 Jump Twist	Box 4	Med Ball Chest Pass DB BO Row Ball Pike Drop	Box 4	Glute Bar Lift Rope Circles Gripper
Box 5	Glute Bar Lift Cuban Press OC Band DB BO Row	Box 5	Lunge OC Hops Delt BO OH Reb Drop DB BO Row	Box 5	Iso Bi Recip Iso Tri Recip OC Ball Groin Squeeze
Box 6	GH HYPR OC Ball Groin Squeeze Plate Pincher	Box 6	GH HYPR OC Ball Groin Squeeze Plate Pincher	Box 6	Iso Bi Recip Speed Abduction Close Grip Bench
Box 7	DB Shoulder Press Hip Flex OC Prone CL Iso Bi Recip	Box 7	Inc Delt Lat Reb Drop Russian Switch Lunge DB Shoulder Press	Box 7	Lunge OC Hops Rope Vertical GH Supine CL Shock Abs
Box 8	Iso Tri Recip Iso Bi Recip Jobs ECC	Box 8	Iso Tri Recip Bicep Shock Curls Band Lying Int Rot	Box 8	

BLOCK FIVE (3-DAY): HIGH VELOCITY PEAKING FOR HOCKEY
HYPERLINKS

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink	Day 3	Exercise Hyperlink
Box 1	Hex Deadlift Cpress Ext Rot Rev Band Ankle Band Work	Box 1	Hex Deadlift Cpress Ext Rot rev Band Calf Raises	Box 1	Hex Deadlift Cpress Ext Rot rev Band Calf Raises
Box 2	Squat Drop Jump 4-way Neck OC Ball SL Leg Press	Box 2	Squat Drop Jump Isometric Ball Groin Squeez Hex Deadlift	Box 2	Squat Drop Jump OC Ball Groin Squeeze Hex Deadlift
Box 3	SL Leg Press Hip Flex OC Prone CL DB BO Row	Box 3	Hex Deadlift Isometric Ball Groin Squeez DB BO Row	Box 3	Hex Deadlift OC Ball Groin Squeeze DB BO Row
Box 4	Cpress Int Rot Band OC Med Ball Chest Pass DB Bench	Box 4	Bench Press Med Ball Chest Pass Bench Press	Box 4	Bench Press Med Ball Chest Pass Bench Press
Box 5	DB Bench GH HYP R Incline Inc Delt Lat Reb Drop	Box 5	Bench Press Glute Bar Lift Delt BO Lat Reb Drop	Box 5	Bench Press Glute Bar Lift Delt BO Lat Reb Drop
Box 6	Band Tricep Extension Bicep Shock Curls OC Ball Groin Squeeze	Box 6	TriPress Band ASFM Curl Band AFSM STR Leg OC Glute Lifts	Box 6	TriPress Band ASFM Curl Band AFSM STR Leg OC Glute Lifts
Box 7		Box 7		Box 7	
Box 8	GH HANG Rollers Glutes and Hams Laying Relaxation	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes

**BLOCK FIVE (3-DAY): HIGH VELOCITY PEAKING FOR SWIMMING
(200-400M) HYPERLINKS**

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink	Day 3	Exercise Hyperlink
Box 1	Squat Jump Dual Action Bar Rows Leg Press Calf Raise	Box 1	Squat Drop Jump Prone Rings Figure 8 Calf Raises	Box 1	Squat Jump STR LG Iso Glute Lifts Calf Raises
Box 2	Hex Deadlift Cuban Press Incline Figure 8 Hex Deadlift	Box 2	Hex Deadlift Hip Flex Prone OC Leg Press	Box 2	Leg Press 4 wy BND Ankle Kick Lat Pull and Press
Box 3	Single Leg Squat Hip Flex Prone CL Lat Pull Chin Grip	Box 3	Leg Press Delt BO OH Reb Drop DB BO Row	Box 3	DB Fly Ball LG Curl DB Rear Delt
Box 4	DB Bench GH HYPR Incline DB Shoulder Press	Box 4	Bench Press Inc Delt Lat Reb Drop Bench Press	Box 4	Tricep Band Press Chin up
Box 5	DB Tri Ext Lat Pull Down Band Push Back	Box 5	Bench Press Glute Bar Lift DB Shrug	Box 5	
Box 6		Box 6	Dips Chin up Side to side supine row	Box 6	
Box 7		Box 7		Box 7	
Box 8	GH HANG Rollers Glutes and Hams Laying Relaxation	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes

**BLOCK FIVE (3-DAY): HIGH VELOCITY PEAKING FOR VOLLEYBALL
HYPERLINKS**

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink	Day 3	Exercise Hyperlink
Box 1	Black Burn Series Scarecrow DB Bench	Box 1	Jobses Prone Rings Figure 8 DB Incline Bench	Box 1	DB Incline Bench DB BO Row Jobses
Box 2	One Leg MB Side Toss DB BO Row 90 90 Jump Twist	Box 2	Med Ball Chest Pass 1 Arm DB Row Pike Abs Strap Drop	Box 2	Iso Bi Recip Iso Tri Recip OC Ball Groin Squeeze
Box 3	Band Push Back Hip Flex OC Prone CL Band Lying Int Rot	Box 3	Inc Delt Lat Reb Drop Hip Flex OC Prone CL CubPr Ext Rot Rev Band	Box 3	Single Leg Squat Hip Flex OC Prone CL Ball LG Curl
Box 4	SL Hex Deadlift SL Hex Deadlift 1/2 SQ JMP Weighted	Box 4	Back Squat Back Squat 1/2 SQ JMP Weighted	Box 4	Iso Bi Recip 90 90 Jump Twist Iso Tri Recip
Box 5	Hurdle Hop 1/2 SQ JMP Weighted 15 Yard Starts	Box 5	Stnding SQ Drop Jump Delt BO Lat Reb Drop Plate Pincher	Box 5	Lunge OC Hops Reactive Bench Toss Delt BO Lat Reb Drop
Box 6	DB Tri Pro Sup Iso Bi Recip Jobses ECC	Box 6	Iso Tri Recip Iso Bi Recip CubPr In Rot Rev Band	Box 6	Glute Bar Lift Rope Circles Plate Pincher
Box 7	Glute Bar Lift CubPr Ext Rot Rev Band DB BO Row	Box 7	Lunge OC Hops Band Lying Int Rot DB BO Row	Box 7	Speed Switch Lunge with Ju Rope Vertical GH Supine CL Shock Abs
Box 8	GH HYPR Isometric Ball Groin Sque Plate Pincher	Box 8	GH HYPR OC Ball Groin Squeeze Plate Pincher	Box 8	

**BLOCK FIVE (2-DAY IN-SEASON): HIGH VELOCITY
PEAKING FOR GENERAL ATHLETE HYPERLINKS**

Day 1	Exercise Hyperlink	Day 2	Exercise Hyperlink
Box 1	Hex Deadlift Cuban Press Incline Figure 8 Ankle Band Work	Box 1	Hex Deadlift Cpress Ext Rot rev Band Calf Raises
Box 2	Squat Drop Jump 4 way neck SL Leg Press	Box 2	Squat Drop Jump Isometric Ball Groin Squeeze Hex Deadlift
Box 3	SL Leg Press Hip Flex OC Prone CL DB BO Row	Box 3	Hex Deadlift Isometric Ball Groin Squeeze DB BO Row
Box 4	Prone Rings Figure 8 Med Ball Chest Pass DB Bench	Box 4	Bench Press Med Ball Chest Pass Bench Press
Box 5	DB Bench GH HYPR Incline DB Side Lat Raise	Box 5	Bench Press Glute Bar Lift Delt BO Lat Reb Drop
Box 6	Band Tricep Extension Bicep Curl Shock 90 90 Groin ISO Hold	Box 6	Band Tricep Extension Bar Curl 90 90 Glute ISO Hold
Box 7		Box 7	
Box 8	GH HANG Rollers Glutes and Hams Laying Relaxation	Box 8	GH HANG Rollers Quads and Back Laying Wall Shakes

TABLE 7.4: POSSIBLE VARIATIONS FOR EXERCISE SEQUENCING

TRAINING PHASE	PHASE ONE: ABOVE 80% (HIGH FORCE AT LOW VELOCITY)			PHASE TWO: 80-55% (HIGH FORCE AT HIGH VELOCITY)	PHASE THREE: BELOW 55% (HIGH VELOCITY PEAKING)
BLOCK	BLOCK ONE	BLOCK TWO	BLOCK THREE	BLOCK FOUR	BLOCK FIVE
BACK SQUAT	BACK SQUAT ECCENTRIC	BACK SQUAT ISOMETRIC	BACK SQUAT WITH CHAINS	BACK SQUAT	BACK SQUAT WITH BANDS
	BACK SQUAT WEIGHT RELEASERS	BACK SQUAT ISOMETRIC	BACK SQUAT WITH BANDS	BACK SQUAT	BACK SQUAT WITH BANDS
	BACK SQUAT WEIGHT RELEASERS	BACK SQUAT WITH PAUSE	BACK SQUAT WITH CHAINS	BACK SQUAT	SQUAT JUMP WITH WEIGHT
SINGLE LEG SQUAT	SINGLE LEG DUMBBELL SQUAT ECCENTRIC	SINGLE LEG DUMBBELL SQUAT PAUSE	SINGLE LEG DUMBBELL SQUAT OSCILLATORY	SINGLE LEG DUMBBELL SQUAT DROP	SINGLE LEG DUMBBELL REACTIVE SQUAT
	SINGLE LEG DUMBBELL SQUAT ECCENTRIC	SINGLE LEG DUMBBELL SQUAT PAUSE	SINGLE LEG DUMBBELL SQUAT DROP	SINGLE LEG DUMBBELL REACTIVE SQUAT	SINGLE LEG DUMBBELL SQUAT OSCILLATORY
	SINGLE LEG DUMBBELL SQUAT ECCENTRIC	SINGLE LEG DUMBBELL SQUAT PAUSE	SINGLE LEG DUMBBELL SQUAT OSCILLATORY	SINGLE LEG DUMBBELL SQUAT 2POC	SINGLE LEG DUMBBELL REACTIVE SQUAT
FRONT SQUAT	FRONT SQUAT ECCENTRIC	FRONT SQUAT ISOMETRIC	FRONT SQUAT	DUMBBELL SINGLE LEG FRONT SQUAT REACTIVE	DUMBBELL SINGLE LEG FRONT SQUAT OSCILLATORY REACTIVE
LUNGE	DUMBBELL WALKING LUNGE WITH PAUSE	DUMBBELL WALKING LUNGE	DUMBBELL WALKING LUNGE SWITCH	WALKING LUNGE JUMPS	WALKING DROP LUNGE JUMPS
	WALKING LUNGE WITH BAND	WALKING BAND LUNGE JUMPS	WALKING DROP BAND LUNGE JUMP	BOX DROP LUNGE	BOX DROP REACTIVE LUNGE JUMP

TABLE 7.4: POSSIBLE VARIATIONS FOR EXERCISE SEQUENCING					
TRAINING PHASE	PHASE ONE: ABOVE 80% (HIGH FORCE AT LOW VELOCITY)			PHASE TWO: 80-55% (HIGH FORCE AT HIGH VELOCITY)	PHASE THREE: BELOW 55% (HIGH VELOCITY PEAKING)
BLOCK	BLOCK ONE	BLOCK TWO	BLOCK THREE	BLOCK FOUR	BLOCK FIVE
	DUMBBELL WALKING LUNGE WITH PAUSE	DUMBBELL WALKING LUNGE	DUMBBELL WALKING LUNGE SWITCH	SPEED SWITCH JUMP LUNGE	SPEED CYCLE JUMP LUNGE
RDL	RDL DUMBBELL ECCENTRIC	RDL DUMBBELL ISOMETRIC	RDL DUMBBELL	RDL DUMBBELL OSCILLATORY	RDL DUMBBELL SINGLE LEG BENCH HOP
	IN LINE RDL ECCENTRICS	IN LINE RDL ISOMETRIC	IN LINE RDL	RDL DUMBBELL OSCILLATORY	RDL DUMBBELL SINGLE LEG BENCH HOP
	RDL ECCENTRIC	RDL ISOMETRIC	RDL	IN LINE RDL	RDL OSCILLATORY
LEG PRESS	LEG PRESS SINGLE LEG ECCENTRIC	LEG PRESS SINGLE LEG ISOMETRIC	SINGLE LEG PRESS	LEG PRESS SINGLE LEG DROP PAUSE	LEG PRESS SINGLE LEG REACTIVE
GLUTE HAM	ECCENTRIC GLUTE HAM	GLUTE HAM HYPER	GLUTE HAM HYPER	SPEED GLUTE HAM DROP	GLUTE HAM OC ADVANTAGE POSITION
HIP FLEXOR	HIP FLEXOR ECCENTRIC PRONE	HIP FLEXOR ISOMETRIC PULL	HIP FLEXOR PRONE CONTRALATERAL	HIP FLEXOR PRONE OC CONTRALATERAL	HIP FLEXOR SPEED SWITCH LUNGE
	HIP FLEXOR PRONE ECCENTRIC CONTRALATERAL	HIP FLEXOR PRONE ISOMETRIC CONTRALATERAL	HIP FLEXOR PRONE CONTRALATERAL	HIP FLEXOR PRONE OC CONTRALATERAL	HIP FLEXOR SPEED SWITCH LUNGE
PLYOS	SWITCH LUNGE PAUSE SAND BAG	SWITCH LUNGE WITH JUMP	SWITCH JUMP LUNGE REACTIVE	LUNGE DROP REACTIVE JUMP	BOX DROP REACTIVE LUNGE JUMP
	SQUAT JUMP PAUSE	SQUAT DROP PAUSE JUMP	SQUAT DROP JUMP	ACCELERATED BAND SQUAT JUMP PAUSE	ACCELERATED BAND SQUAT JUMP

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Agility Drill Speed Development Program

The following are a list of 3 second cone drills that can be used for speed development by focusing on work to rest ratios and the cones drills being used so that the coach gets the desired outcome. Stopping, starting and change of direction are of the utmost importance for many sports. Agility drills are one of the most effective methods for developing change of direction abilities, many people believe the agility ladder helps with change of direction, but if you look at the movements used during agility ladder training, you can see that these movements do not mimic what happens in sport. All drills that you see here are turning to the right; keep in mind the coach must have the athlete turn both right and left to develop symmetrical cutting and change of direction ability.

Agility Drills for Speed Development

When your main focus for agility drills is speed development then the most obvious time to complete the drills for speed development would be directly after your warm-up and right before going into the weight room or any other type of workout. At the high school level, I would recommend coaches do cone agility drills everyday they do workouts. The key focus for speed development is running cone agility drills as fast as possible and with that you must get plenty of rest so you can repeat a high-quality effort of maximal speed while doing the cone agility drills.

Rest Time for Speed Development

The suggested rest time for the 3 seconds cone agility drills for speed development and quickness is between 30 to 45 second between each repetition of a 3 second cone drill completed. This will give your athletes plenty of rest and keeps repetitions high-quality.

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Number of repetitions for Speed Development

With the 3 second cone drill the amount of repetitions that can be completed is usually between 8 to 12 high-quality repetitions. You would not want to complete more than this because the quality of the drill would suffer.

Administration of Drills

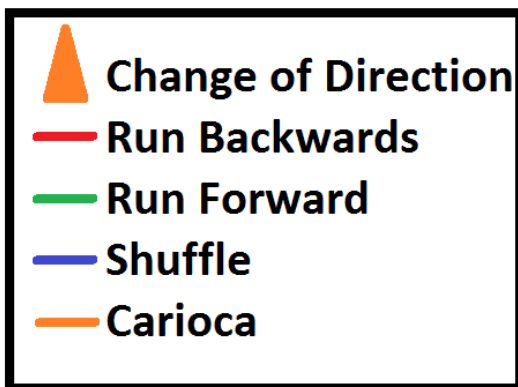
An effective way to set up cone agility drills for a large number of athletes is to pick the desired number of drills that you want to run, make sure you do the same drill to the left and right. Set the desired number of drills up on the field or in a gym. Then have one athlete at each station run the drill when the coach gives start signal, you may have as many as 12 athletes running at once depending on the desired number of drills and amount of space you have. Have the athletes walked to the next station so they get variations of the drills. Signal to let the next group of 12 athletes run the drills.

Coaching points

If you notice the cone agility drills never have athletes coming back through the drill or ending at the starting spot so you can actually run multiple athletes through the drill one after another because they will not cross paths. One of the most effective methods for speed development or conditioning is to set your agility drills up to have two starting lines, one line 3 yards behind the front starting line and have the athletes chase each other through the drills. The only rule is you can't leave your feet and reach across a cone to touch your chase partner; you can only touch the athlete in front of you on straight a ways.

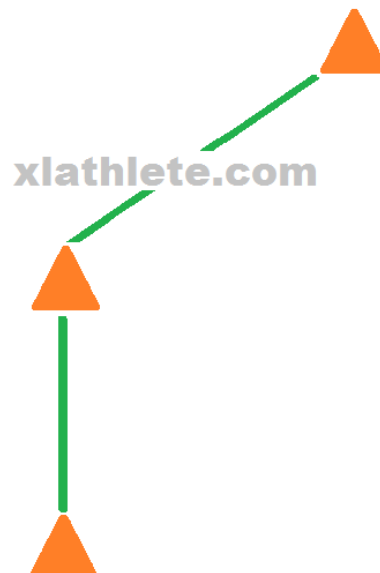
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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



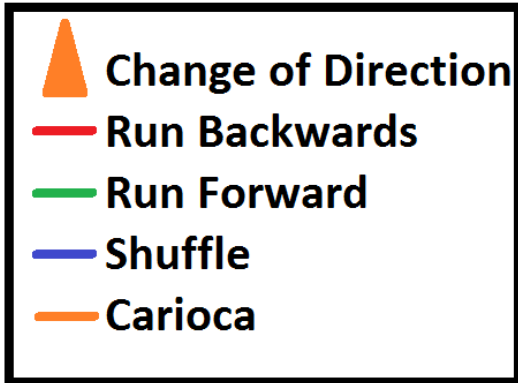
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 10 Yards.



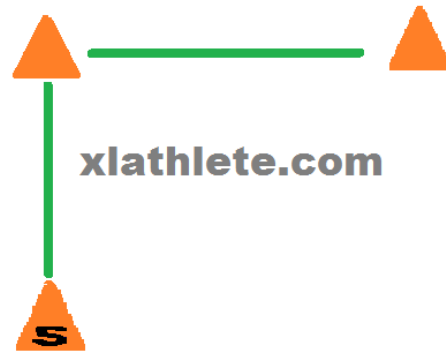
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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



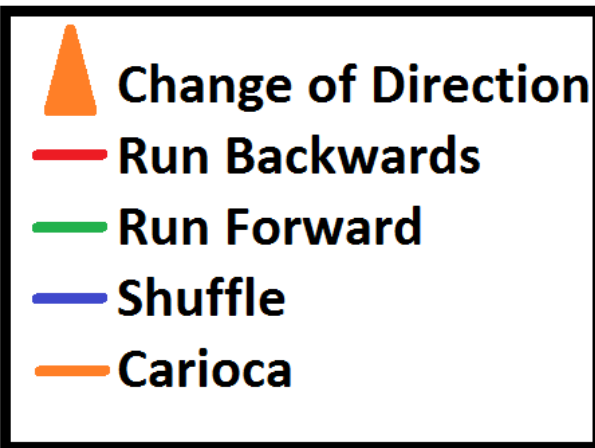
The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
6 Yards.



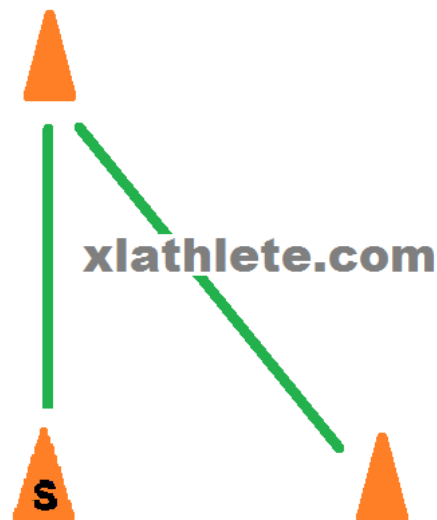
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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



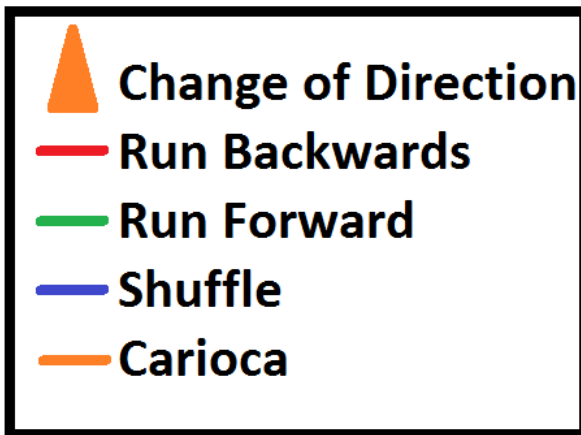
The duration of this drill is 3 seconds.

The distance between cones is 5 yards.



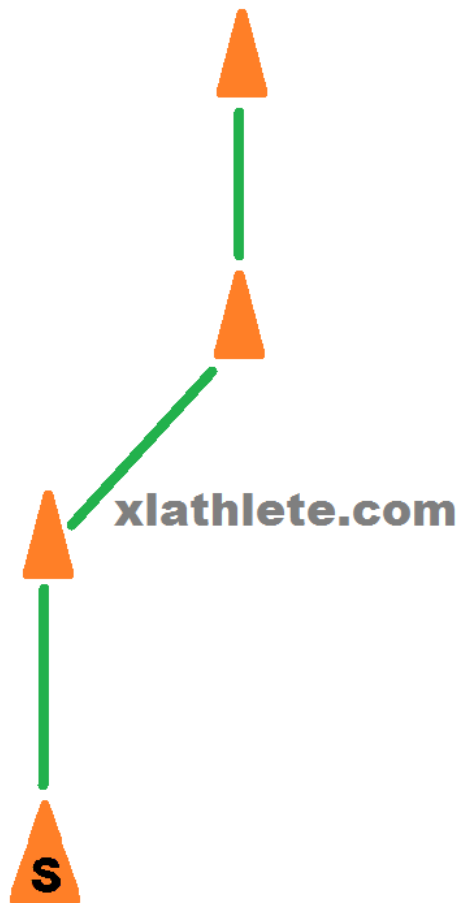
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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



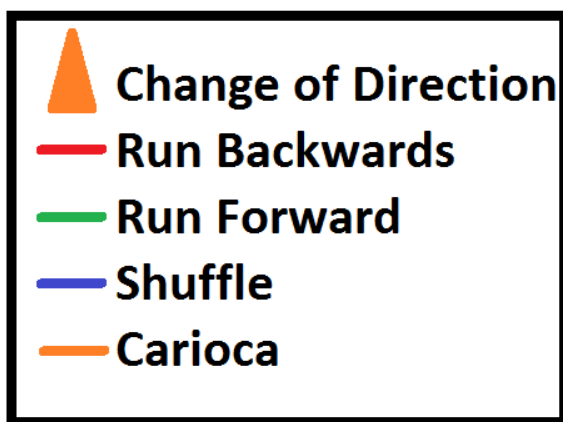
The duration of this drill is 3 seconds.

The distance between cones is 5 yards.



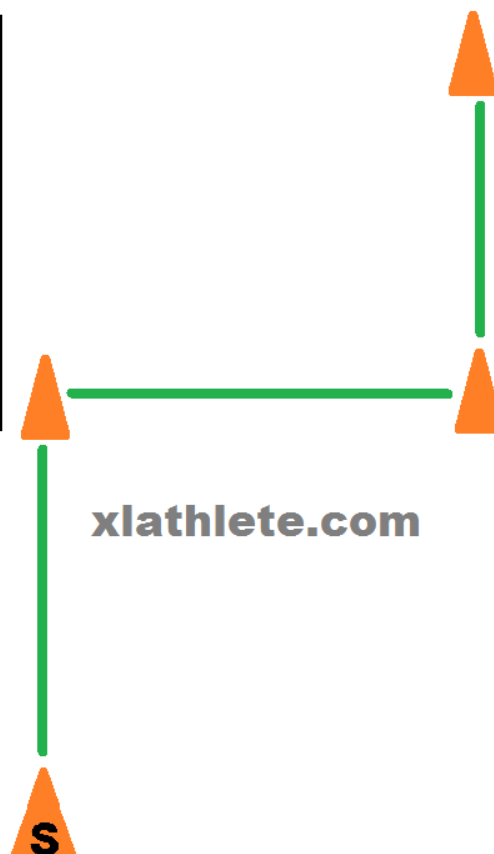
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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



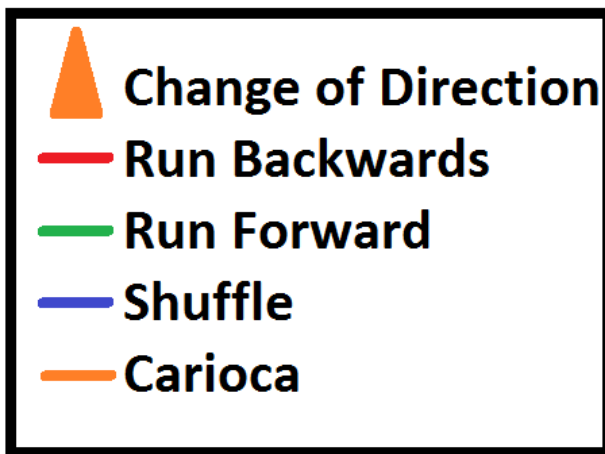
The duration of this drill is **3 seconds.**

The distance between cones is **4 yards.**



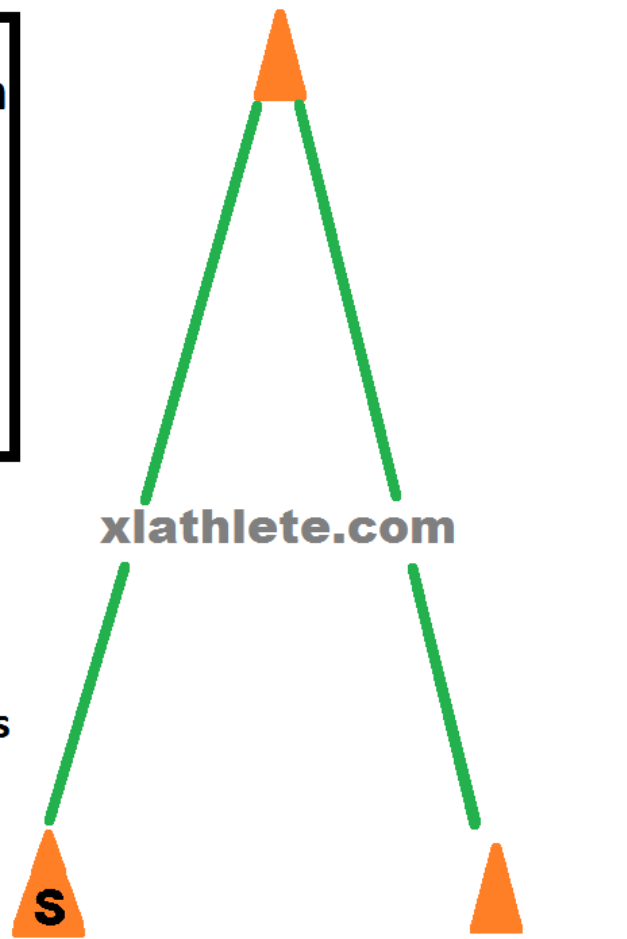
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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



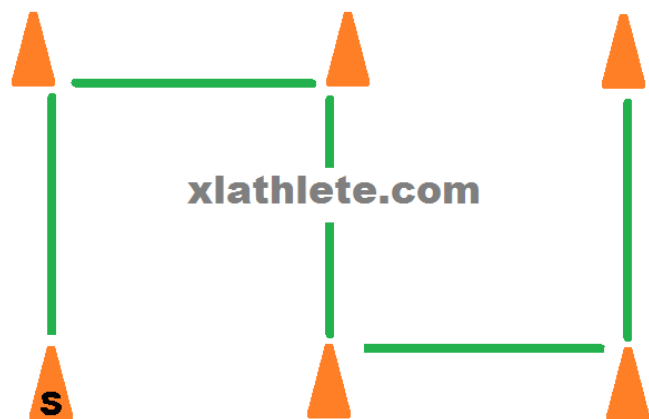
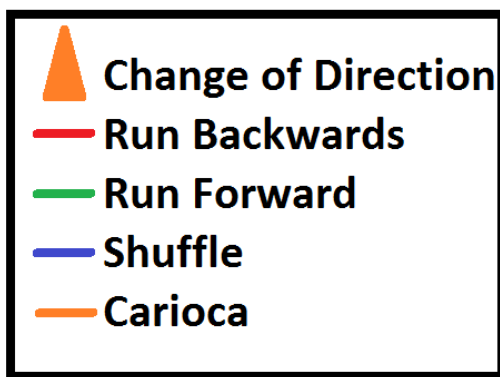
The duration of this drill is
3 sec

The distance between cones is
5 yds



www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

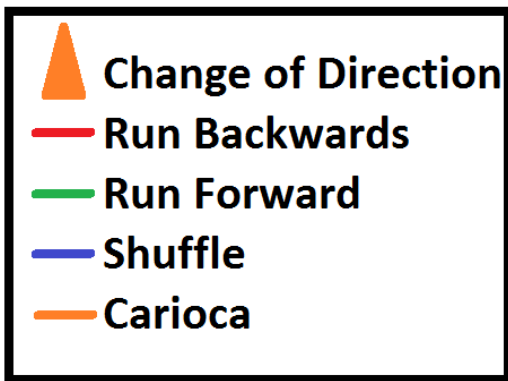


The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 5 Yards.

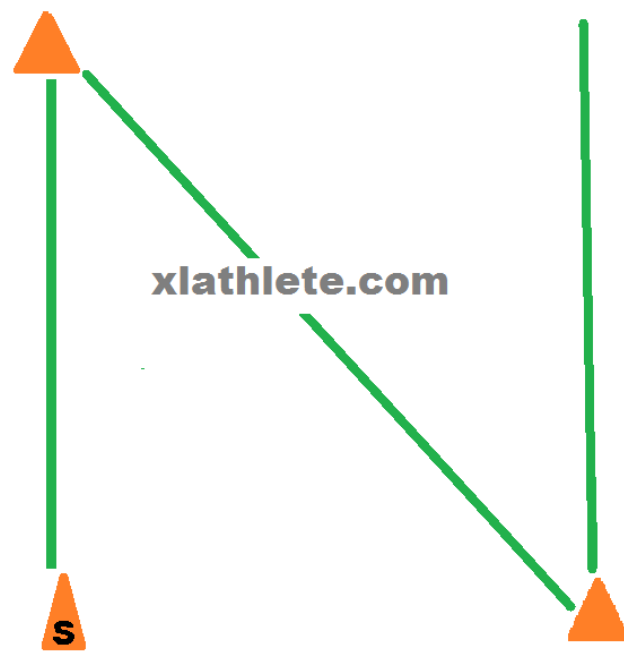
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



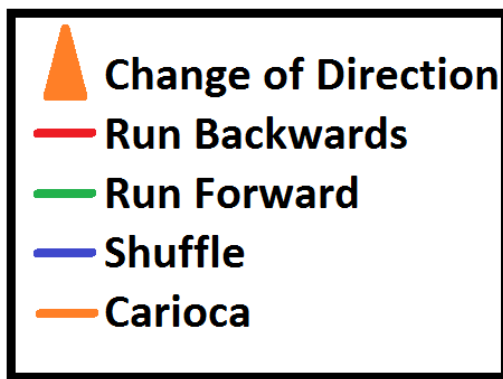
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 5 Yards.



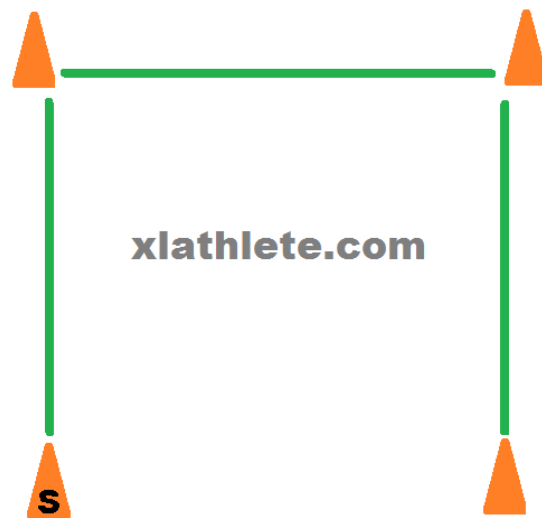
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



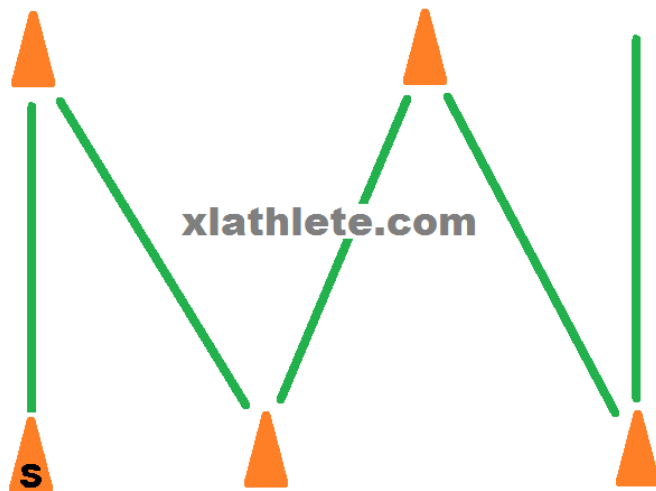
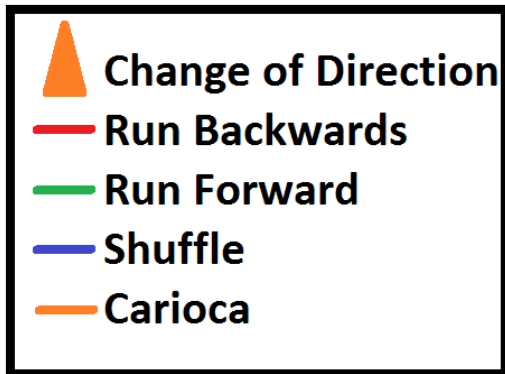
The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
4 Yards.



www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The duration of this drill is
3 Seconds.

The distance between cones is
2 Yards.

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The following are a list of 3 second cone drills that can be used for speed development or conditioning by changing the emphasis placed on work to rest ratios and the cones drills being used so that the coach gets the desired outcome. Stopping, starting and change of direction are of the utmost importance for many sports. Agility drills are one of the most effective methods for developing change of direction abilities, many people believe the agility ladder helps with change of direction, but if you look at the movements used during agility ladder training, you can see that these movements do not mimic what happens in sport. All drills that you see here are turning to the right; keep in mind the coach must have the athlete turn both right and left to develop symmetrical cutting and change of direction ability.

Agility Drills for Speed Development

When your main focus for agility drills is speed development then the most obvious time to complete the drills for speed development would be directly after your warm-up and right before going into the weight room or any other type of workout. At the high school level, I would recommend coaches do cone agility drills everyday they do workouts. The key focus for speed development is running cone agility drills as fast as possible and with that you must get plenty of rest so you can repeat a high-quality effort of maximal speed while doing the cone agility drills.

Rest Time for Speed Development -The suggested rest time for the 3 seconds cone agility drills for speed development and quickness is between 30 to 45 second between each repetition of a 3 second cone drill completed. This will give your athletes plenty of rest and keeps repetitions high-quality.

Number of repetitions for Speed Development - With the 3 second cone drill the amount of repetitions that can be completed is usually between 8 to 12 high-quality repetitions. You would not want to complete more than this because the quality of the drill would suffer.

Agility drills for Conditioning

You want to complete the 3 seconds agility drills for conditioning at the end of your work. This is the only reasonable time to be conditioning because any attempt to do high-quality work will not be very effective.

Rest Time for Conditioning - The suggested rest time for the 3 seconds cone agility drills for conditioning is between 15 and 25 second between each repetition of the 3 second cone drill.

Number repetitions for Conditioning- With the 3 second cone drill the amount of repetitions that can be completed for conditioning is usually 12 to 24 repetitions. It will take this many repetitions to get a conditioning effect.

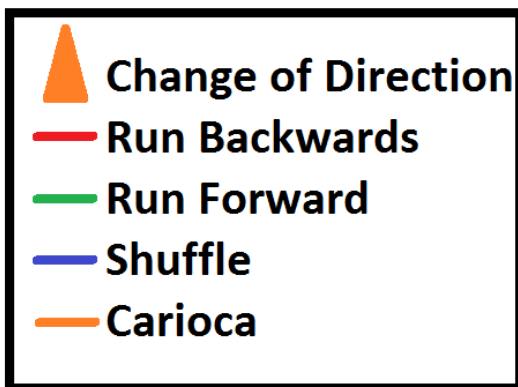
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Administration of drills - An effective way to set up cone agility drills for a large number of athletes is to pick the desired number of drills that you want to run, make sure you do the same drill to the left and right. Set the desired number of drills up on the field or in a gym. Then have one athlete at each station run the drill when the coach gives start signal, you may have as many as 12 kids running at once depending on the desired number of drills and amount of space you have. Have the athletes walked to the next station so they get variations of the drills. Signal to let the next group of 12 kids run the drills.

Coaching points - If you notice the cone agility drills never have athletes coming back through the drill or ending at the starting spot so you can actually run multiple athletes through the drill one after another because they will not cross paths. One of the most effective methods for speed development or conditioning is to set your agility drills up to have two starting lines, one line 3 yards behind the front starting line and have the athletes chase each other through the drills. The only rule is you can't leave your feet and reach across a cone to touch your chase partner; you can only touch the athlete in front of you on straight a ways.

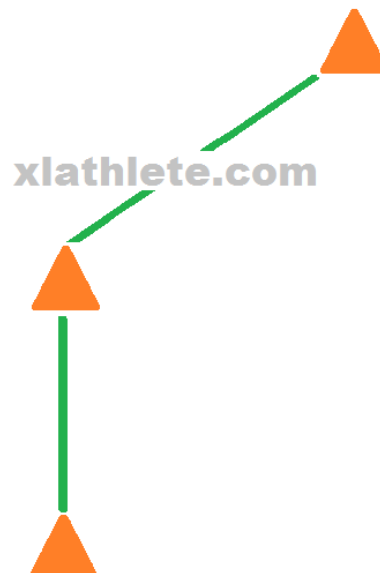
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



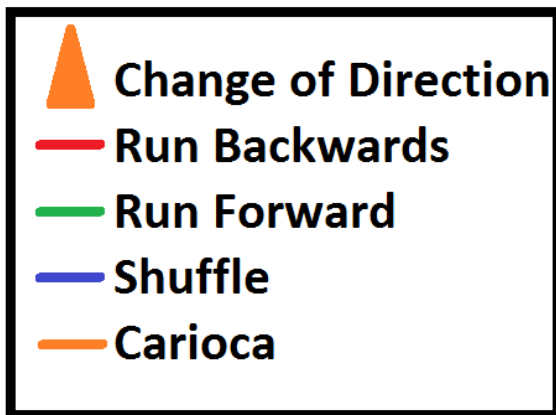
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 10 Yards.



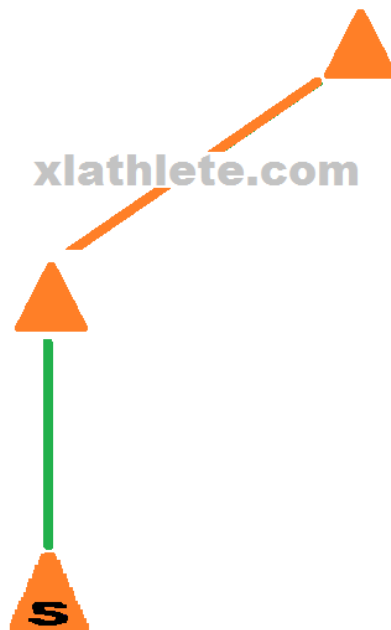
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



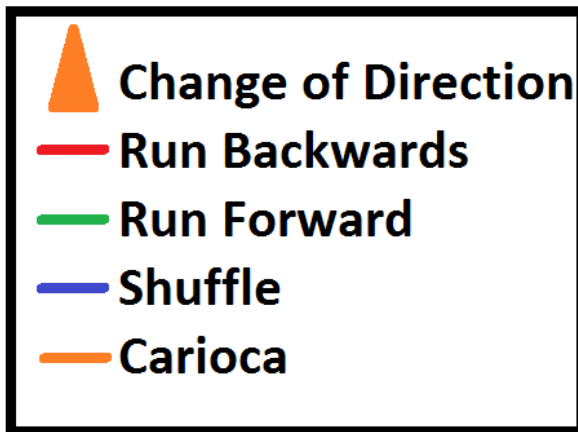
The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
5 Yards.



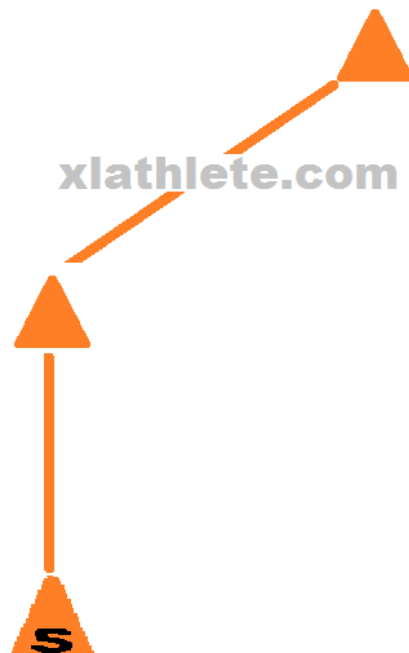
www.xlathlete.com

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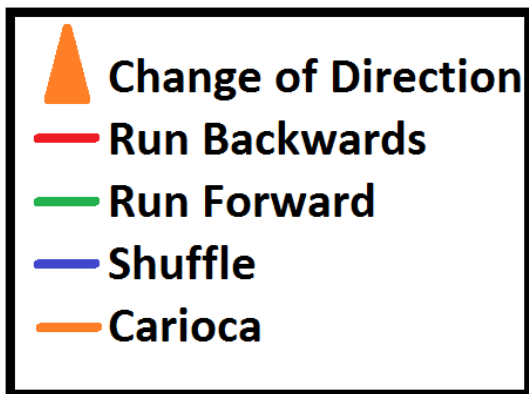
The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
4 Yards.



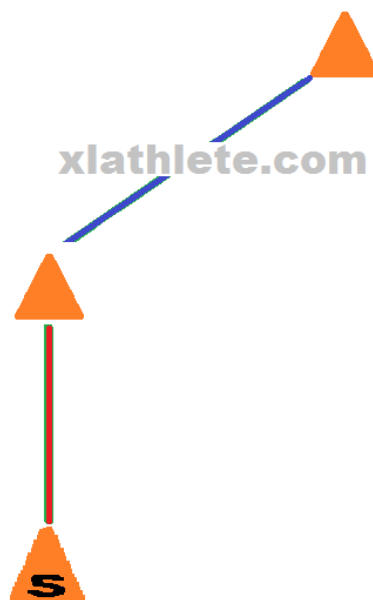
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



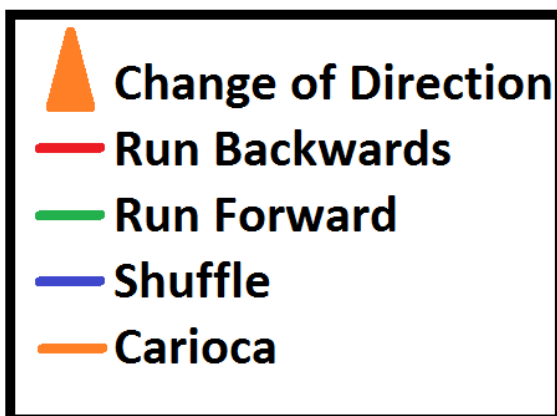
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 4 Yards.



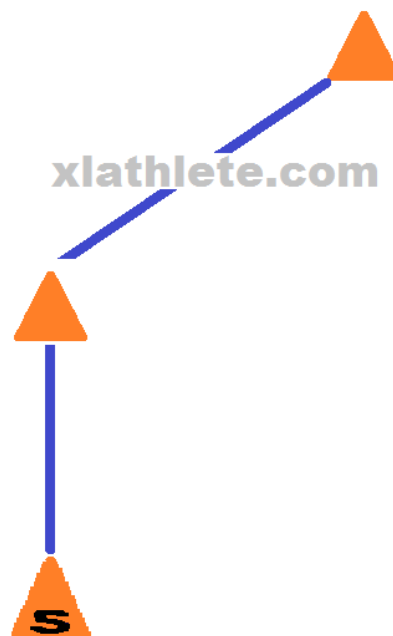
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



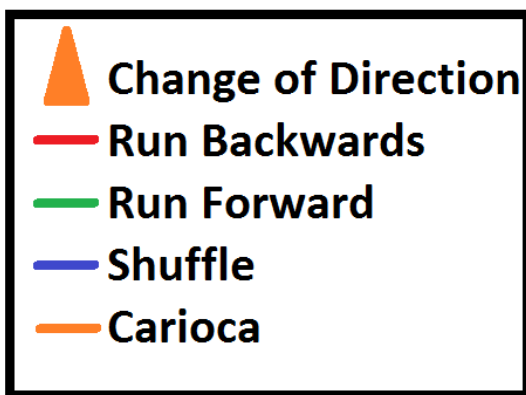
The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
4 Yards.



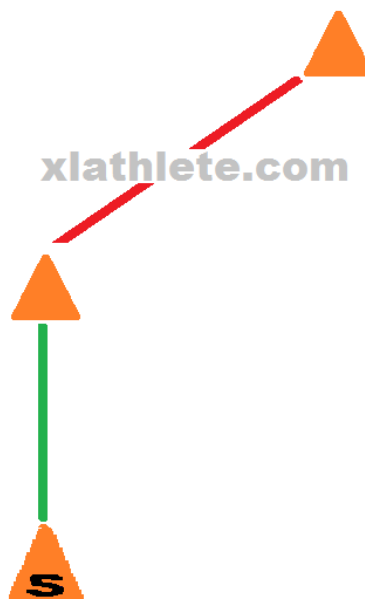
www.xlathlete.com

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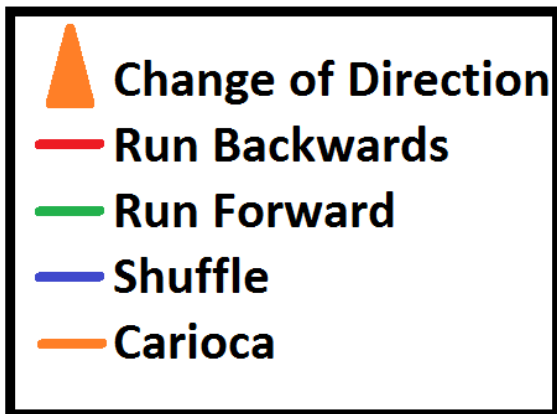
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 5 Yards.



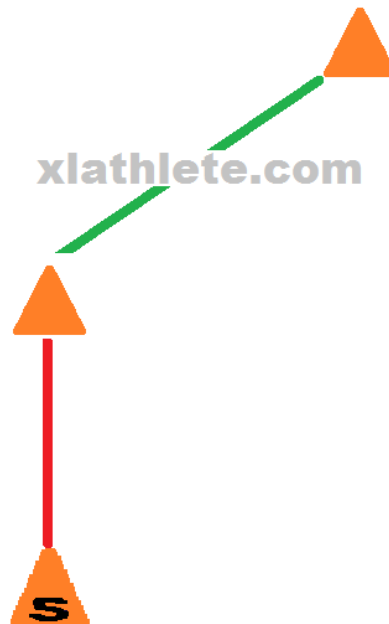
www.xlathlete.com

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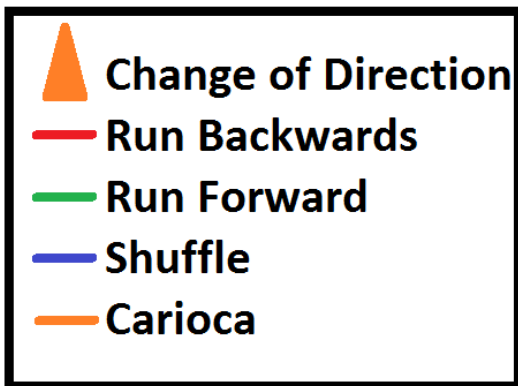
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 5 Yards.



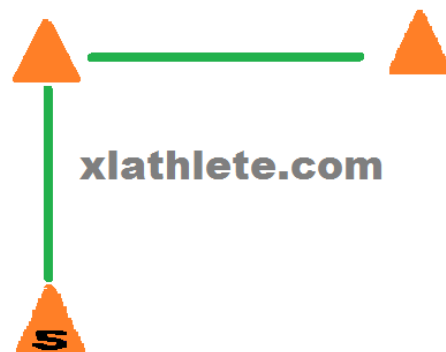
www.xlathlete.com

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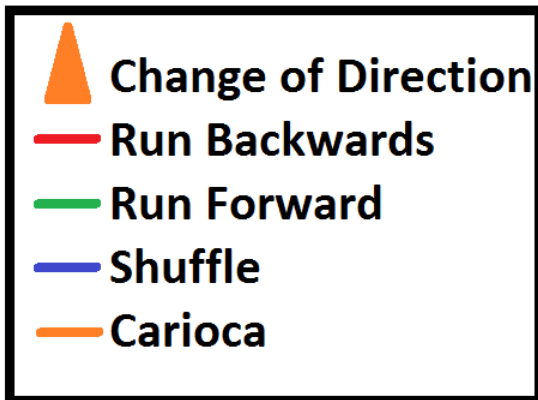
The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
6 Yards.



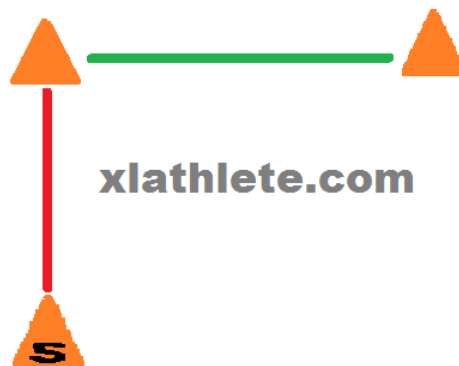
www.xlathlete.com

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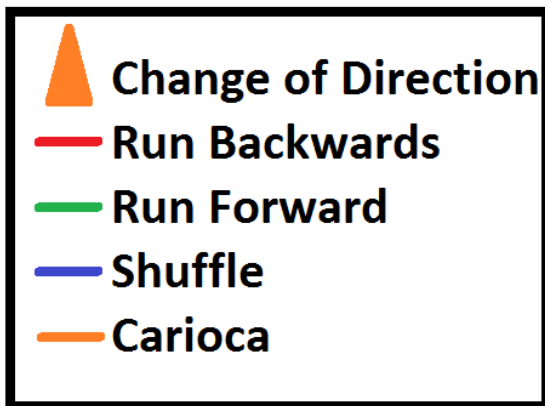
The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
4 Yards.



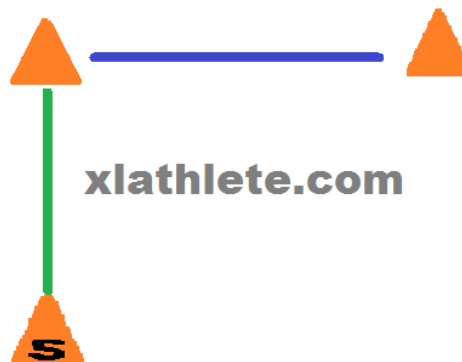
www.xlathlete.com

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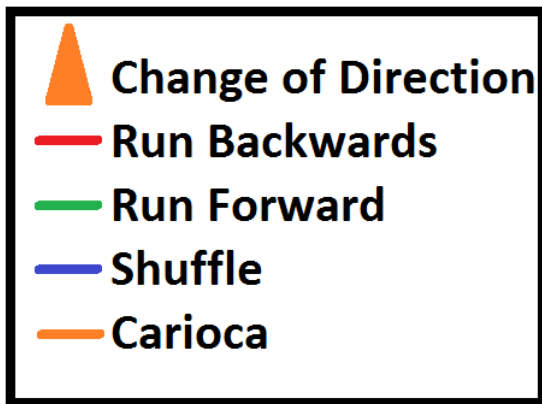
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 5 Yards.



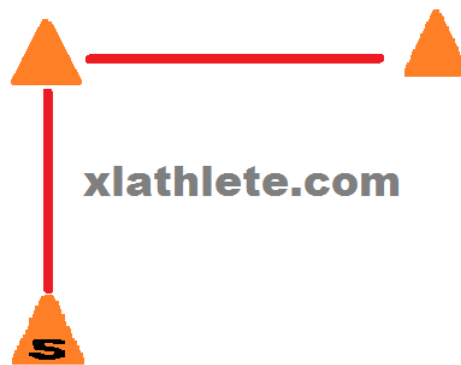
www.xlathlete.com

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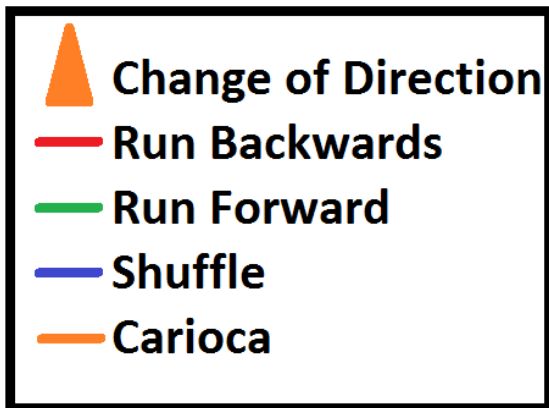
The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
4 Yards.



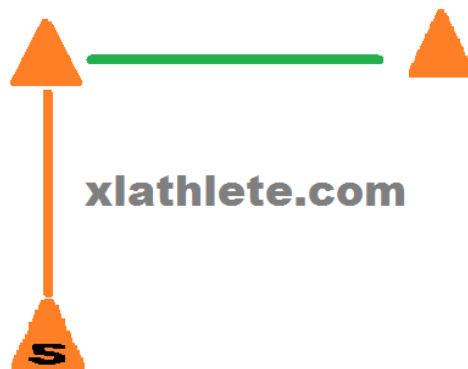
www.xlathlete.com

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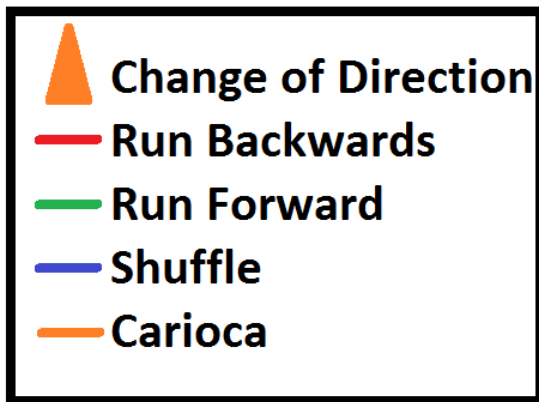
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 5 Yards.



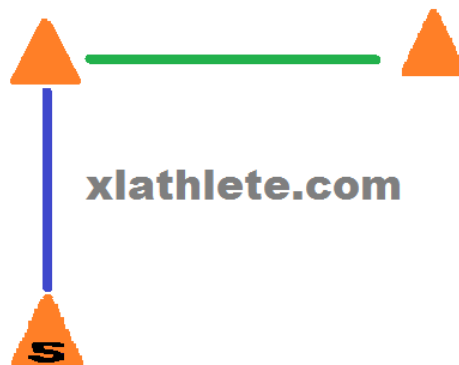
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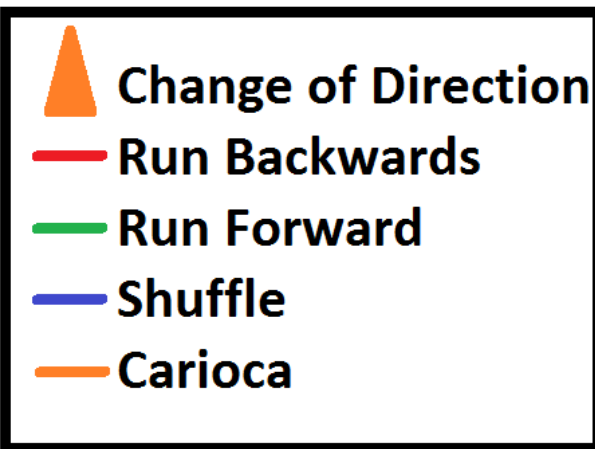
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The Distance Between Cones is 4 Yards.



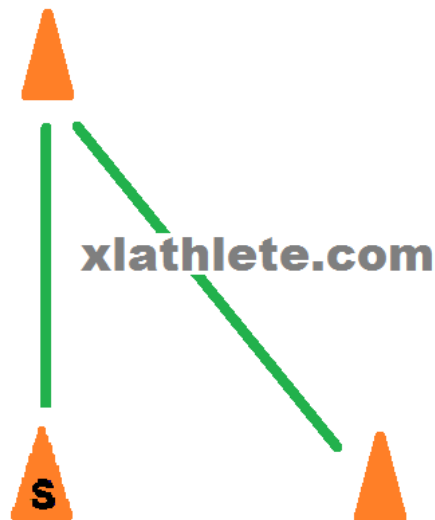
www.xlathlete.com

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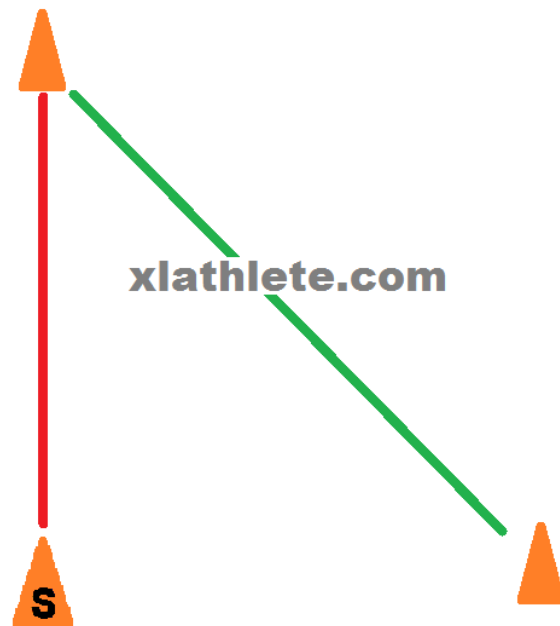
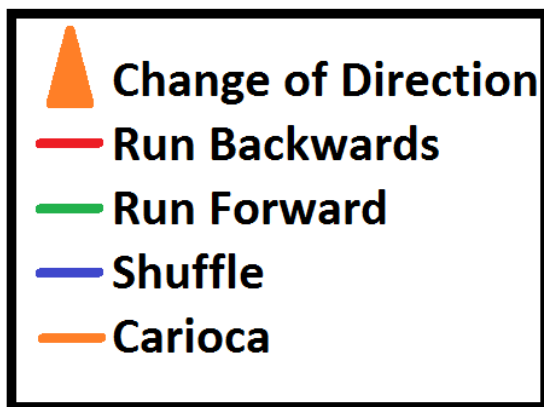
The duration of this drill is 3 seconds.

The distance between cones is 5 yards.



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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

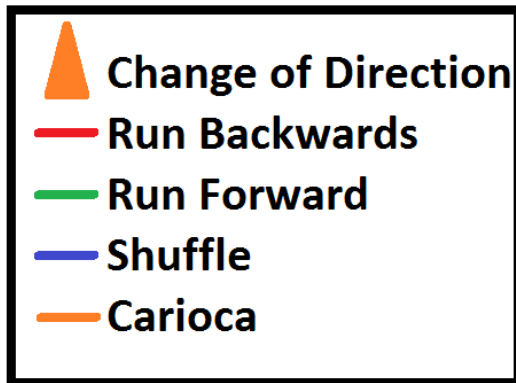


The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 4 Yards.

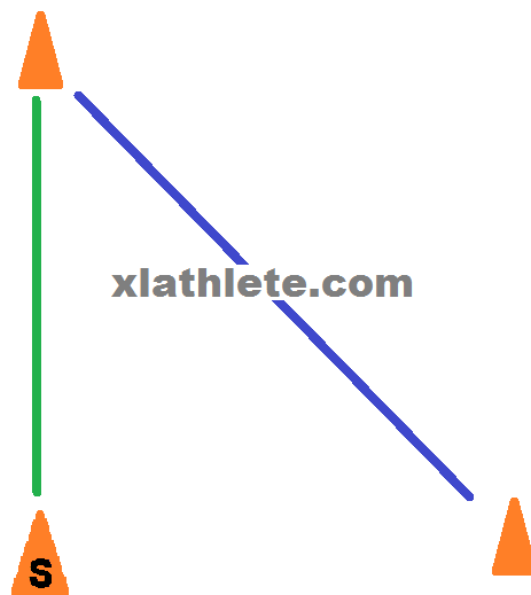
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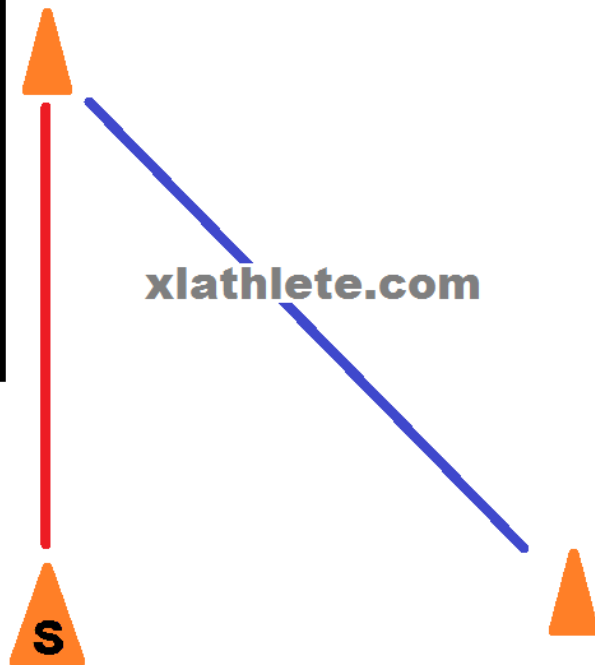
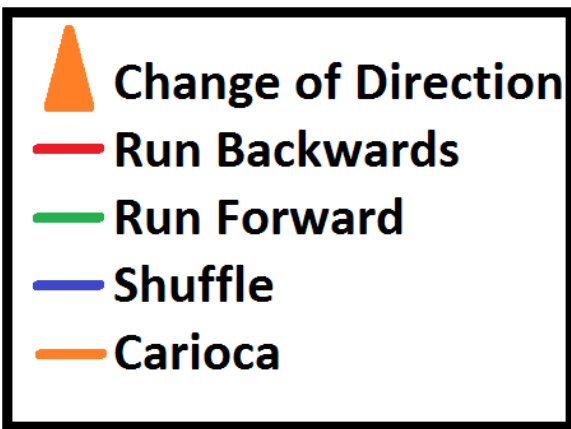
The duration of this drill is
3 Seconds.

The distance between cones is
4 Yards.



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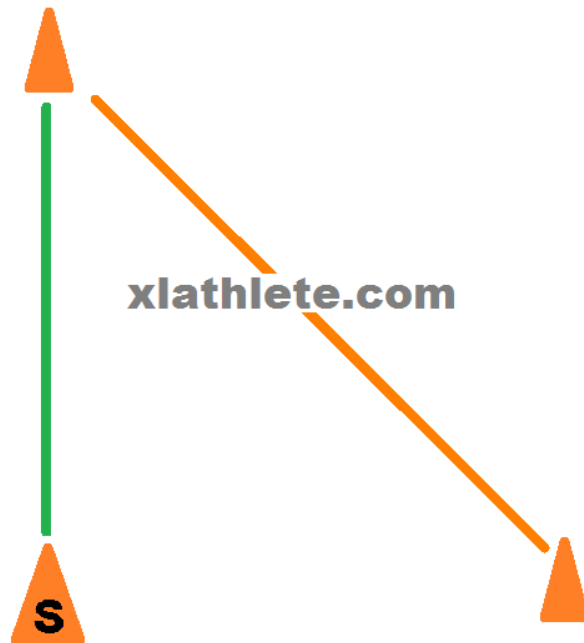
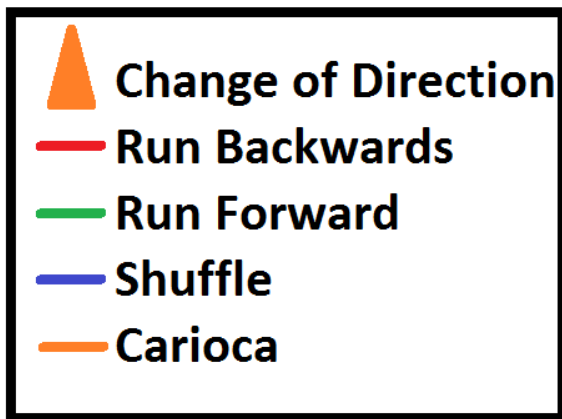


The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 4 Yards.

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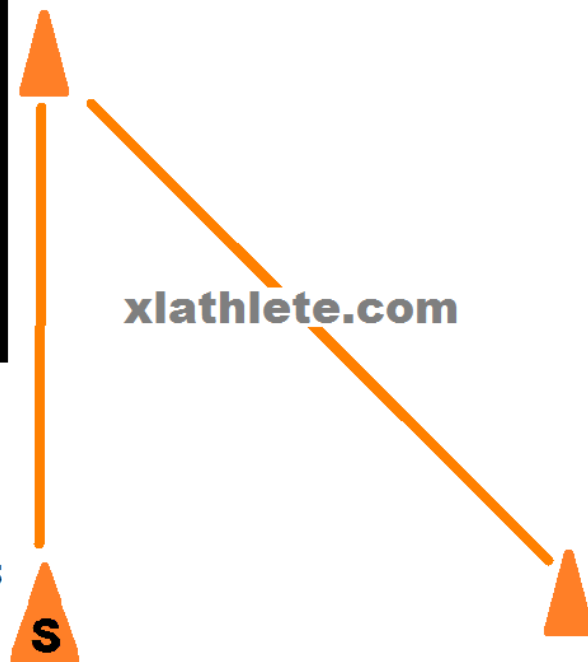
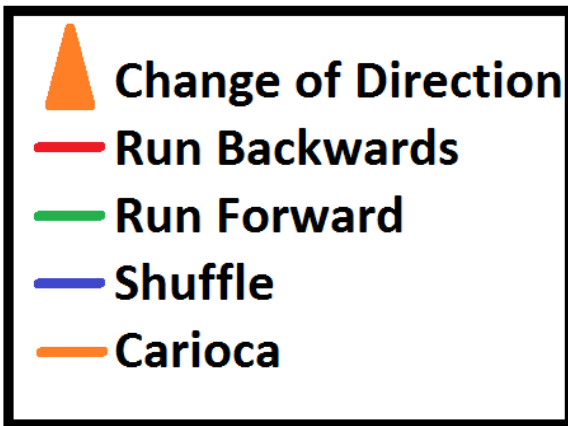


The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 4 Yards.

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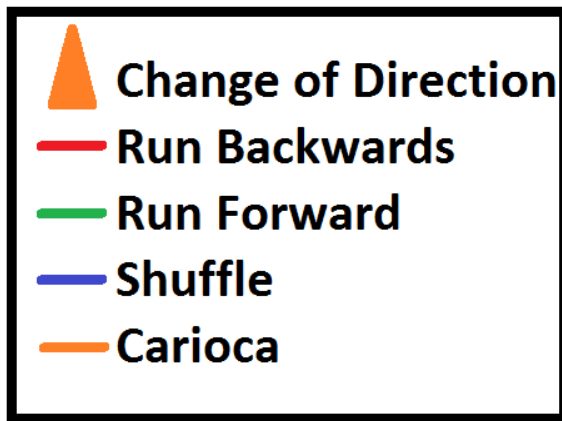


The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
3 Yards.

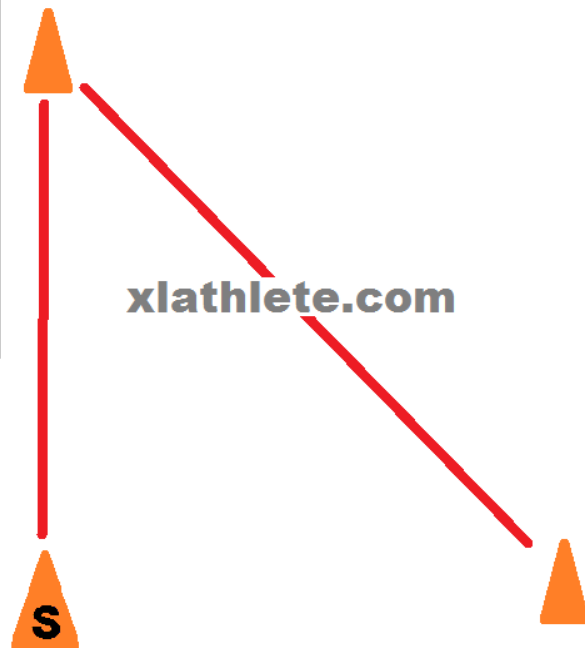
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



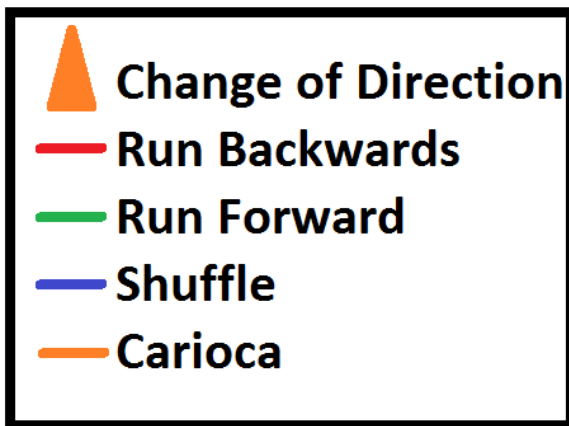
The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
3 Yards.



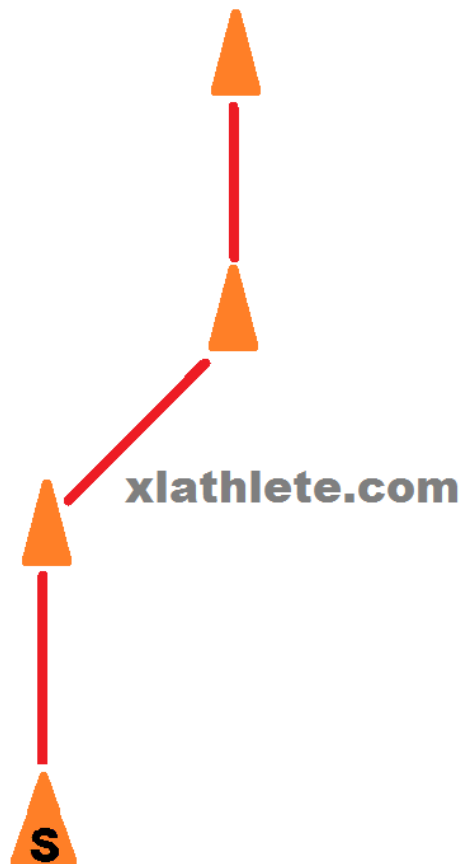
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



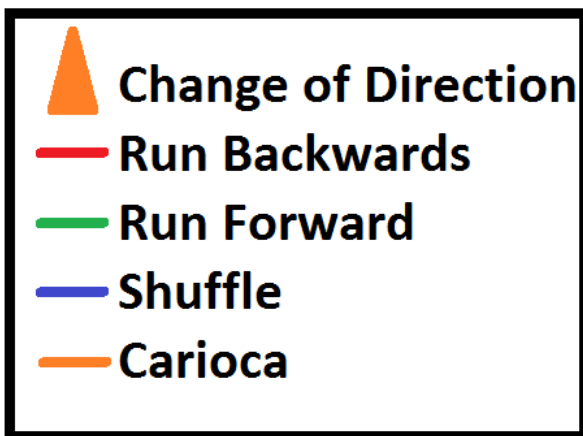
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 3 Yards.



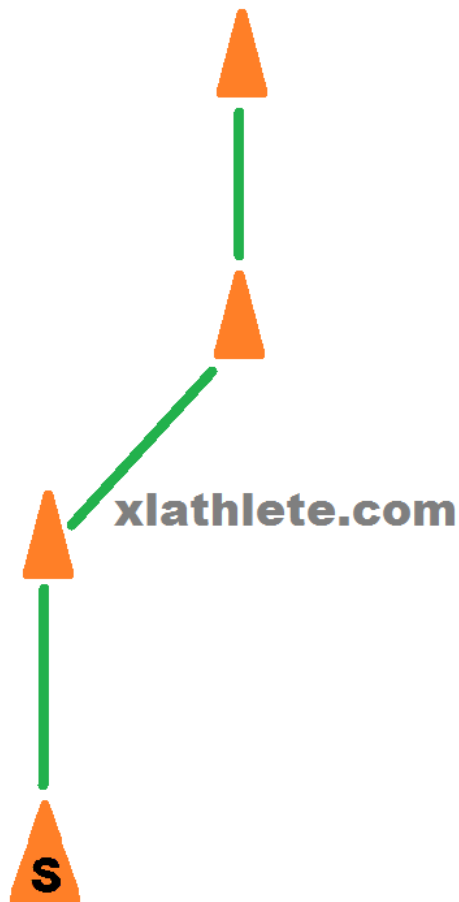
www.xlathlete.com

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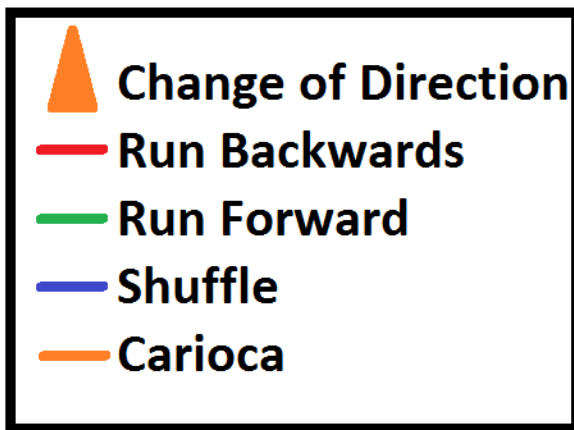
The duration of this drill is 3 seconds.

The distance between cones is 5 yards.



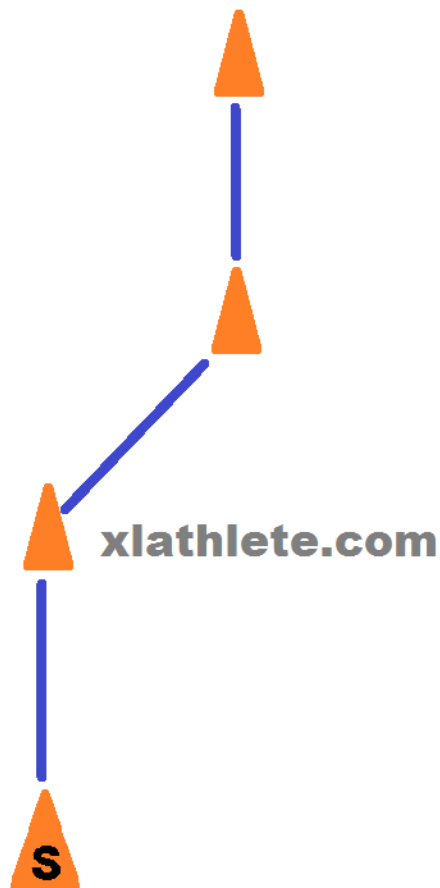
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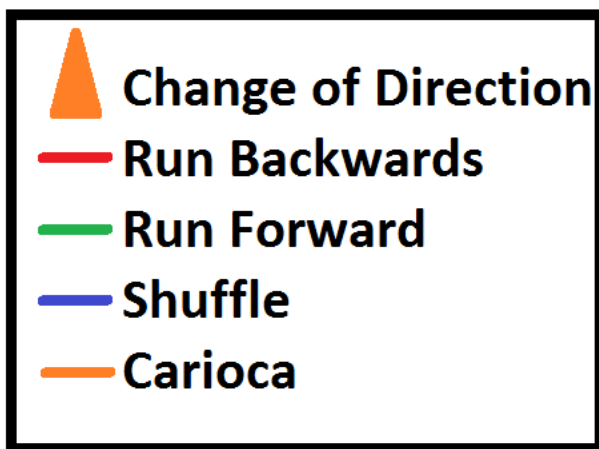
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 3 Yards.



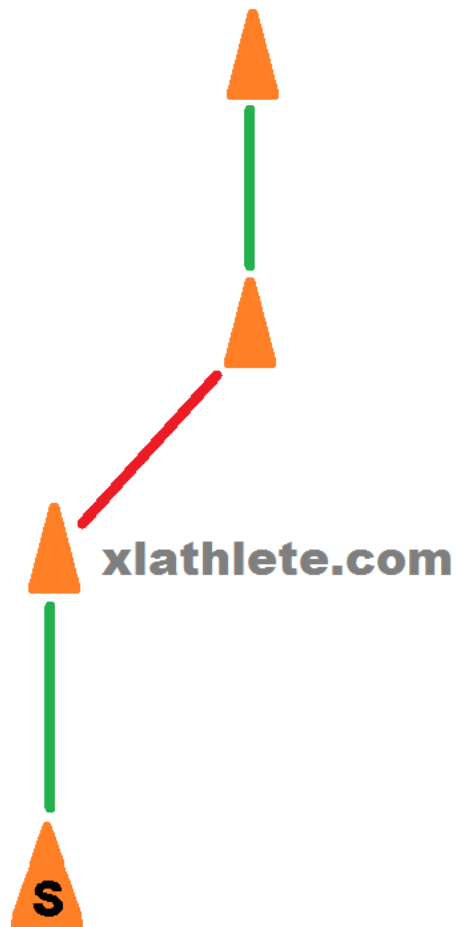
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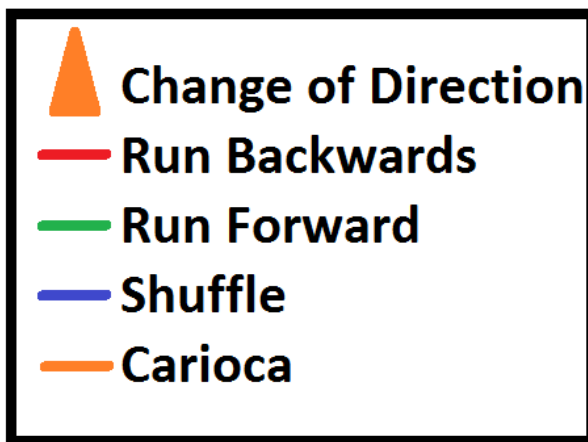
The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
3 Yards.



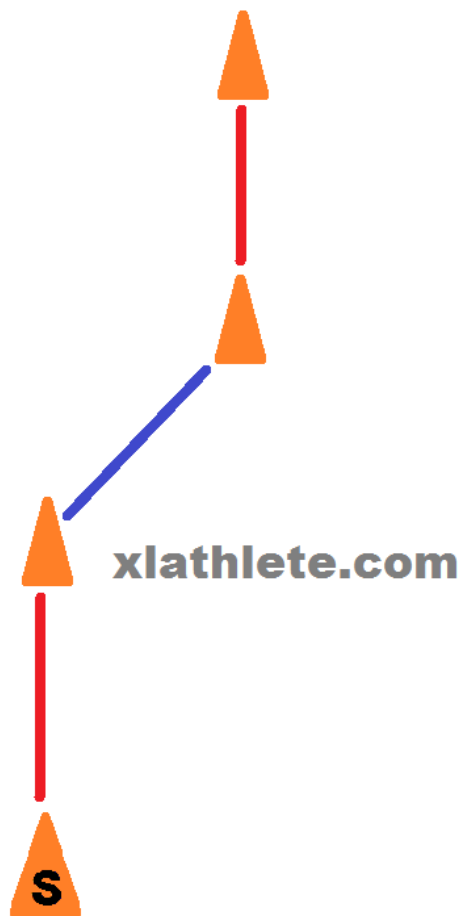
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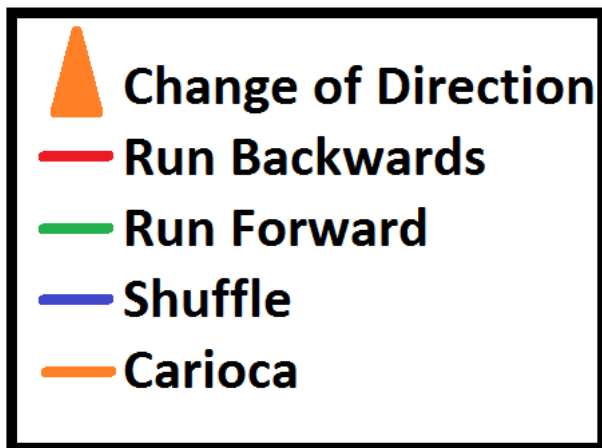
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 3 Yards.



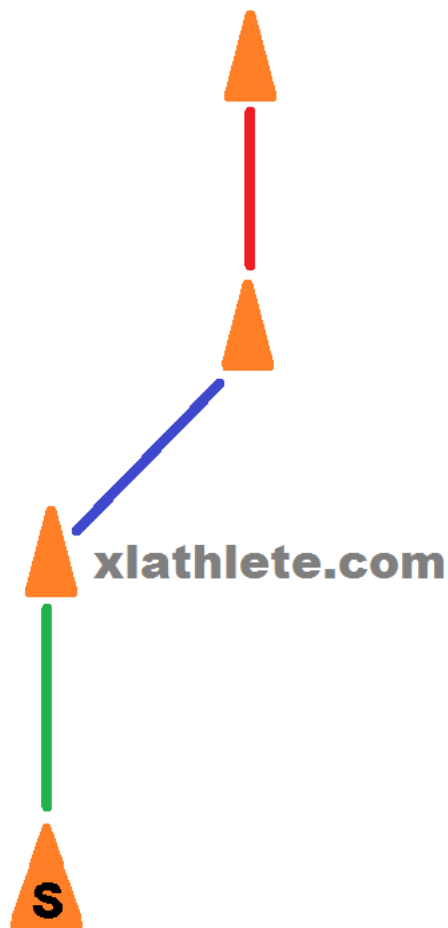
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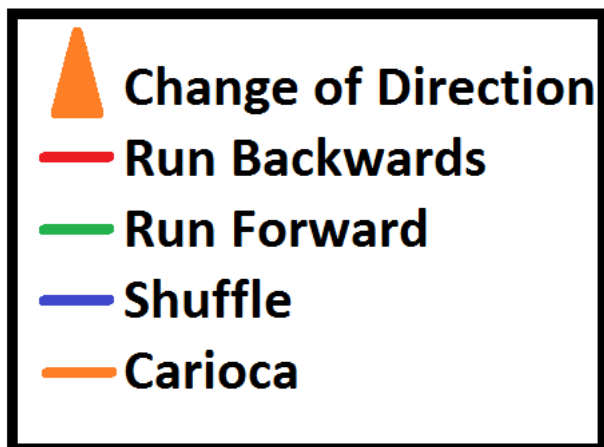
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The Distance Between Cones is 3 Yards.



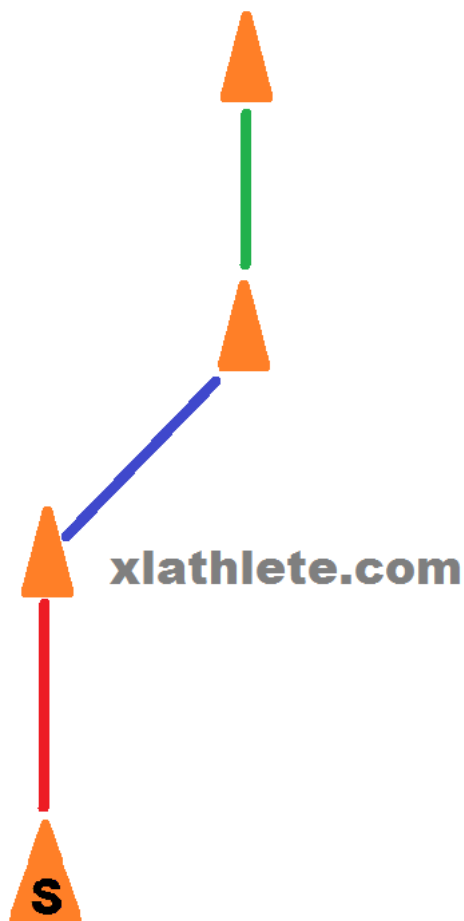
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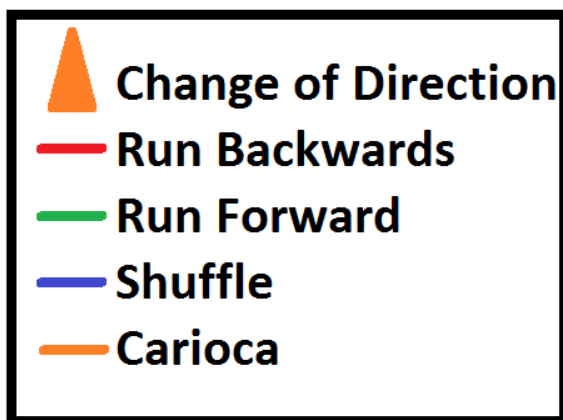
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 3 Yards.



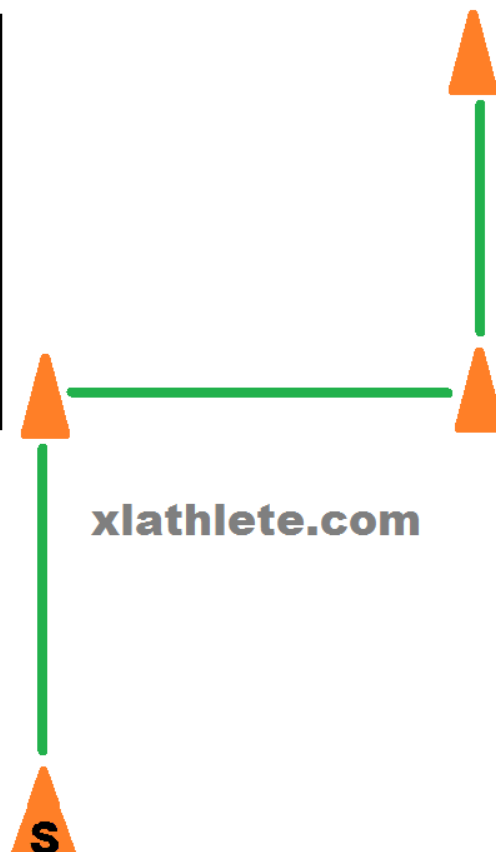
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



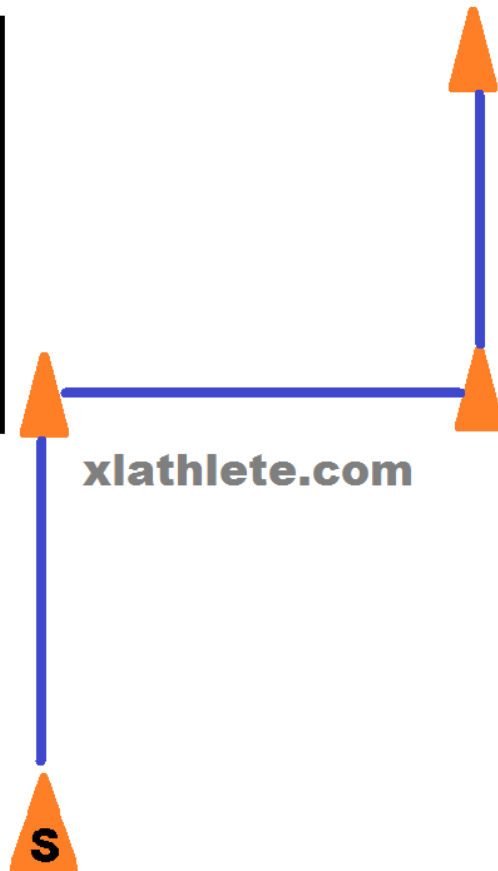
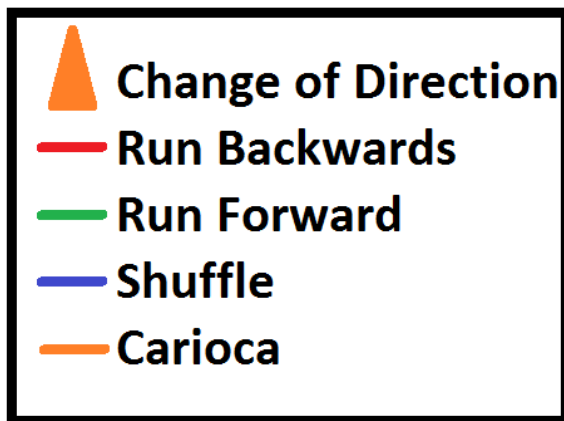
The duration of this drill is **3 seconds.**

The distance between cones is **4 yards.**



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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

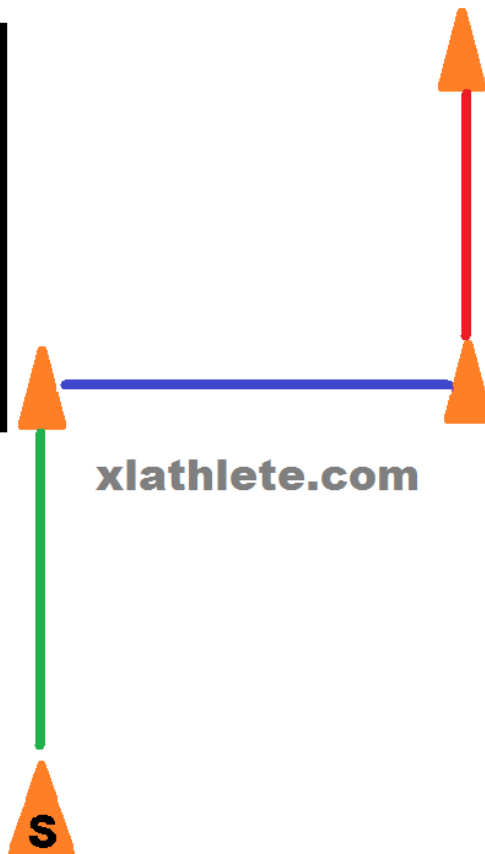
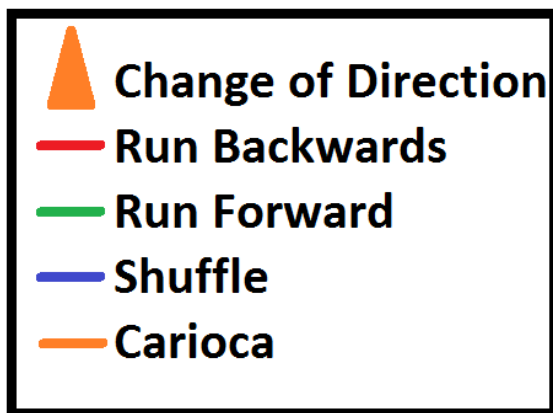


The duration of this drill is
3 seconds

The distance between cones is
3 yards

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

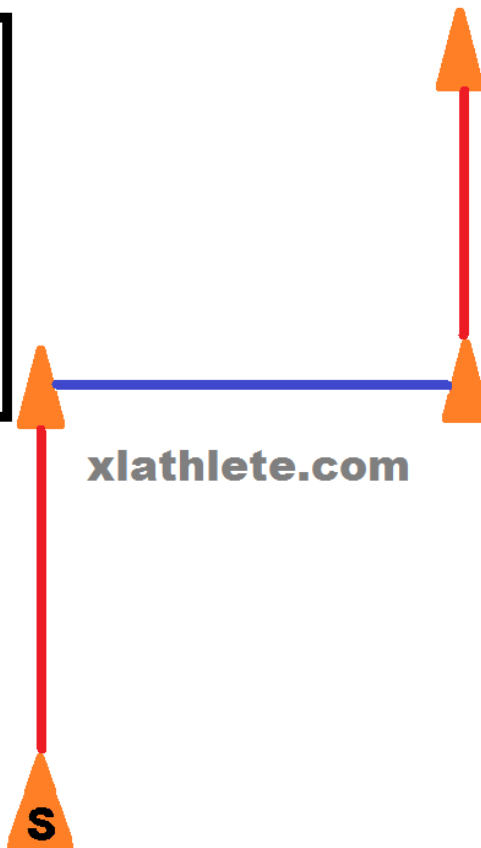
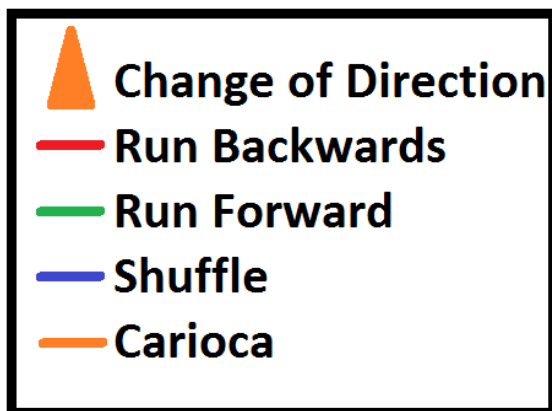


The duration of this drill is **3 seconds**

The distance between cones is **3 yards**

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The Duration of This Drill is 3 Seconds.

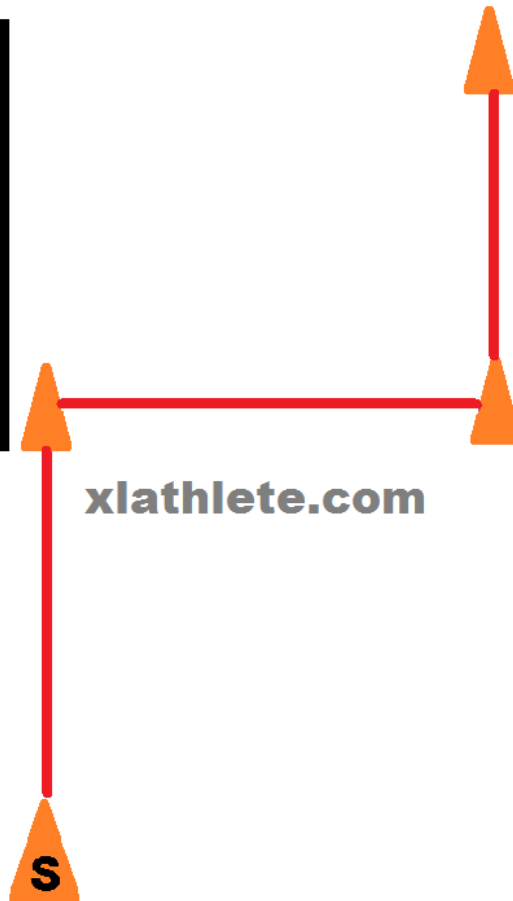
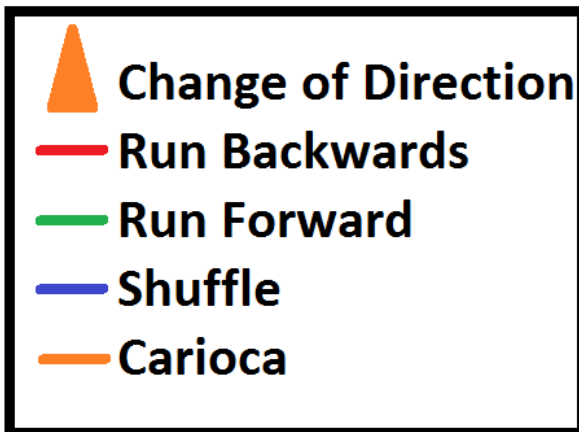
The Distance Between Cones is 3 Yards.

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These drill are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The duration of this drill is

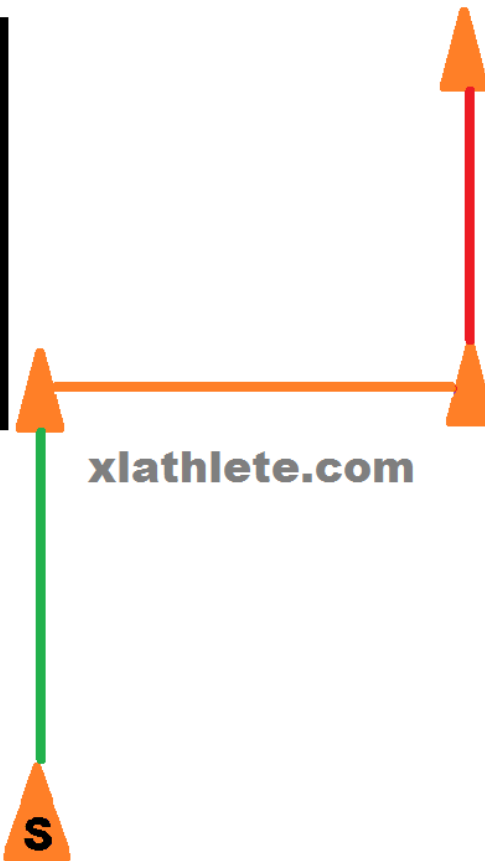
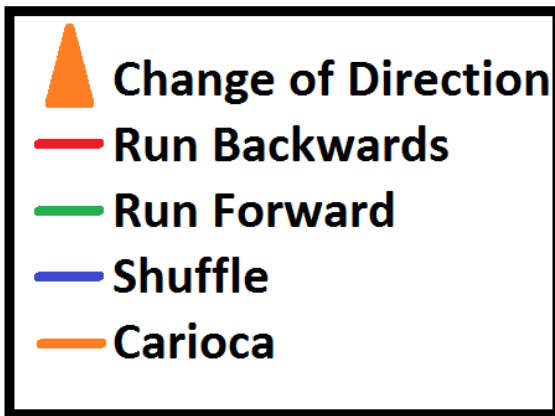
3 seconds

The distance between cones is

3 yards

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

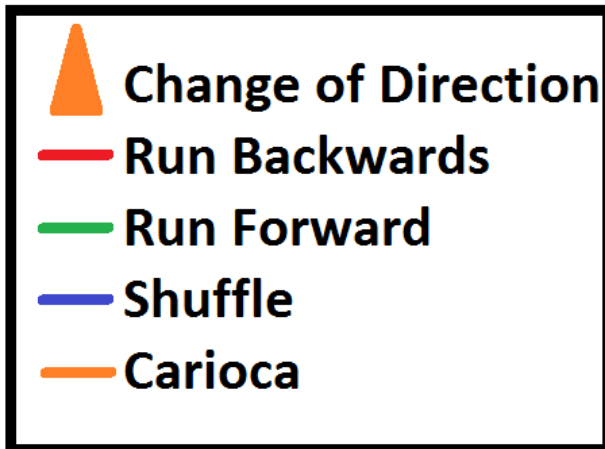


The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 3 Yards.

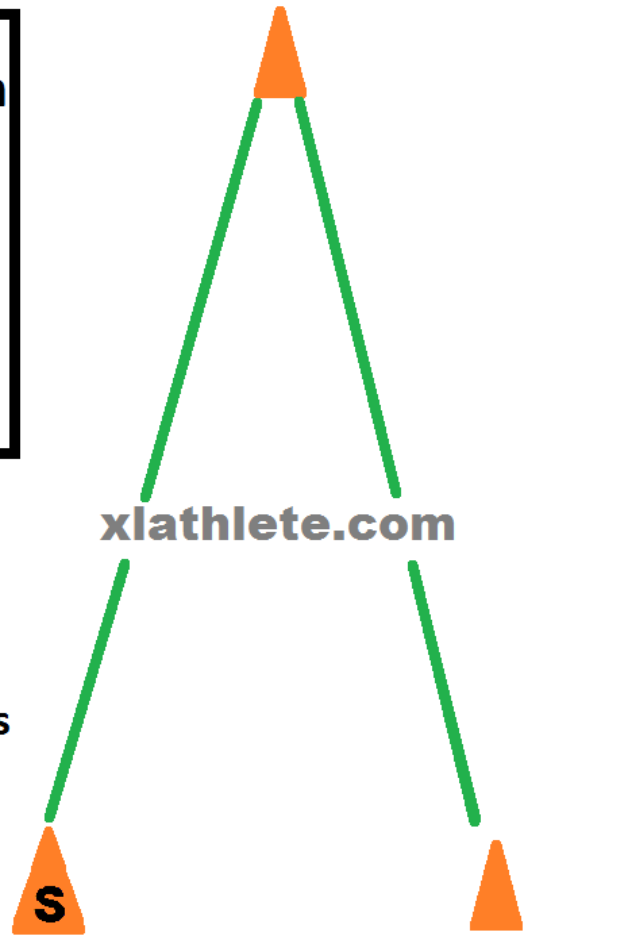
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



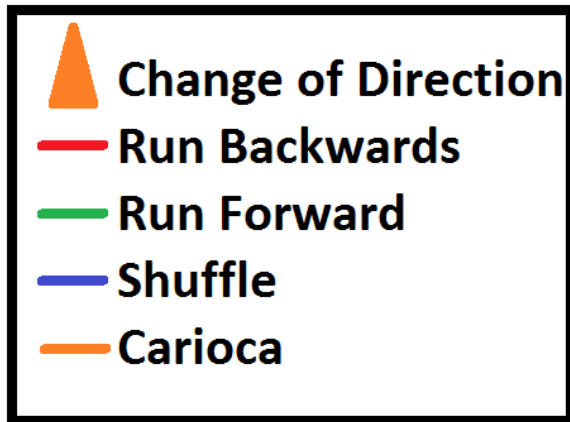
The duration of this drill is
3 sec

The distance between cones is
5 yds



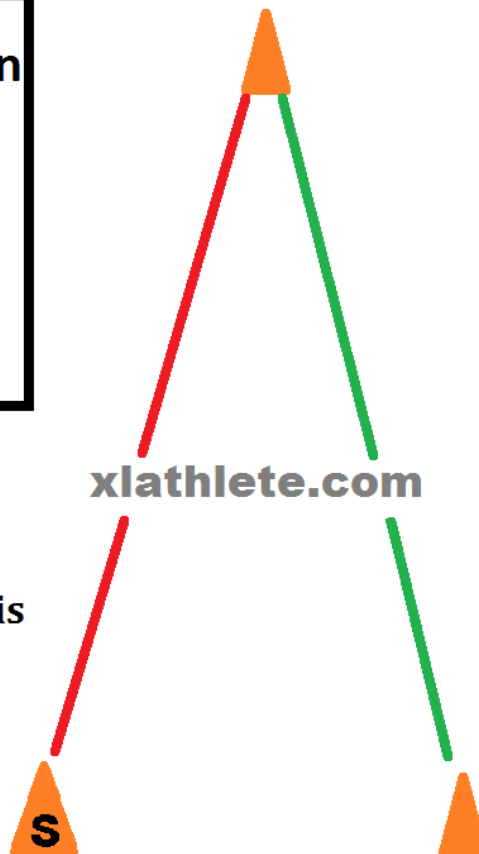
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



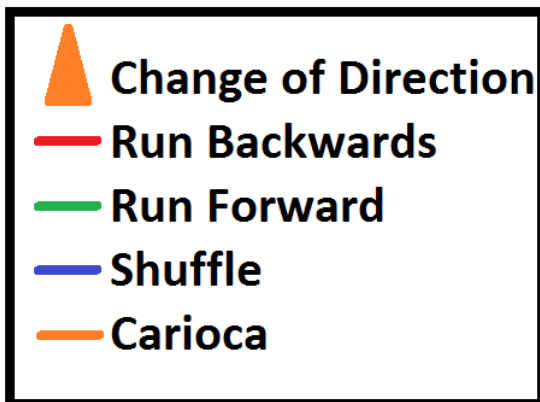
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 4 Yards.



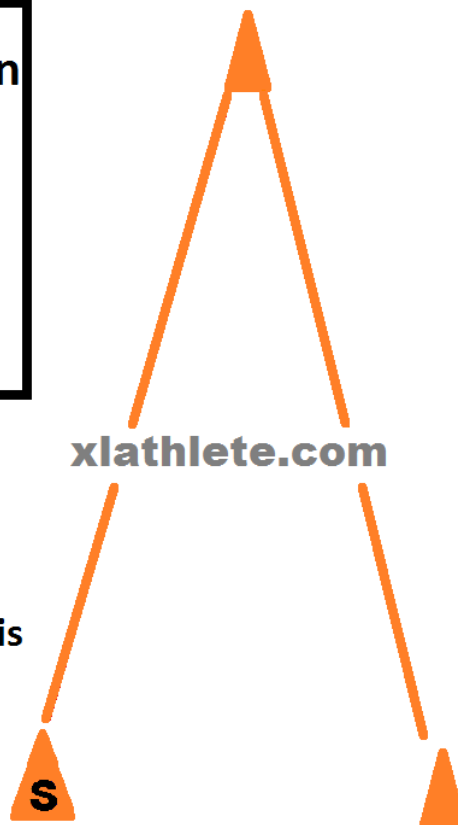
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



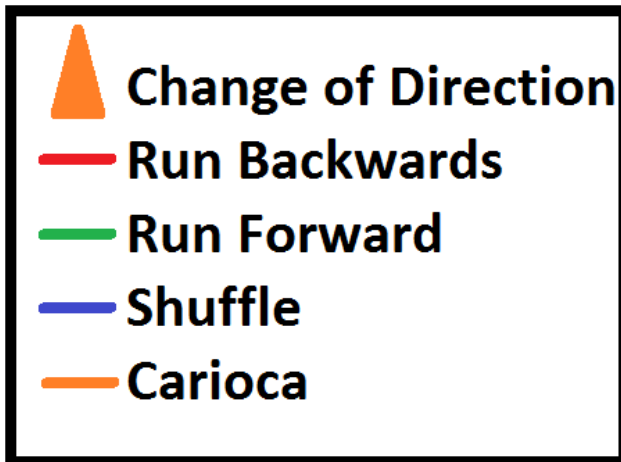
The duration of this drill is
3 sec

The distance between cones is
4 yds



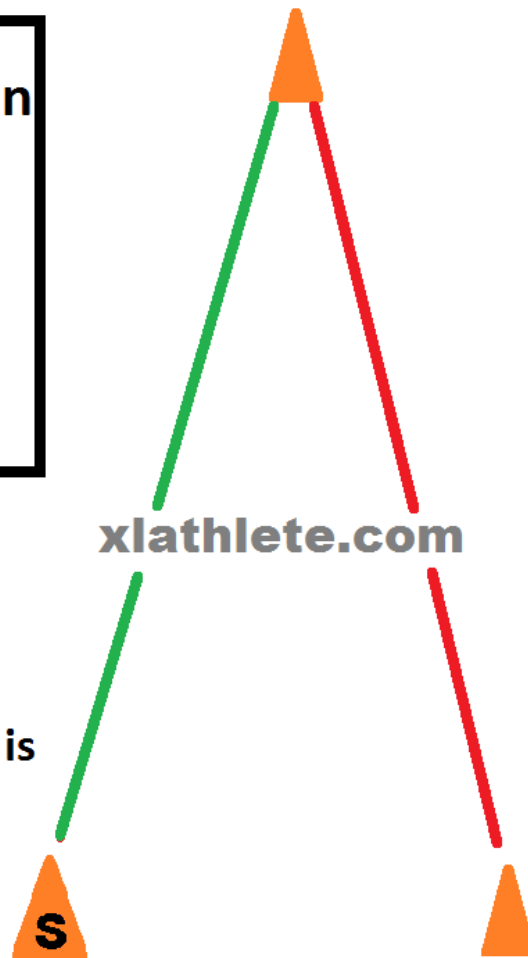
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



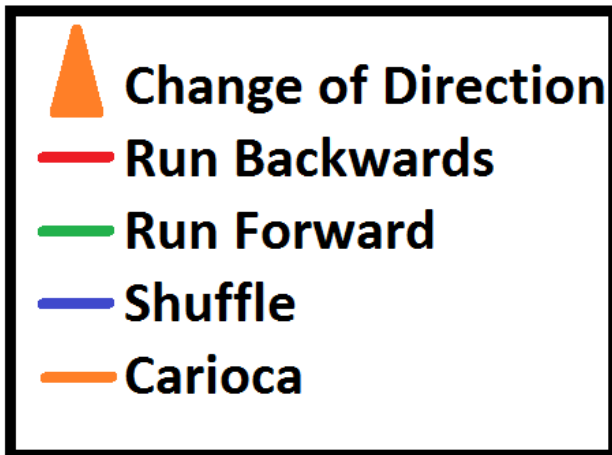
The duration of this drill is
3 seconds

The distance between cones is
5 yds



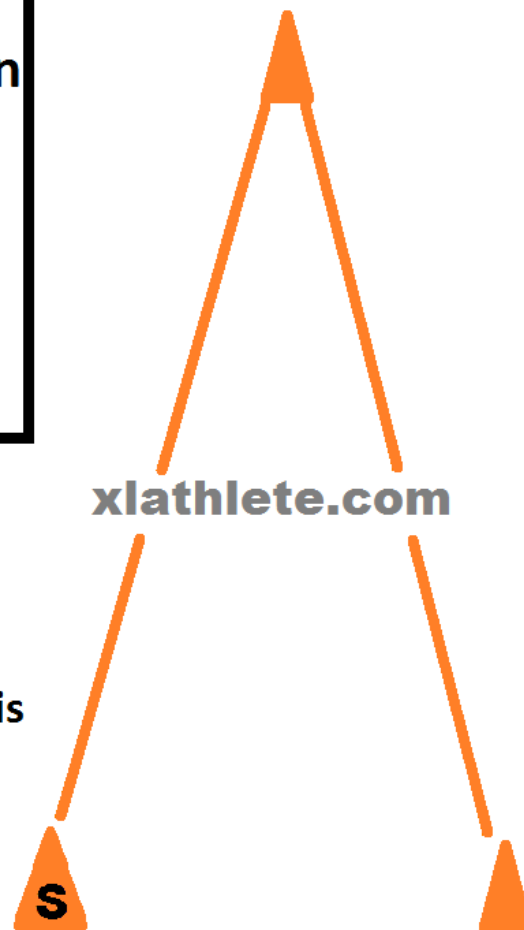
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



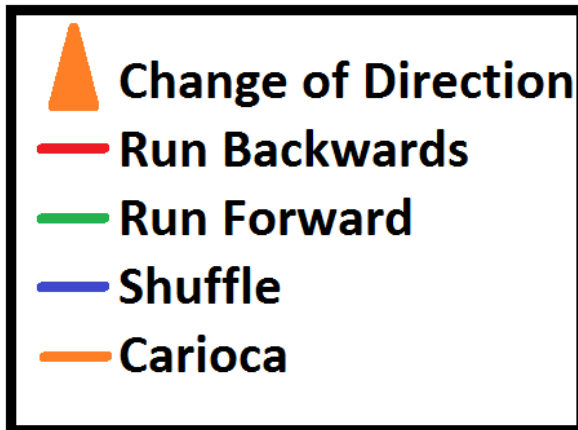
The duration of this drill is
3 sec

The distance between cones is
4 yds



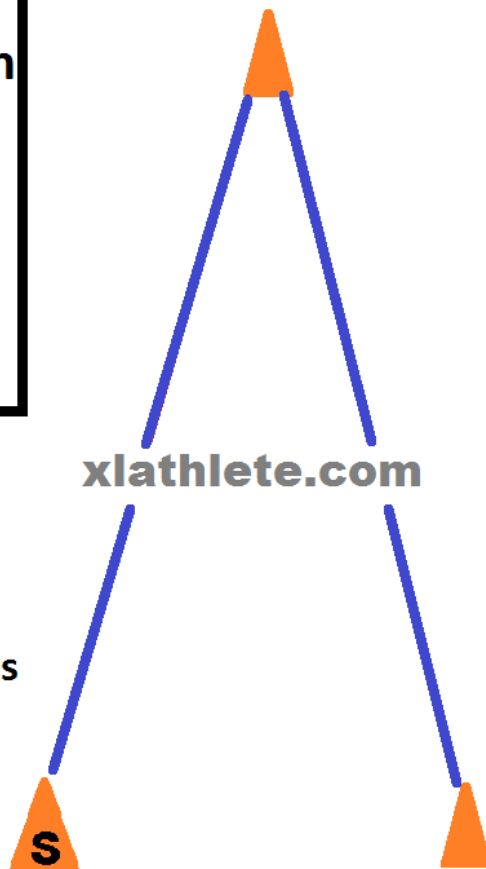
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



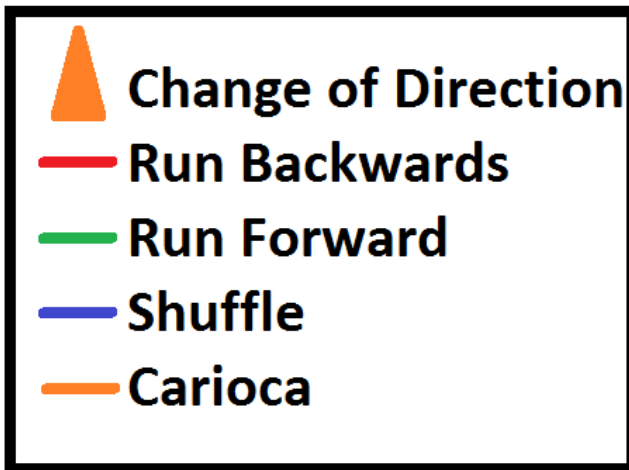
The duration of this drill is
3 sec

The distance between cones is
4 yds



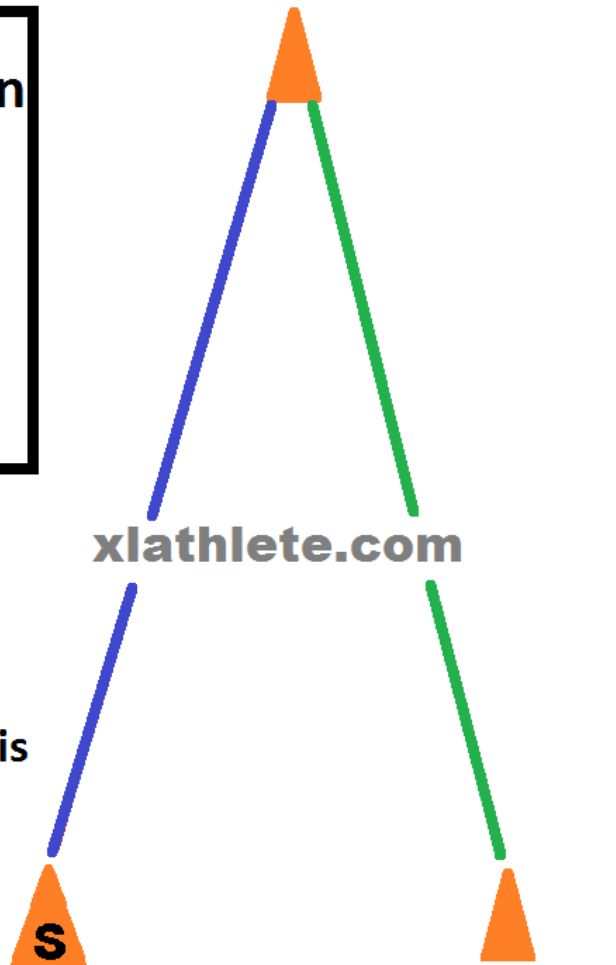
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



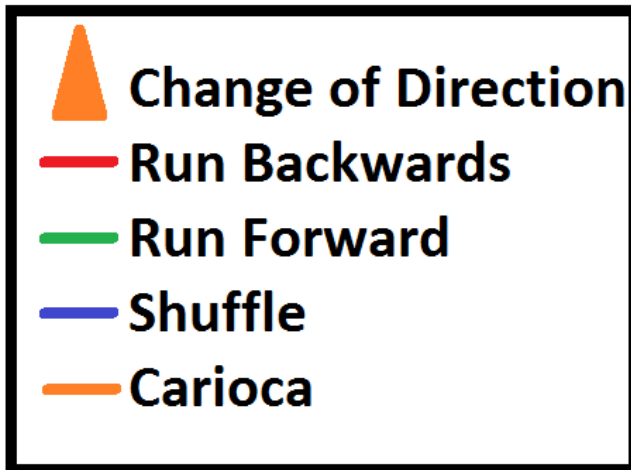
The duration of this drill is
3 sec

The distance between cones is
5 yds



www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The duration of this drill is
3 sec

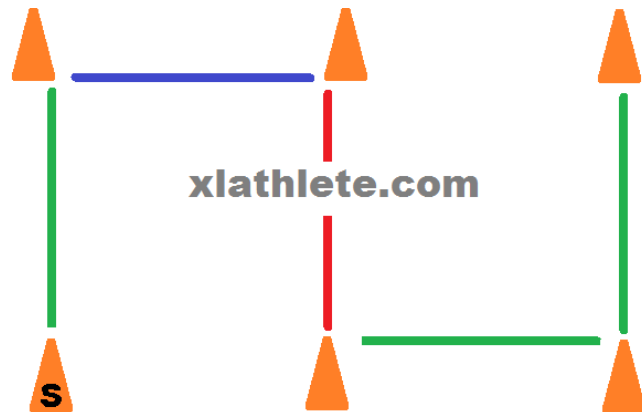
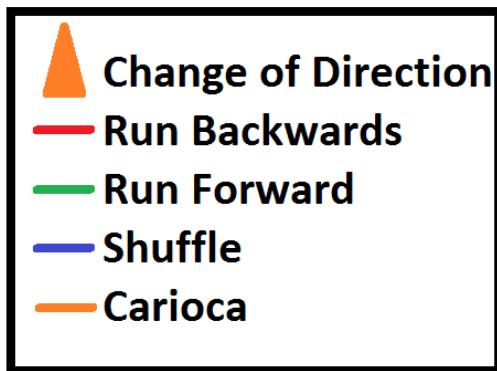
The distance between cones is
5 yds

xlathlete.com



www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

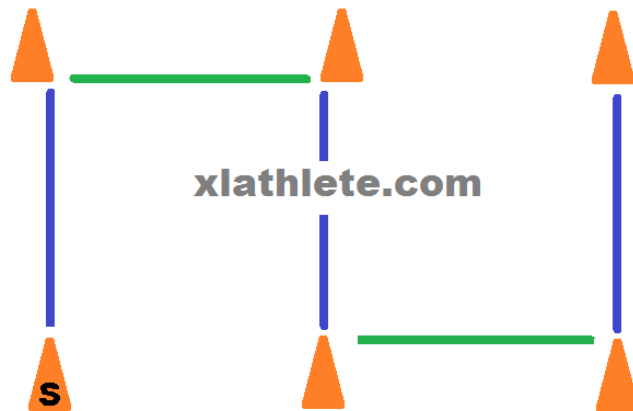
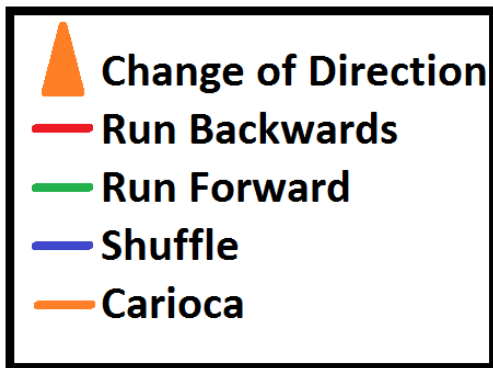


The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
2 Yards.

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

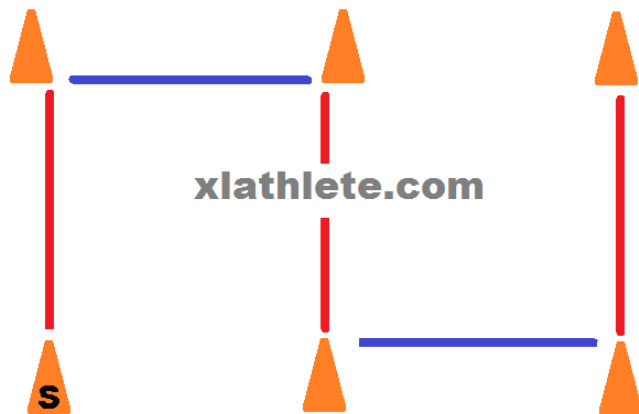
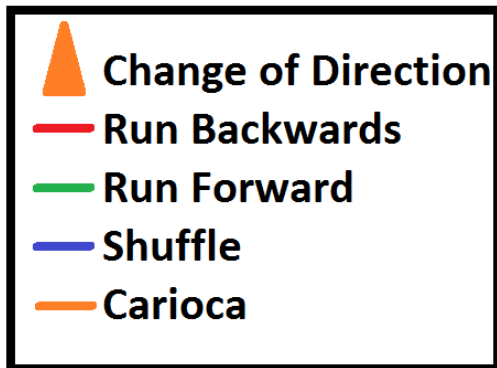


The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
3 Yards.

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

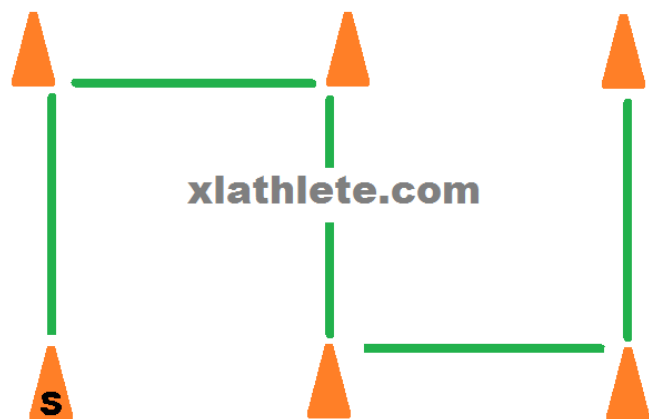
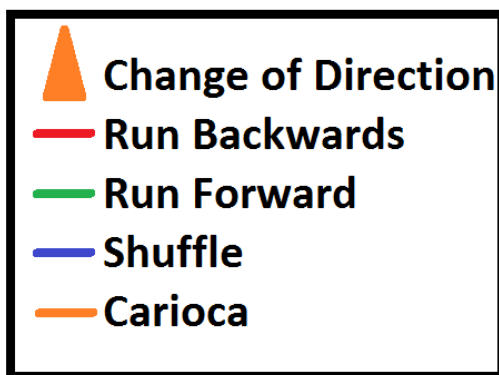


The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 2 Yards.

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

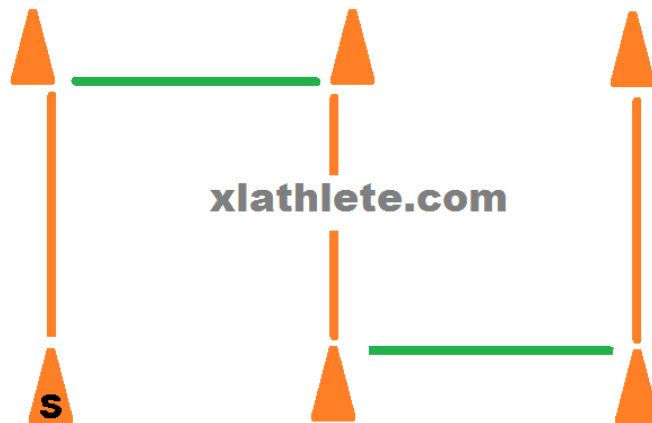
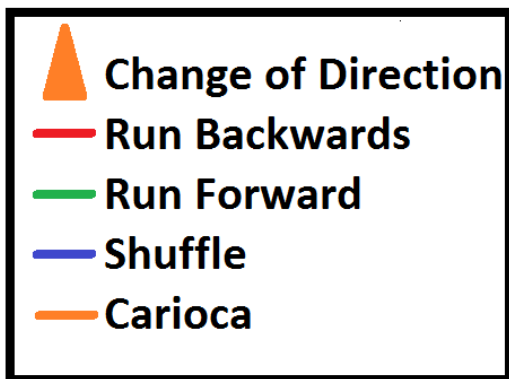


The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 5 Yards.

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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

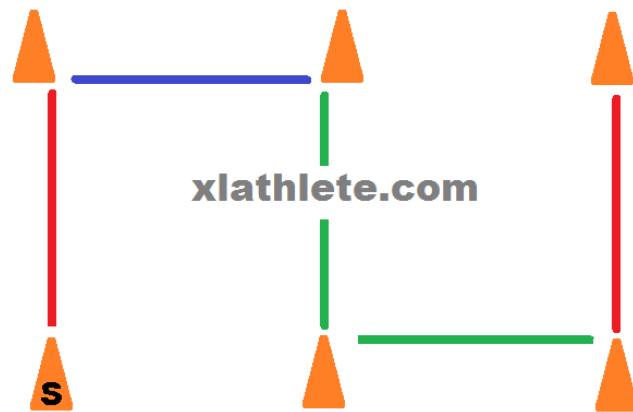
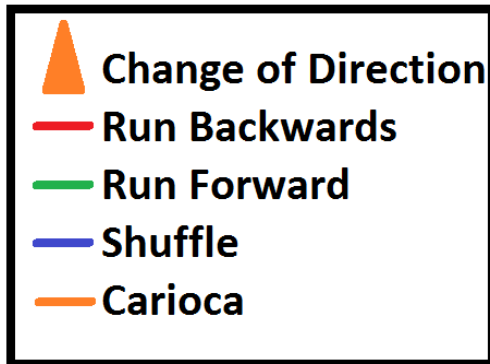


The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 3 Yards.

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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

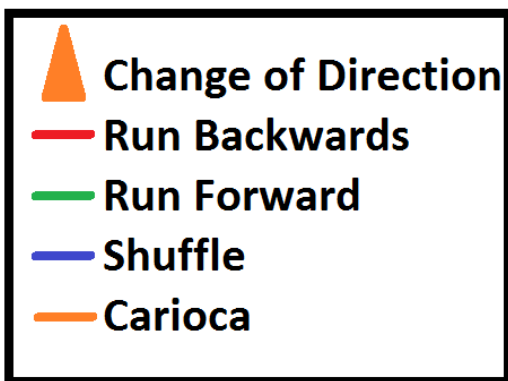


The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 3 Yards.

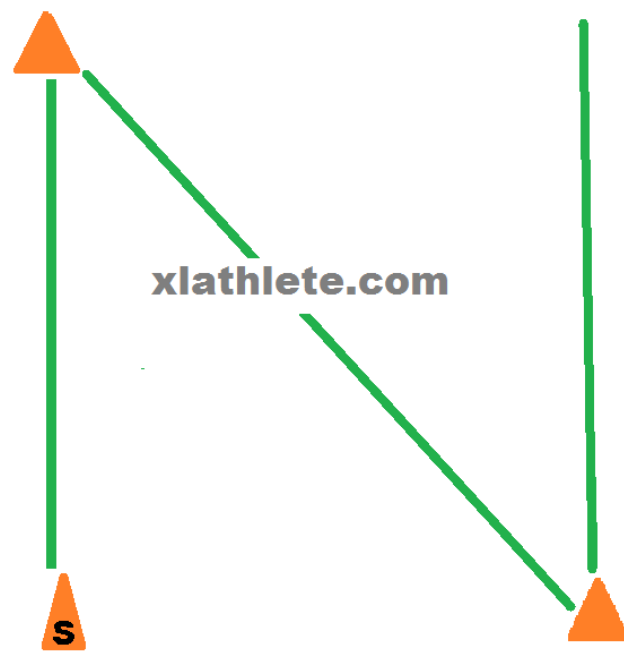
www.xlathlete.com

These drill are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



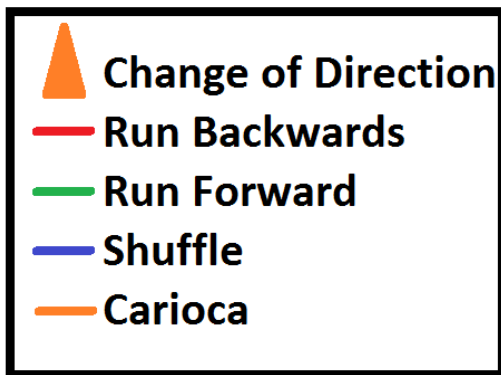
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 5 Yards.



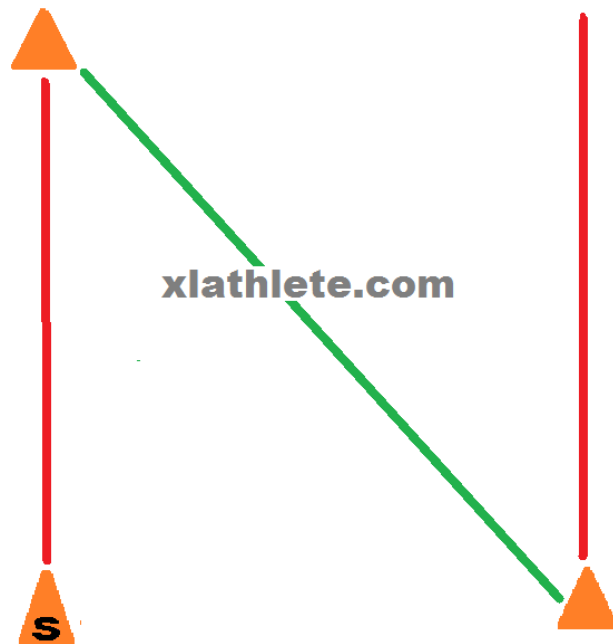
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



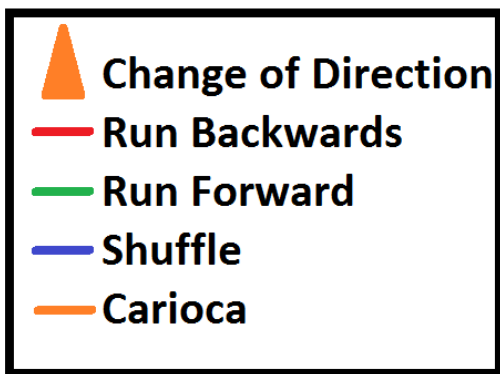
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 4 Yards.



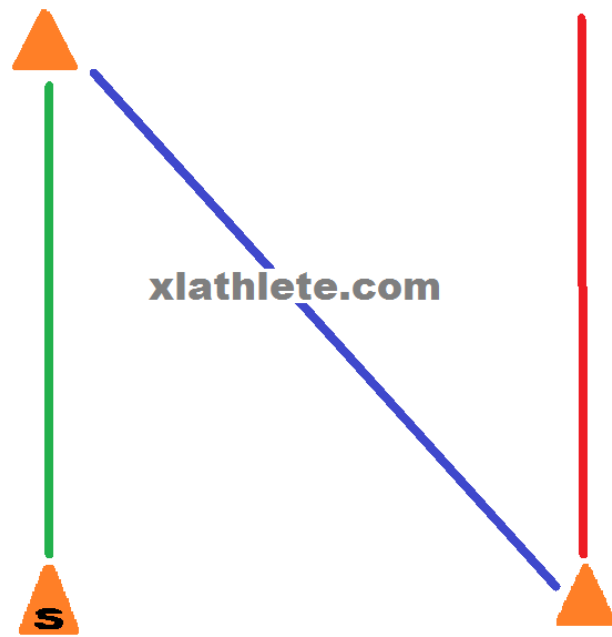
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



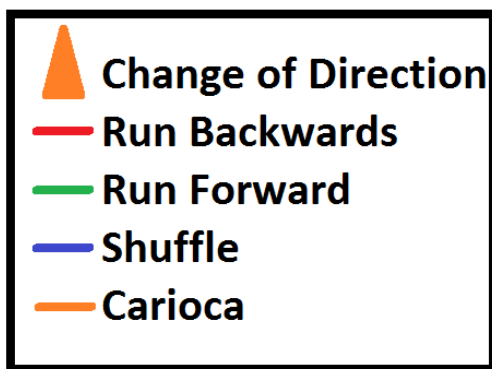
The Duration of This Drill is 3 seconds

The Distance Between Cones is 3 yards



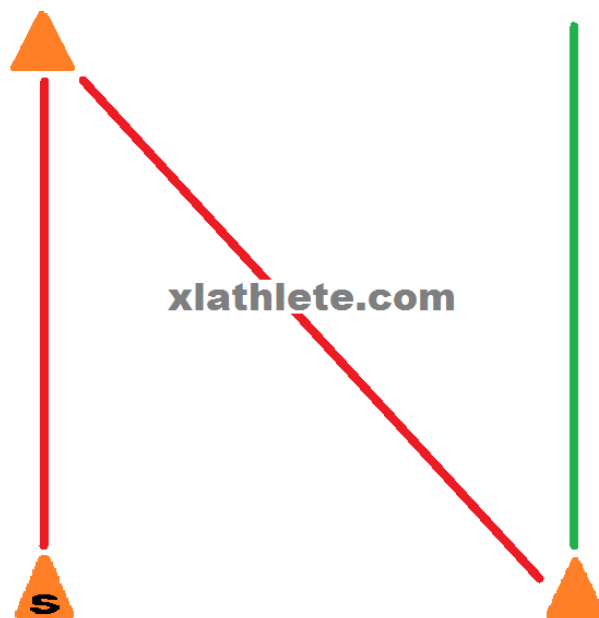
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



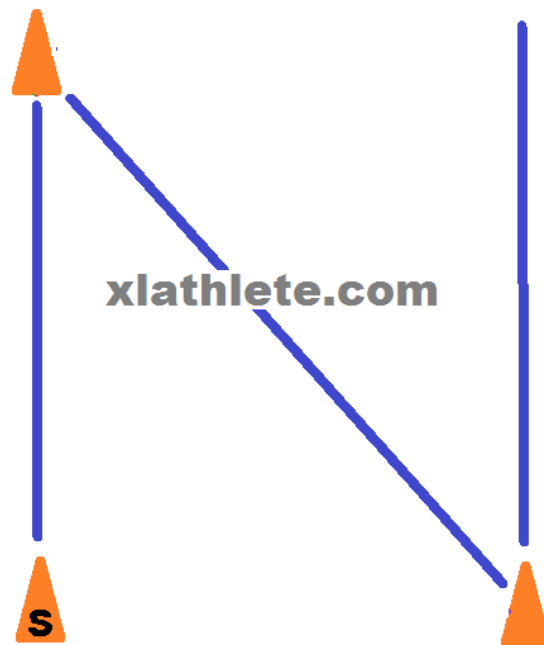
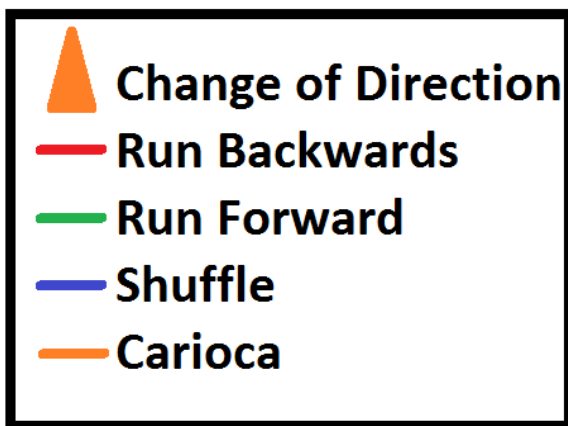
**The Duration of This Drill is
3 seconds**

**The Distance Between Cones is
3 Yards.**



www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

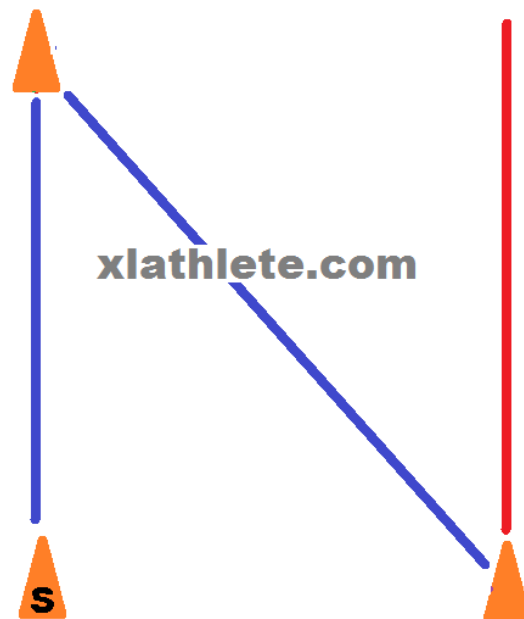
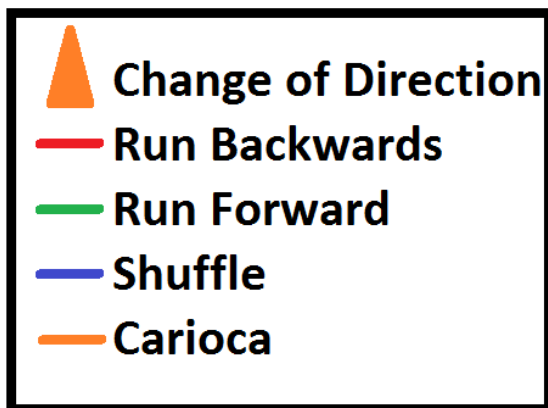


The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
3 Yards.

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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

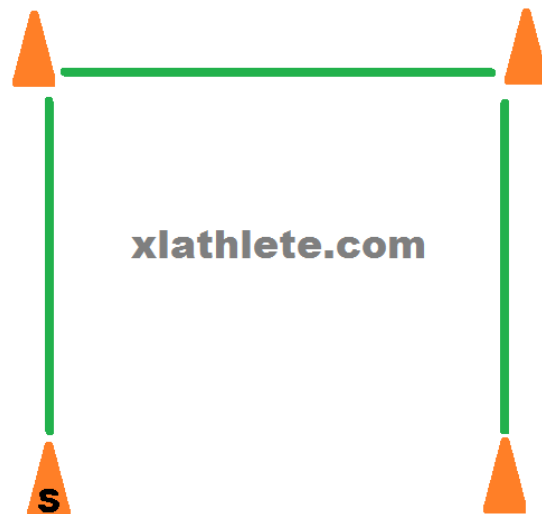
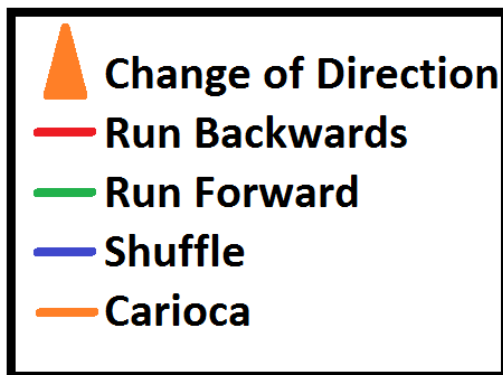


The duration of this drill is
3 Seconds.

The distance between cones is
3 Yards.

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

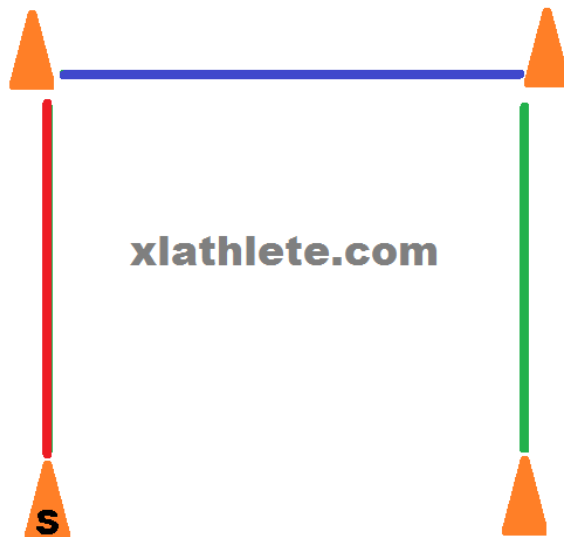
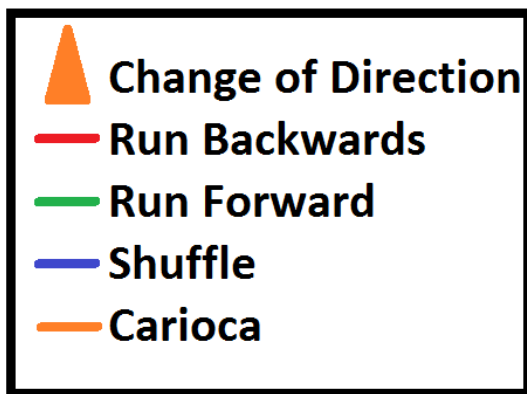


The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
4 Yards.

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

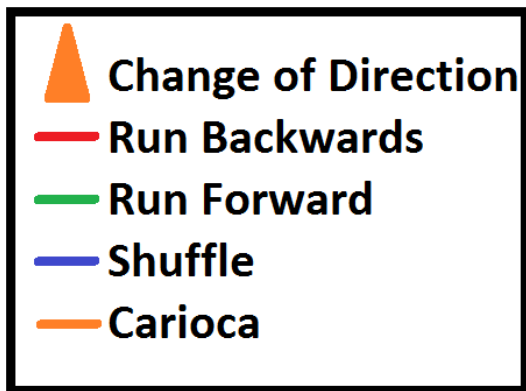


The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 4 Yards.

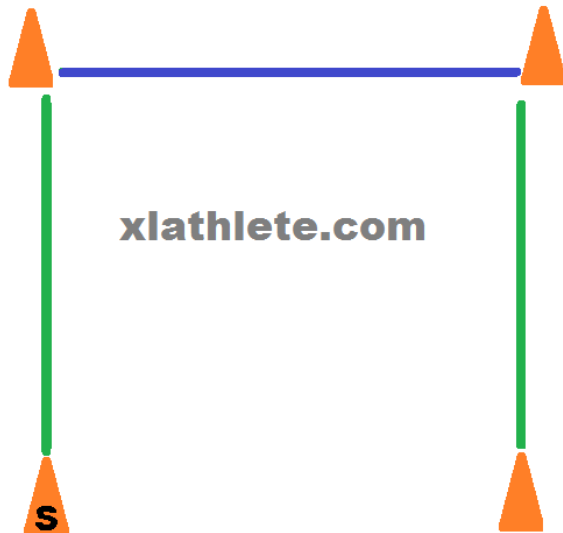
www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



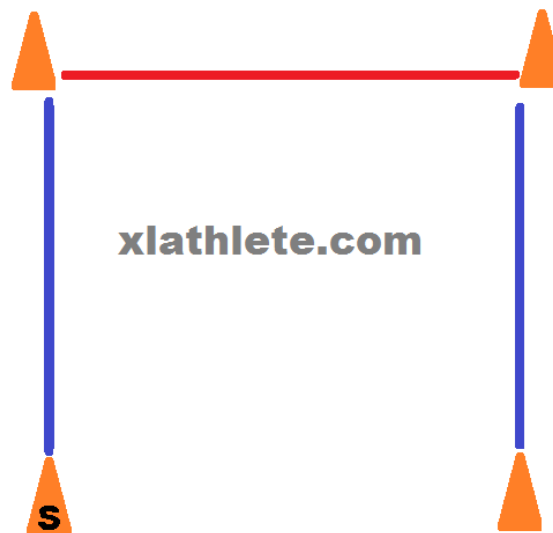
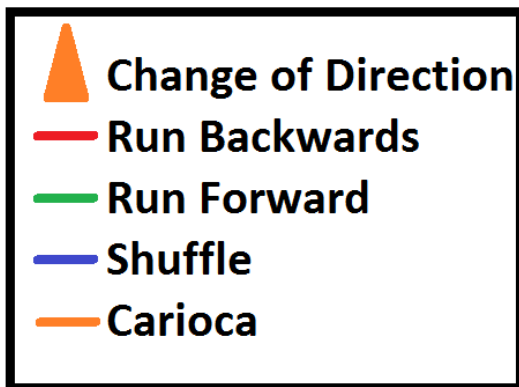
The Duration of This Drill is 3 Seconds.

The Distance Between Cones is 4 Yards.



www.xlathlete.com

These drill are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

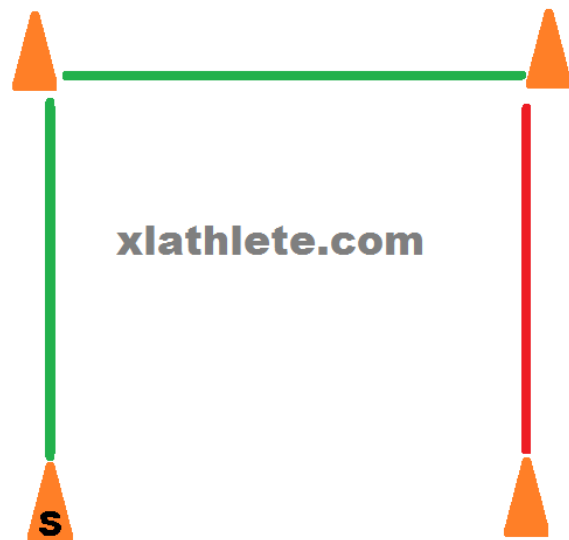
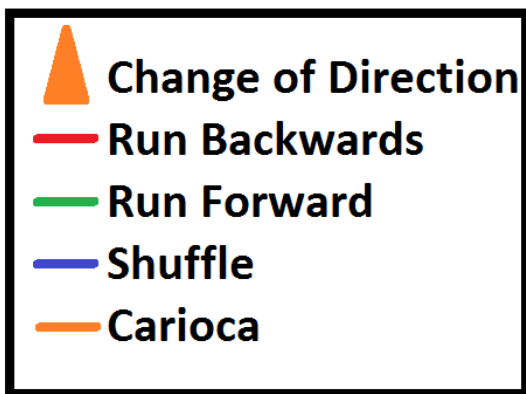


The duration of this drill is
3 Seconds

The distance between cones is
3 yards

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

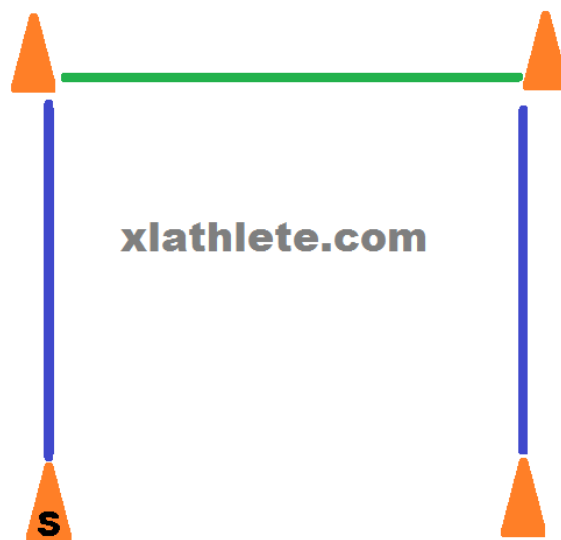
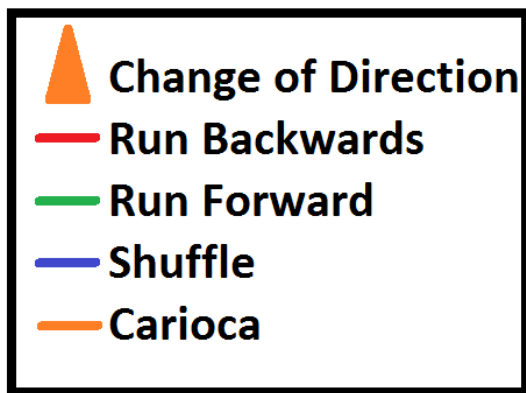


The Duration of This Drill is
3 Seconds.

The Distance Between Cones is
5 Yards.

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

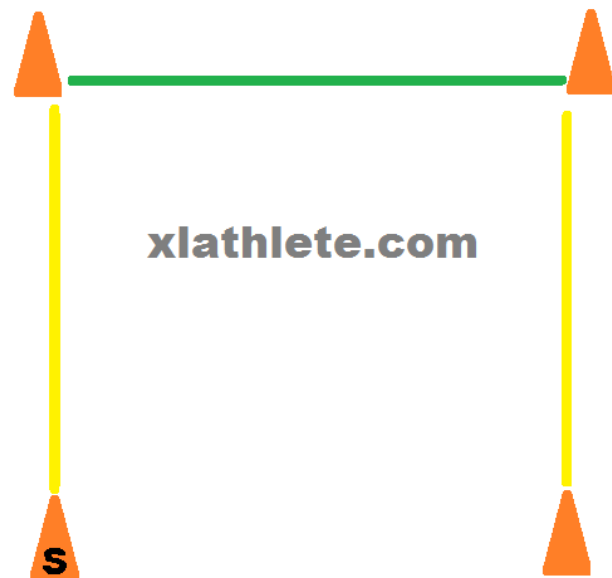
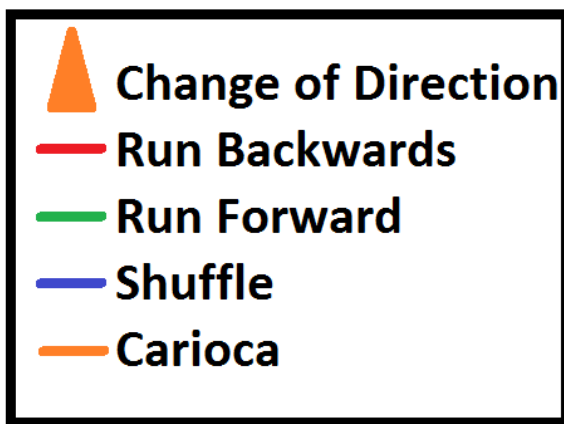


The duration of this drill is
3 Seconds.

The distance between cones is
3 yards

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The duration of this drill is

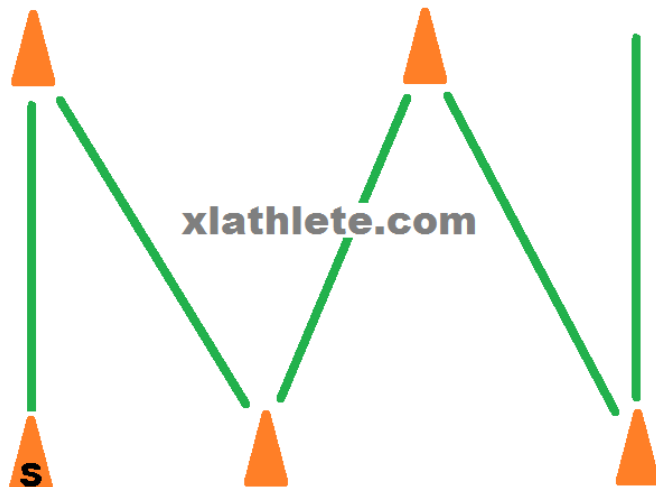
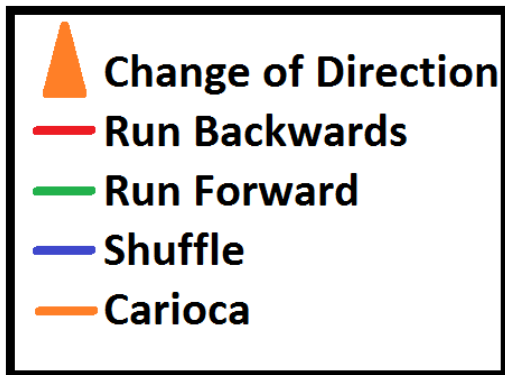
3 seconds

The distance between cones is

3 yards

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

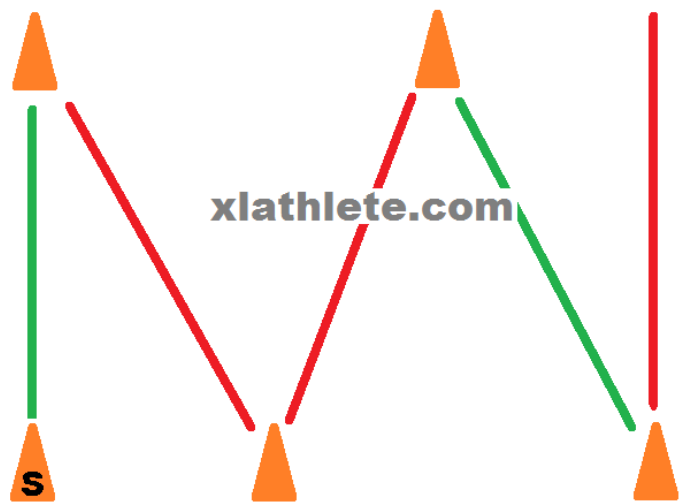
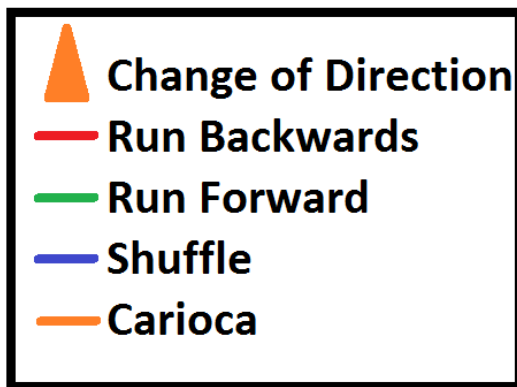


The duration of this drill is
3 Seconds.

The distance between cones is
2 Yards.

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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

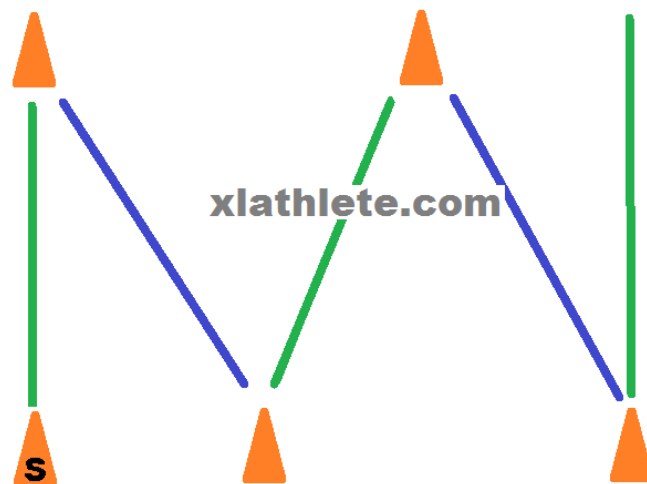
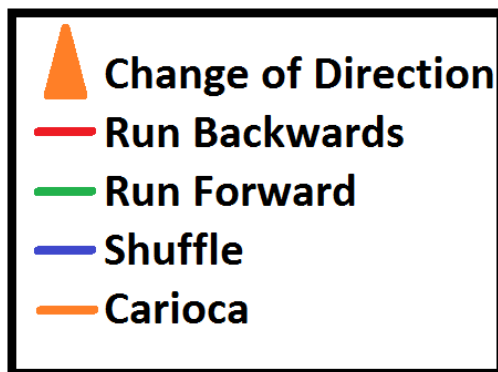


The duration of this drill is 3 Seconds.

The distance between cones is 2 Yards.

www.xlathlete.com

These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

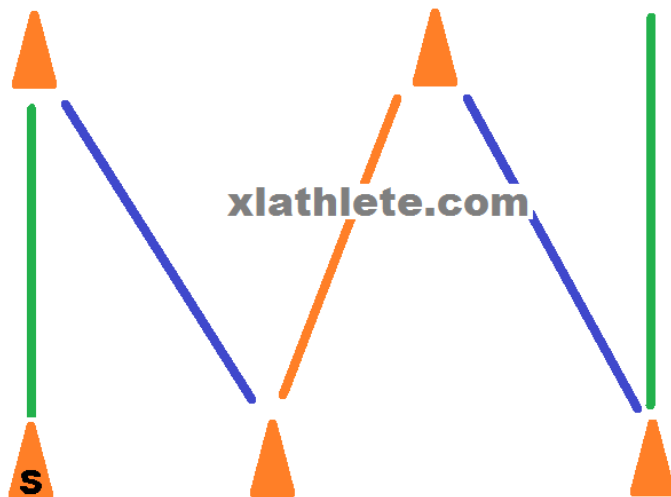
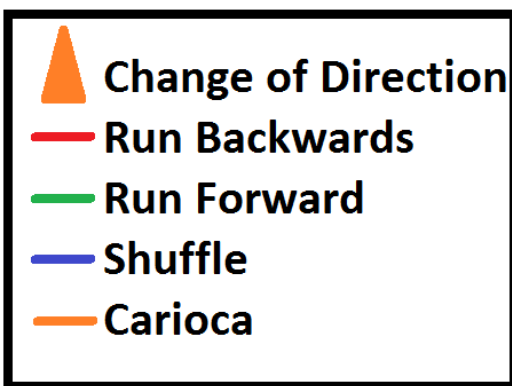


The duration of this drill is
3 Seconds.

The distance between cones is
2 Yards.

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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

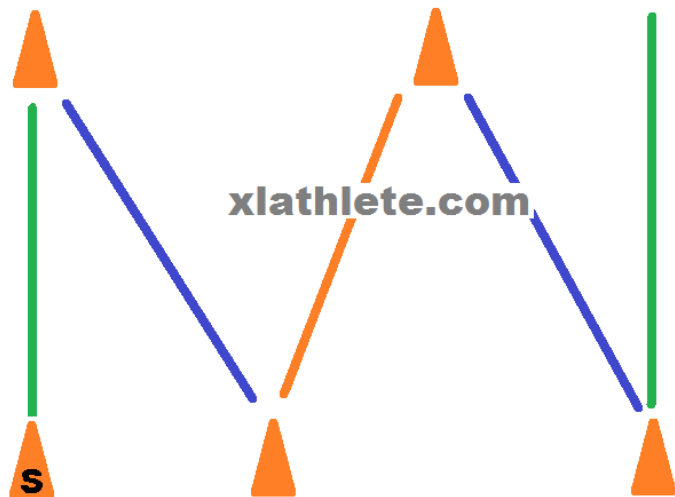
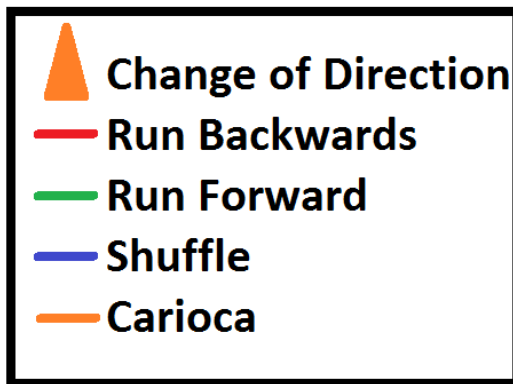


The duration of this drill is
3 Seconds.

The distance between cones is
2 Yards.

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These drills are designed to last 3 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The duration of this drill is
3 Seconds.

The distance between cones is
2 Yards.

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Agility Drill Speed Development Program

The following are a list of 5 second cone drills that can be used for speed development by focusing on work to rest ratios and the cones drills being used so that the coach gets the desired outcome. Stopping, starting and change of direction are of the utmost importance for many sports. Agility drills are one of the most effective methods for developing change of direction abilities, many people believe the agility ladder helps with change of direction, but if you look at the movements used during agility ladder training, you can see that these movements do not mimic what happens in sport. All drills that you see here are turning to the right; keep in mind the coach must have the athlete turn both right and left to develop symmetrical cutting and change of direction ability.

Agility Drills for Speed Development

When your main focus for agility drills is speed development then the most obvious time to complete the drills for speed development would be directly after your warm-up and right before going into the weight room or any other type of workout. At the high school level, I would recommend coaches do cone agility drills everyday they do workouts. The key focus for speed development is running cone agility drills as fast as possible and with that you must get plenty of rest so you can repeat a high-quality effort of maximal speed while doing the cone agility drills.

Rest Time for Speed Development

The suggested rest time for the 5 seconds cone agility drills for speed development and quickness is between 45 to 75 second between each repetition of a 5 second cone drill completed. This will give your athletes plenty of rest and keeps repetitions high-quality.

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Number of repetitions for Speed Development

With the 5 second cone drill the amount of repetitions that can be completed is usually between 8 to 12 high-quality repetitions. You would not want to complete more than this because the quality of the drill would suffer.

Administration of Drills

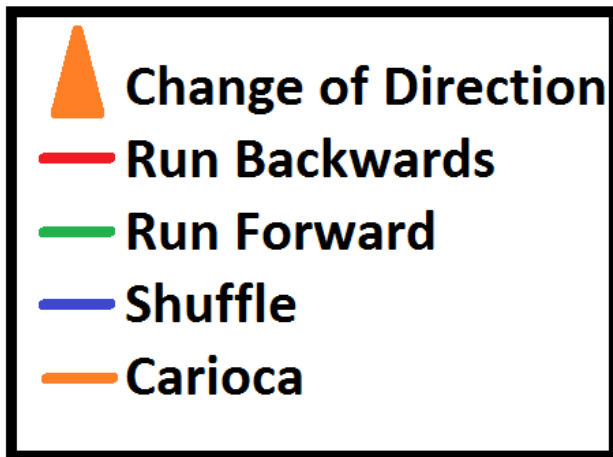
An effective way to set up cone agility drills for a large number of athletes is to pick the desired number of drills that you want to run, make sure you do the same drill to the left and right. Set the desired number of drills up on the field or in a gym. Then have one athlete at each station run the drill when the coach gives start signal, you may have as many as 12 athletes running at once depending on the desired number of drills and amount of space you have. Have the athletes walked to the next station so they get variations of the drills. Signal to let the next group of 12 athletes run the drills.

Coaching points

If you notice the cone agility drills never have athletes coming back through the drill or ending at the starting spot so you can actually run multiple athletes through the drill one after another because they will not cross paths. One of the most effective methods for speed development or conditioning is to set your agility drills up to have two starting lines, one line 3 yards behind the front starting line and have the athletes chase each other through the drills. The only rule is you can't leave your feet and reach across a cone to touch your chase partner; you can only touch the athlete in front of you on straight a ways.

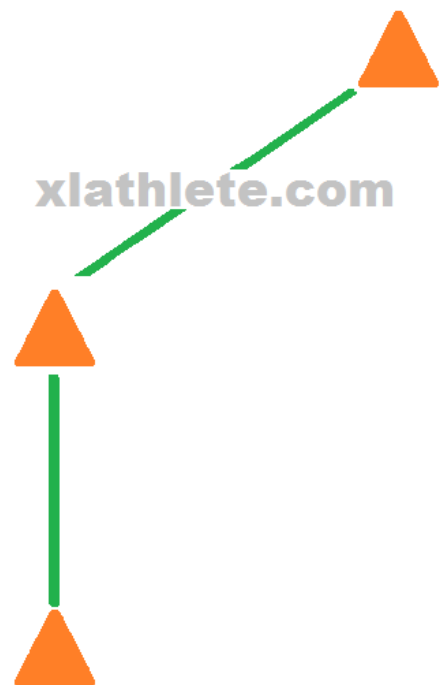
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



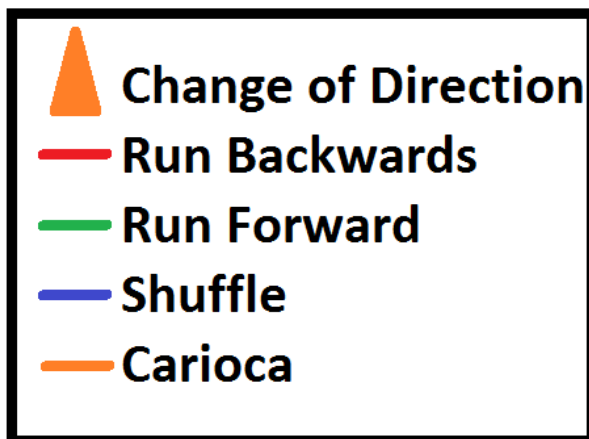
**The Duration of This Drill is
5 Seconds.**

**The Distance Between Cones is
15 Yards.**



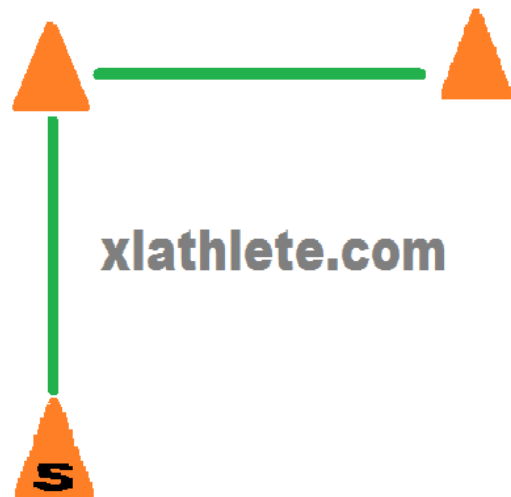
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



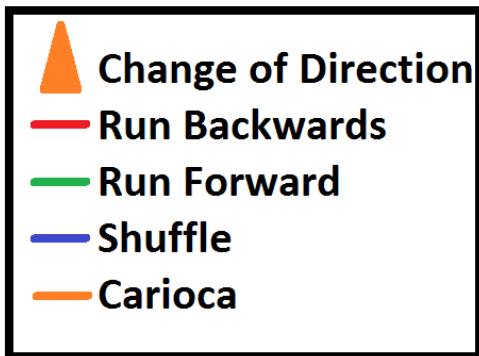
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 11 Yards.



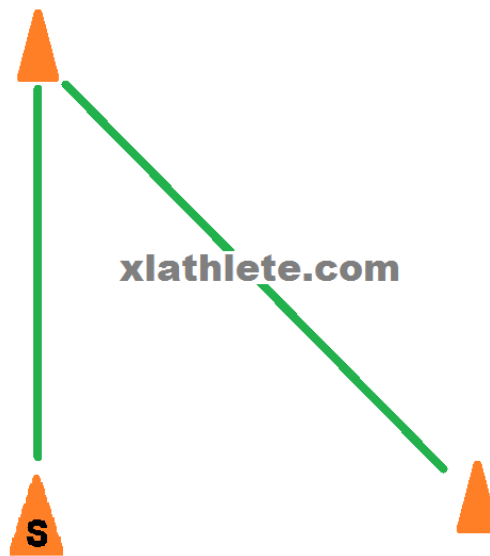
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



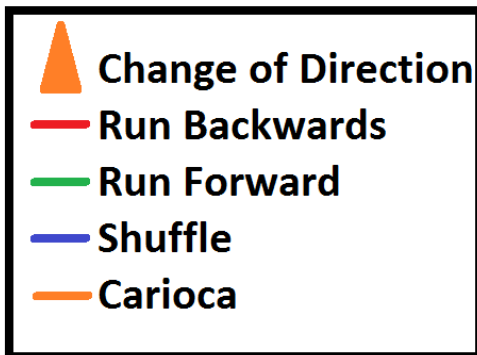
The duration of this drill is 5 seconds.

The distance between cones is 10 yards.



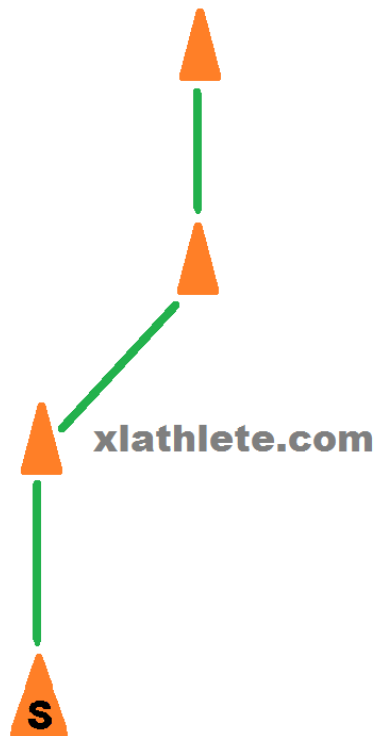
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



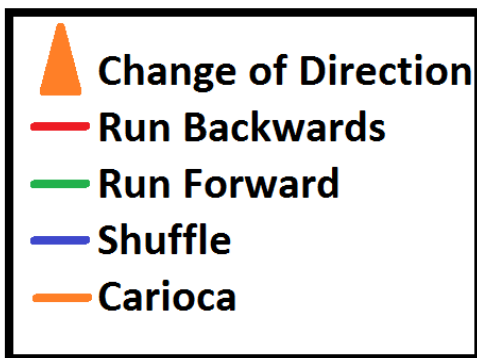
The duration of this drill is 5 seconds.

The distance between cones is 10 yards.



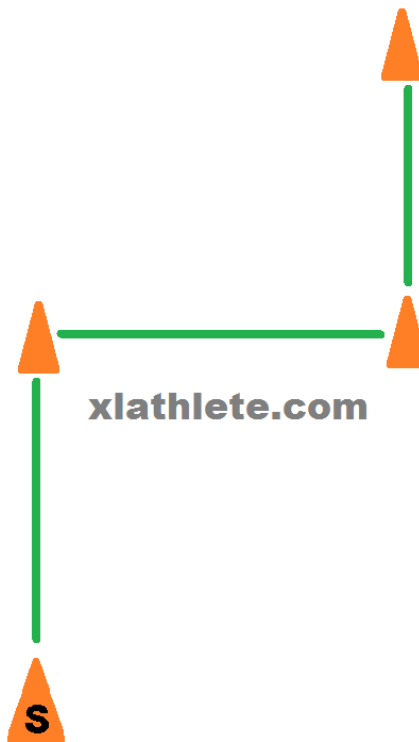
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



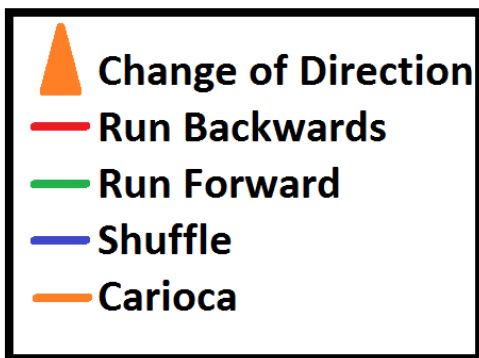
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 8 Yards.



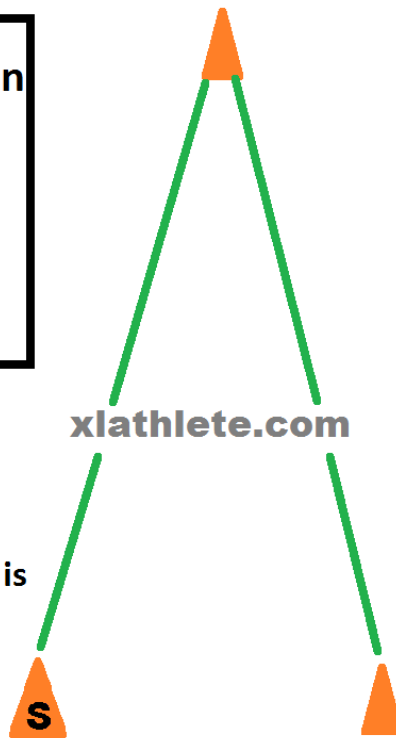
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



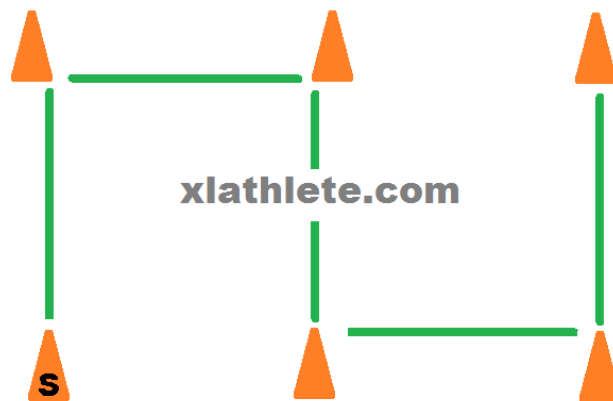
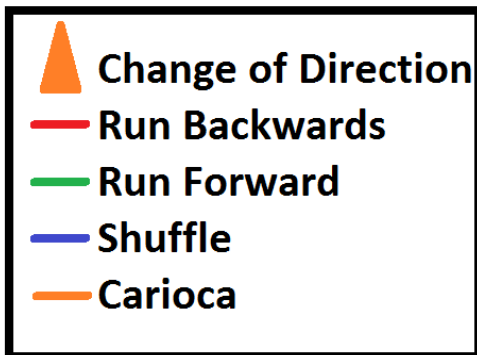
The duration of this drill is
5 sec

The distance between cones is
10 yds



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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

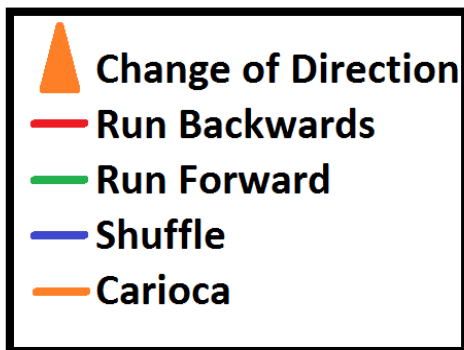


The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 5 yards.

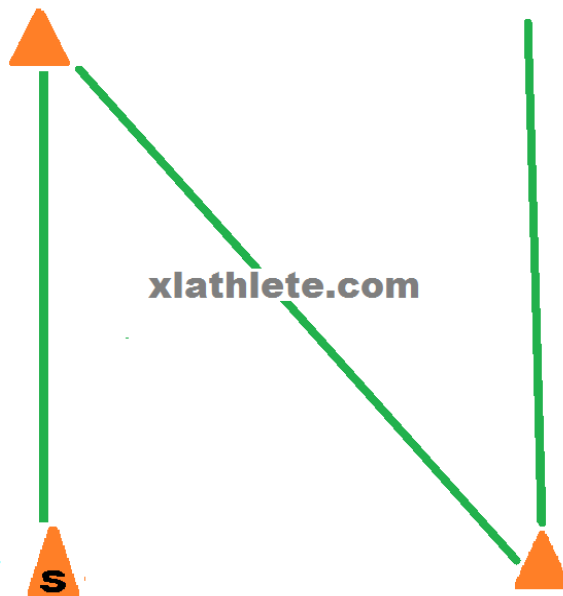
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



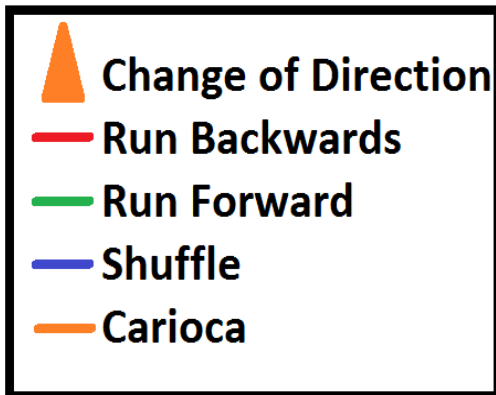
The Duration of This Drill is 5 seconds

The Distance Between Cones is 10 yards



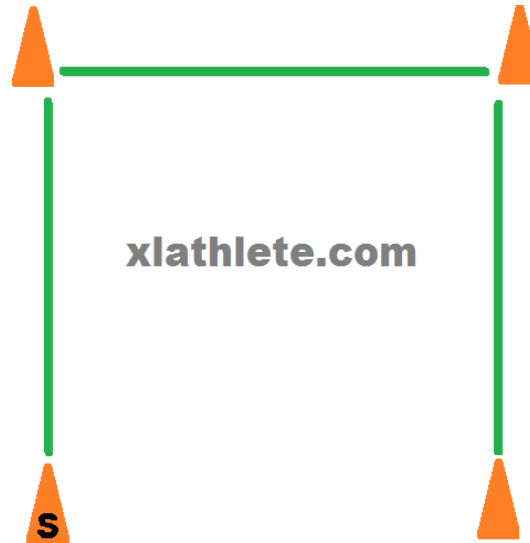
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



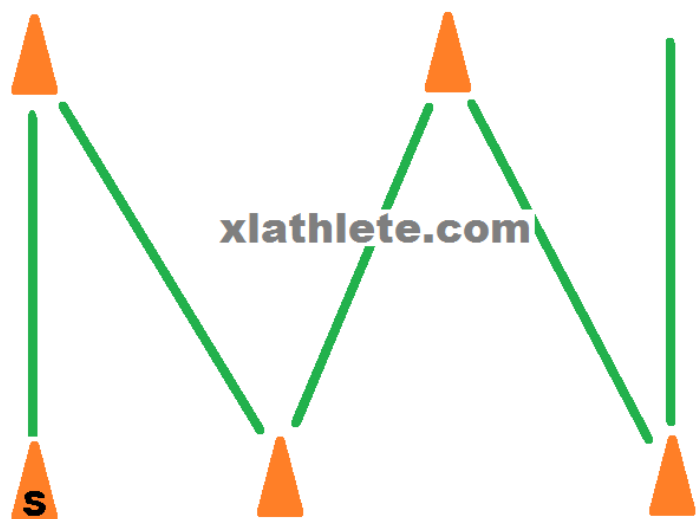
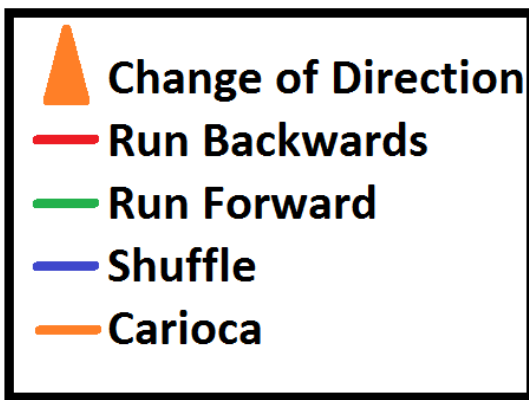
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 10 Yards.



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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The duration of this drill is 5 seconds.

The distance between cones is 4 yards.

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The following are a list of 5 second cone drills that can be used for speed development or conditioning by changing the emphasis placed on work to rest ratios and the cones drills being used so that the coach gets the desired outcome. Stopping, starting and change of direction are of the utmost importance for many sports. Agility drills are one of the most effective methods for developing change of direction abilities, many people believe the agility ladder helps with change of direction, but if you look at the movements used during agility ladder training, you can see that these movements do not mimic what happens in sport. All drills that you see here are turning to the right; keep in mind the coach must have the athlete turn both right and left to develop symmetrical cutting and change of direction ability.

Agility Drills for Speed Development

When your main focus for agility drills is speed development then the most obvious time to complete the drills for speed development would be directly after your warm-up and right before going into the weight room or any other type of workout. At the high school level, I would recommend coaches do cone agility drills everyday they do workouts. The key focus for speed development is running cone agility drills as fast as possible and with that you must get plenty of rest so you can repeat a high-quality effort of maximal speed while doing the cone agility drills.

Rest Time for Speed Development -The suggested rest time for the 5 seconds cone agility drills for speed development and quickness is between 45 to 70 second between each repetition of a 5 second cone drill completed. This will give your athletes plenty of rest and keeps repetitions high-quality.

Number of repetitions for Speed Development - With the 5 second cone drill the amount of repetitions that can be completed is usually between 8 to 12 high-quality repetitions. You would not want to complete more than this because the quality of the drill would suffer.

Agility drills for Conditioning

You want to complete the 5 seconds agility drills for conditioning at the end of your work. This is the only reasonable time to be conditioning because any attempt to do high-quality work will not be very effective.

Rest Time for Conditioning - The suggested rest time for the 5 seconds cone agility drills for conditioning is between 25 and 40 seconds between each repetition of the 5 second cone drill.

Number repetitions for Conditioning- With the 5 second cone drill the amount of repetitions that can be completed for conditioning is usually 12 to 24 repetitions. It will take this many repetitions to get a conditioning effect.

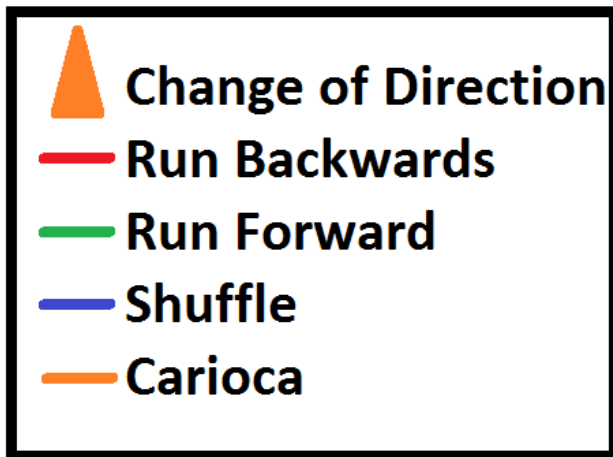
www.xlathlete.com

Administration of drills - An effective way to set up cone agility drills for a large number of athletes is to pick the desired number of drills that you want to run, make sure you do the same drill to the left and right. Set the desired number of drills up on the field or in a gym. Then have one athlete at each station run the drill when the coach gives start signal, you may have as many as 12 kids running at once depending on the desired number of drills and amount of space you have. Have the athletes walked to the next station so they get variations of the drills. Signal to let the next group of 12 kids run the drills.

Coaching points - If you notice the cone agility drills never have athletes coming back through the drill or ending at the starting spot so you can actually run multiple athletes through the drill one after another because they will not cross paths. One of the most effective methods for speed development or conditioning is to set your agility drills up to have two starting lines, one line 3 yards behind the front starting line and have the athletes chase each other through the drills. The only rule is you can't leave your feet and reach across a cone to touch your chase partner; you can only touch the athlete in front of you on straight a ways.

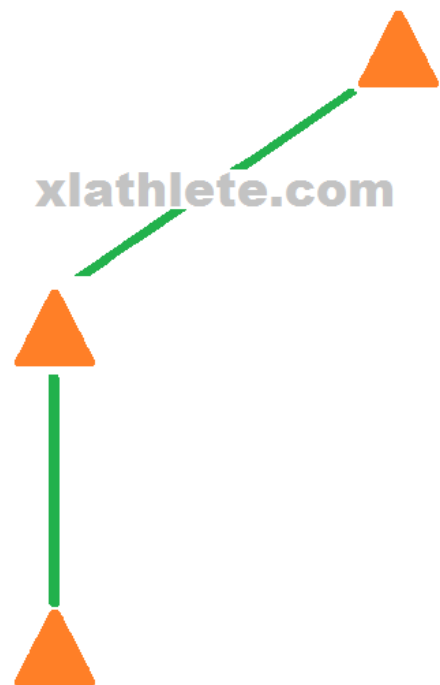
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



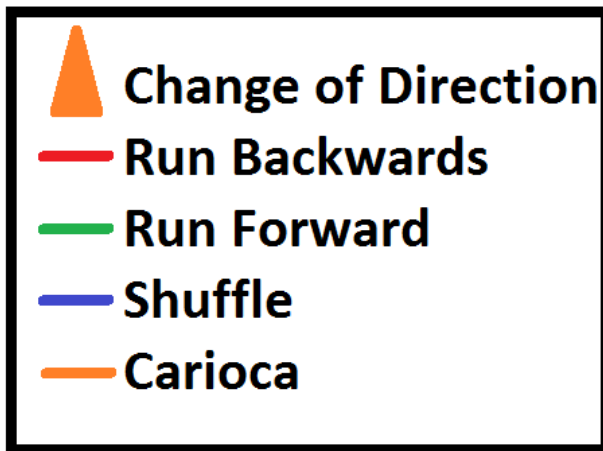
**The Duration of This Drill is
5 Seconds.**

**The Distance Between Cones is
15 Yards.**



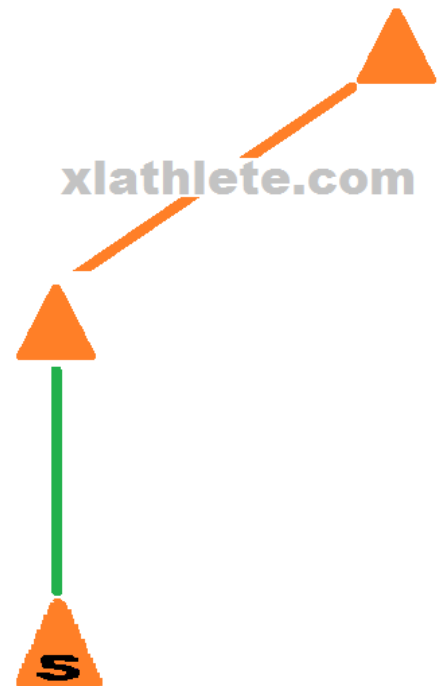
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



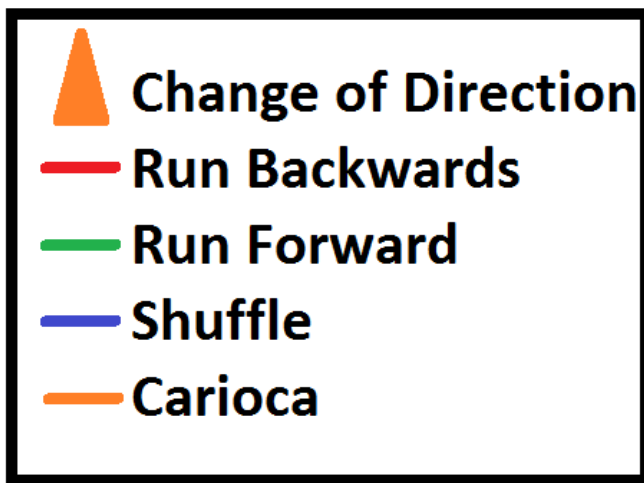
The duration of this drill is 5 seconds.

The distance between cones is 10 yards



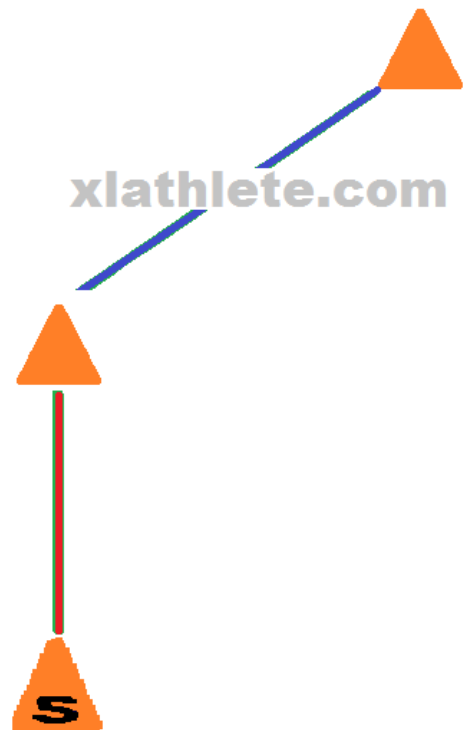
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



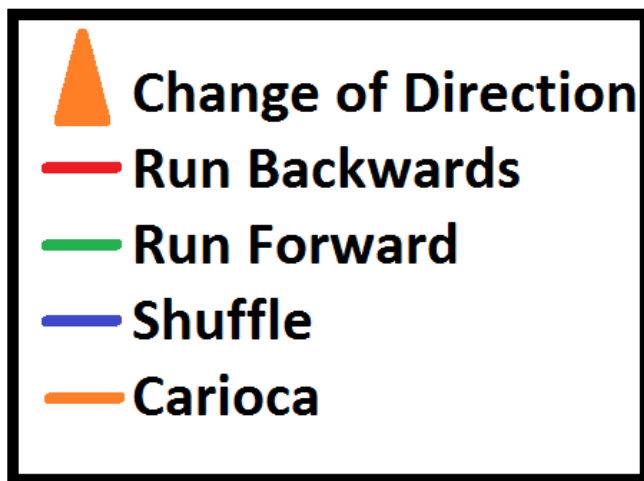
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 8 Yards.



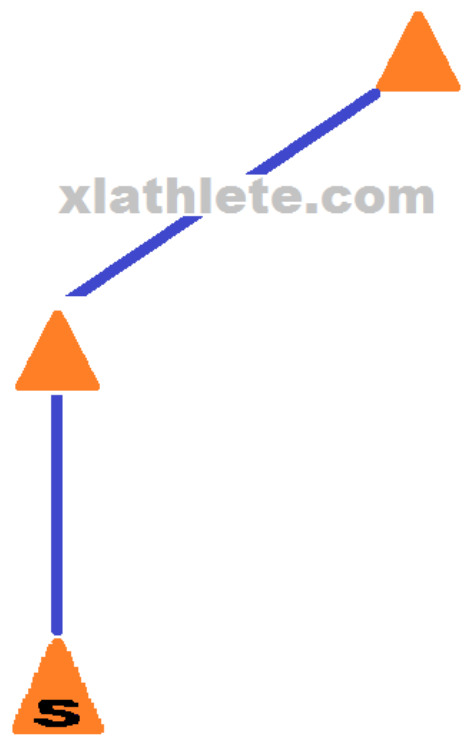
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



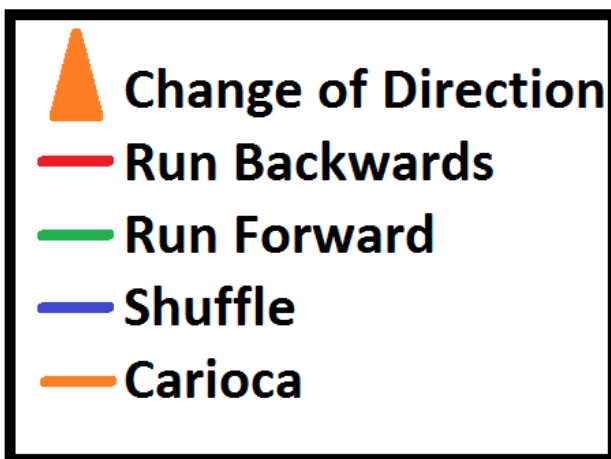
**The Duration of This Drill is
5 Seconds.**

**The Distance Between Cones is
8 Yards.**



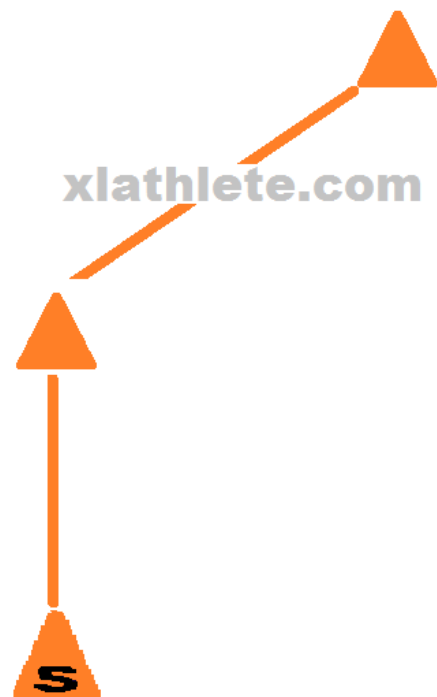
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



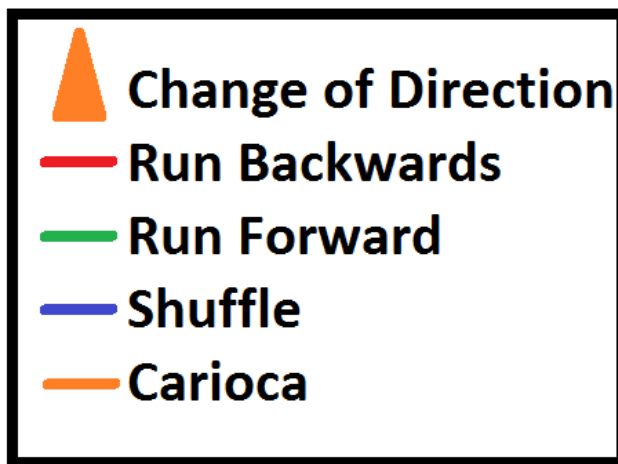
The Duration of This Drill is
5 Seconds.

The Distance Between Cones is
8 Yards.



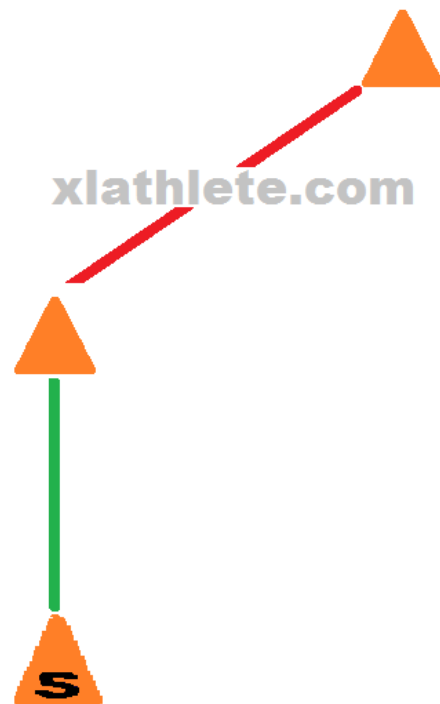
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



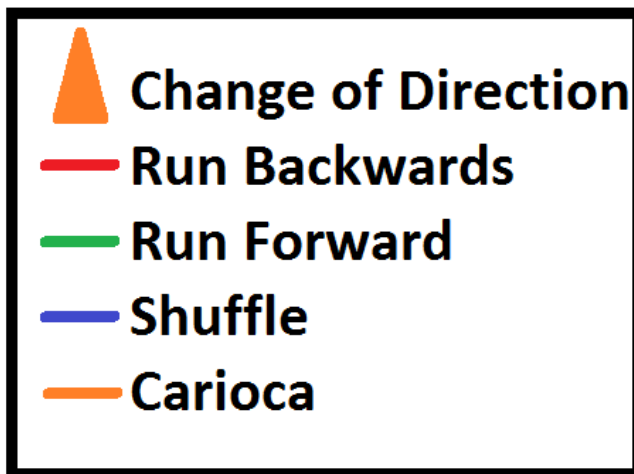
The Duration of This Drill is
5 Seconds.

The Distance Between Cones is
10 Yards.



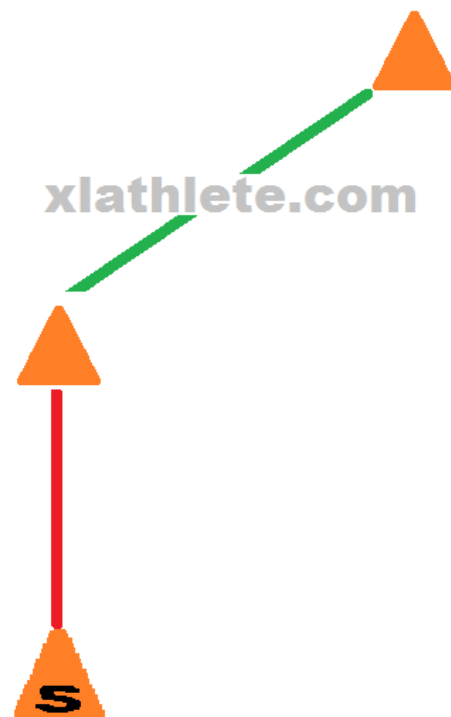
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



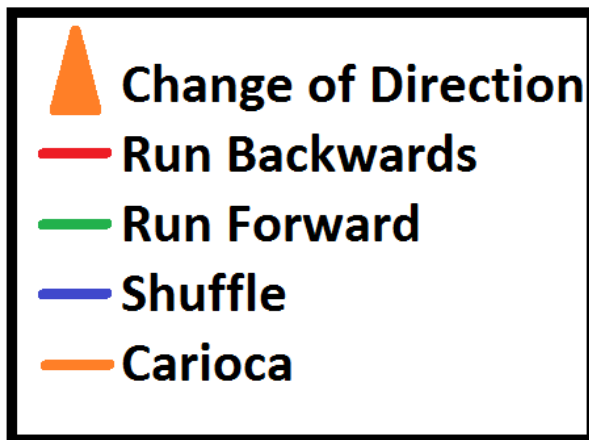
The Duration of This Drill is
5 Seconds.

The Distance Between Cones is
10 Yards.



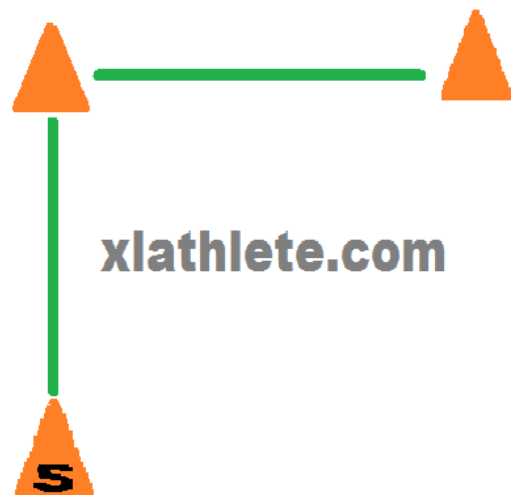
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



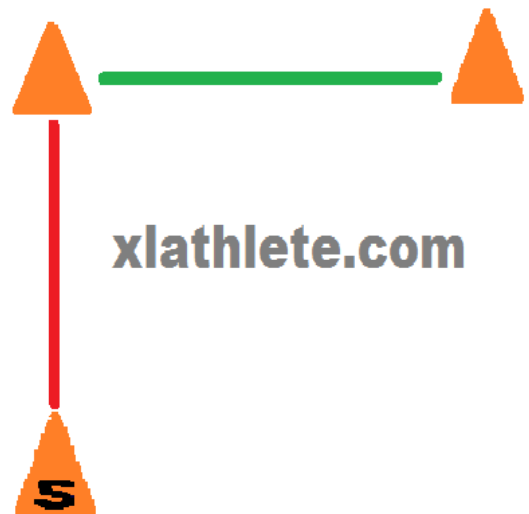
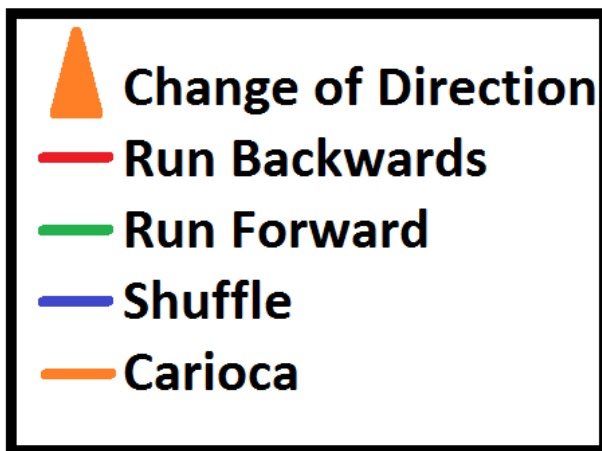
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 11 Yards.



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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

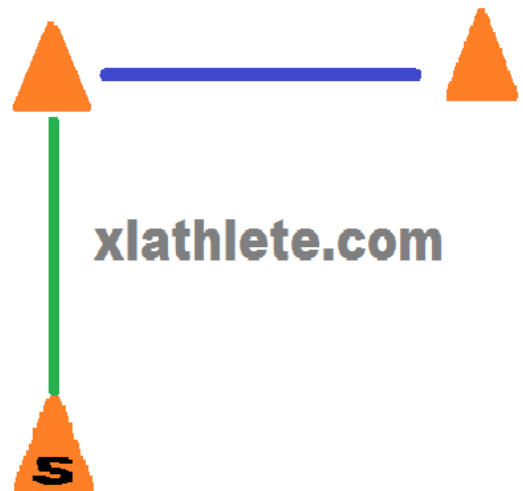
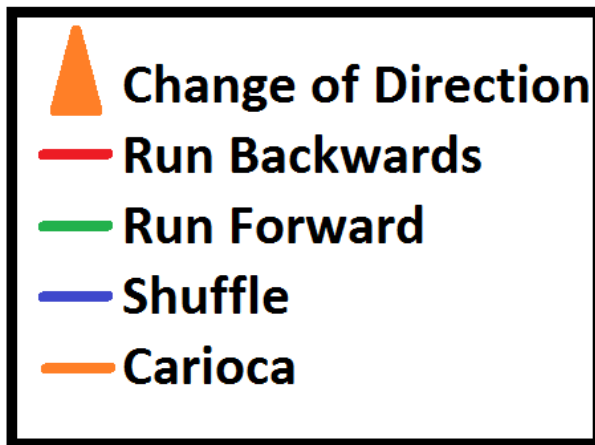


The Duration of This Drill is
5 Seconds.

The Distance Between Cones is
9 Yards.

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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

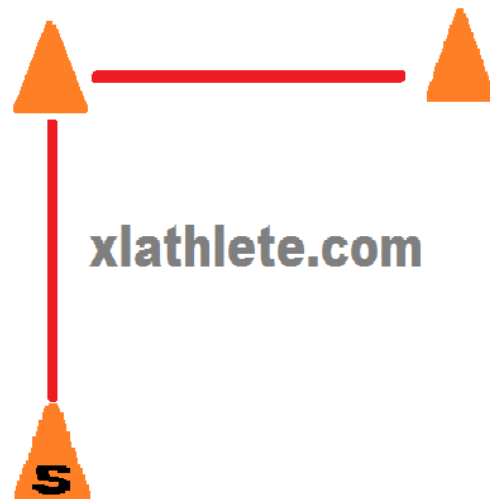
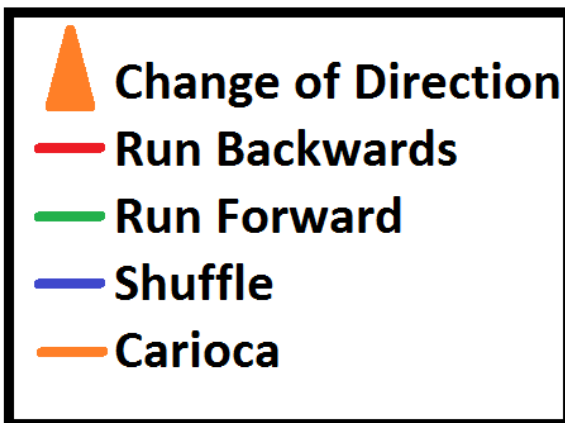


The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 9 Yards.

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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

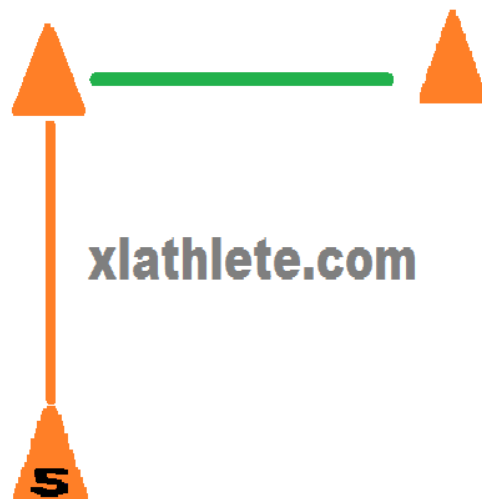
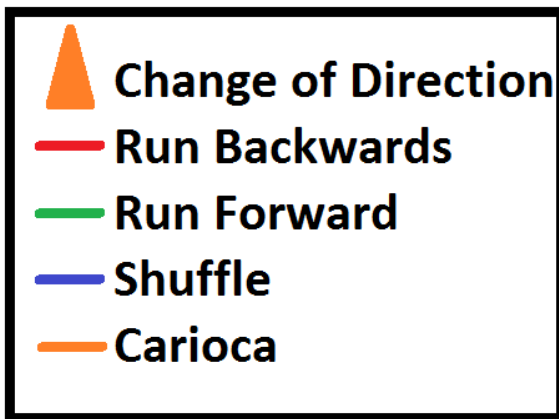


The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 8 Yards.

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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

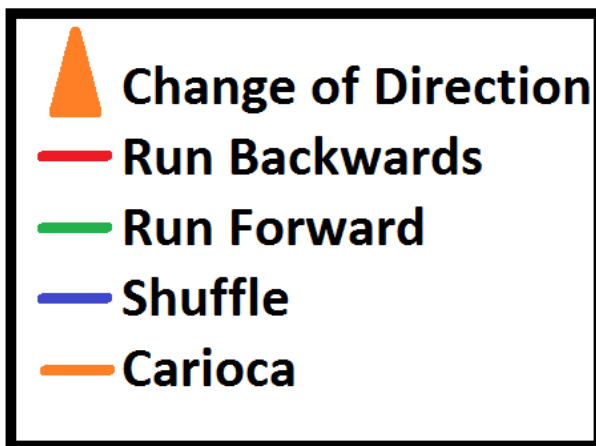


The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 9 Yards.

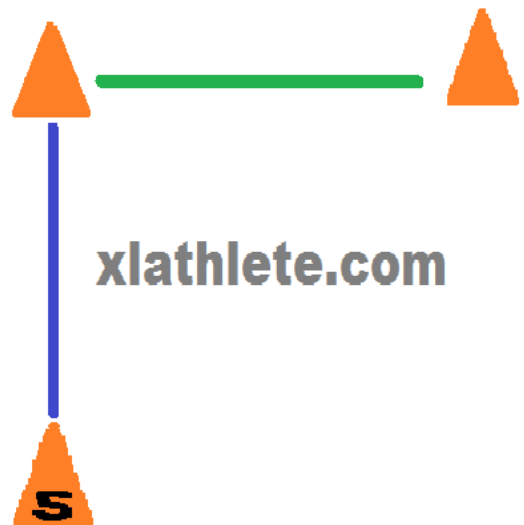
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



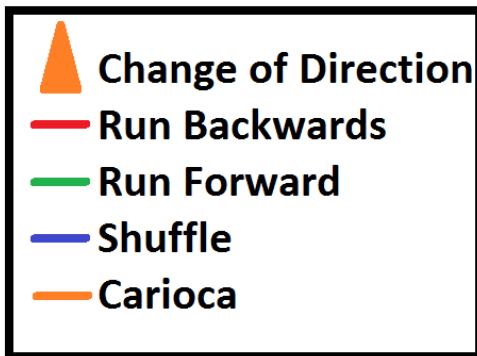
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 9 Yards.



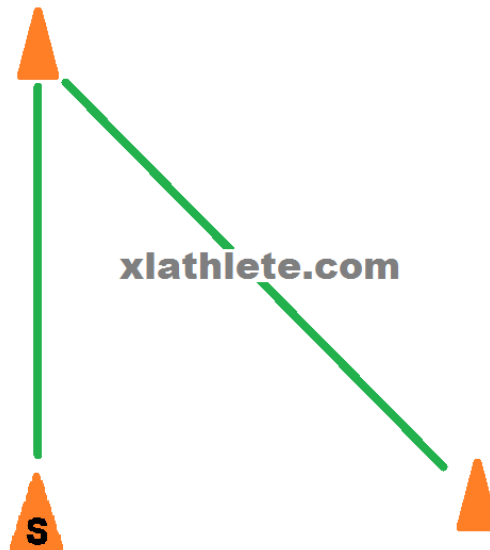
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



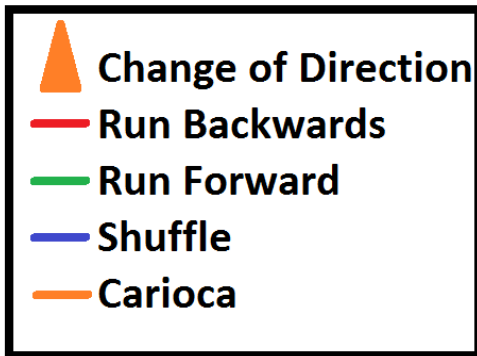
The duration of this drill is 5 seconds.

The distance between cones is 10 yards.



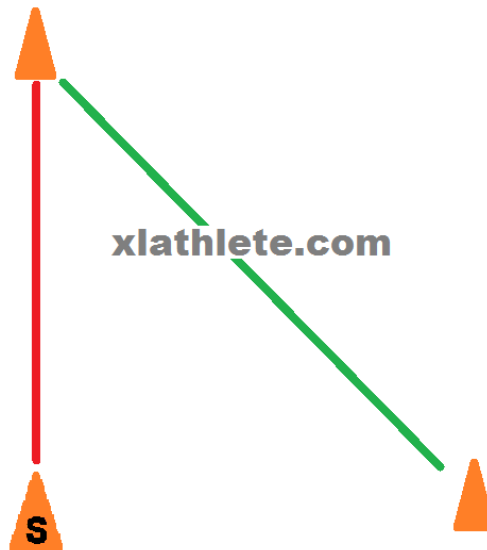
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



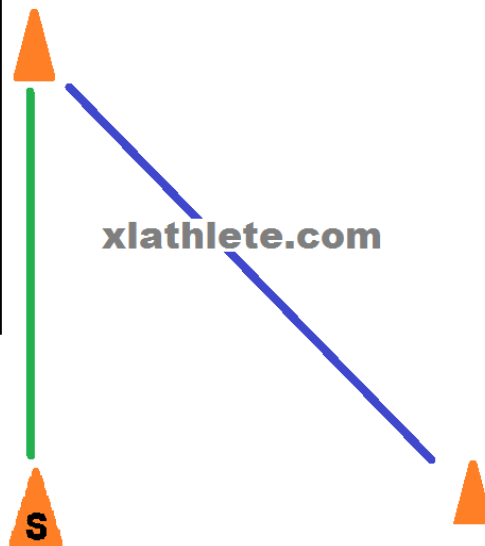
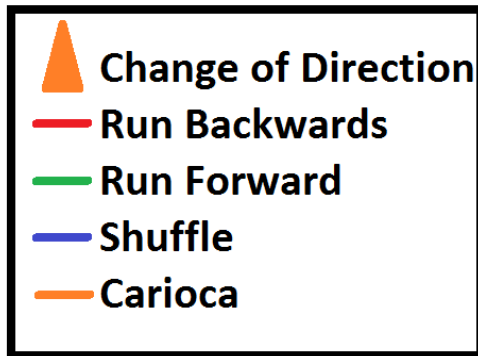
The duration of this drill is 5 seconds.

The distance between cones is 7 yards.



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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

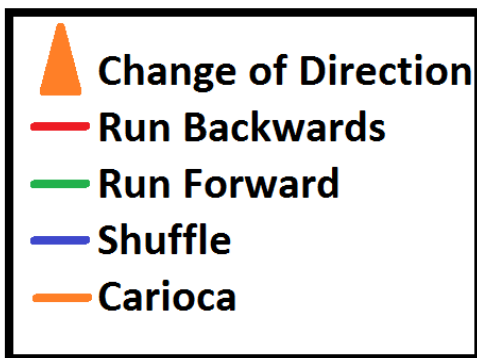


The duration of this drill is 5 seconds.

The distance between cones is 6 yards.

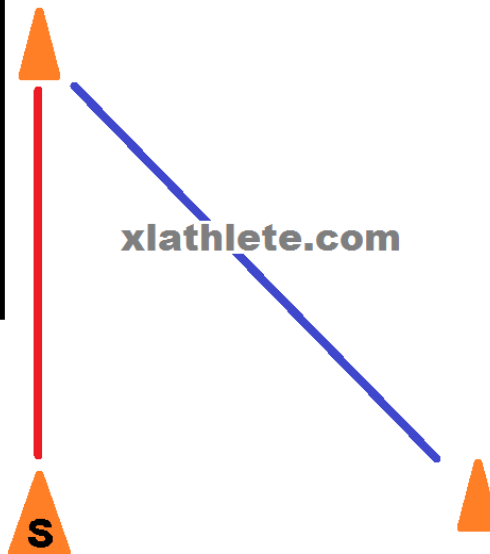
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



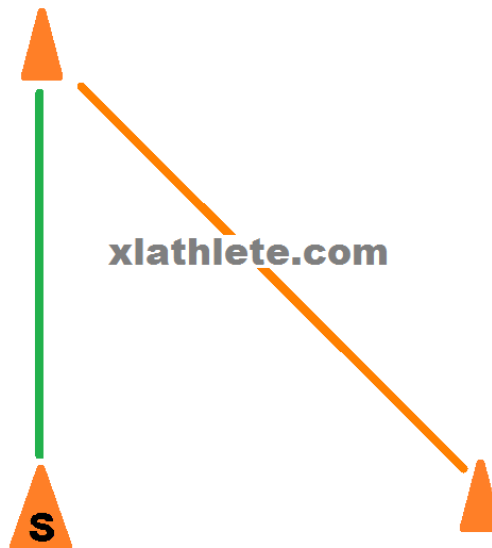
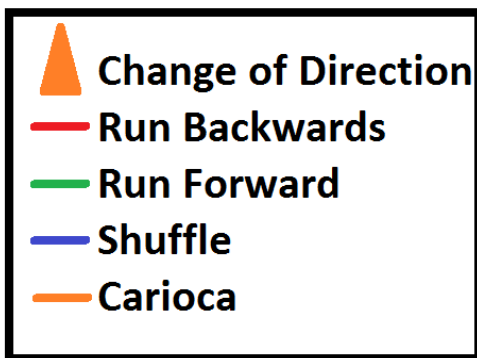
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 6 yards.



www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

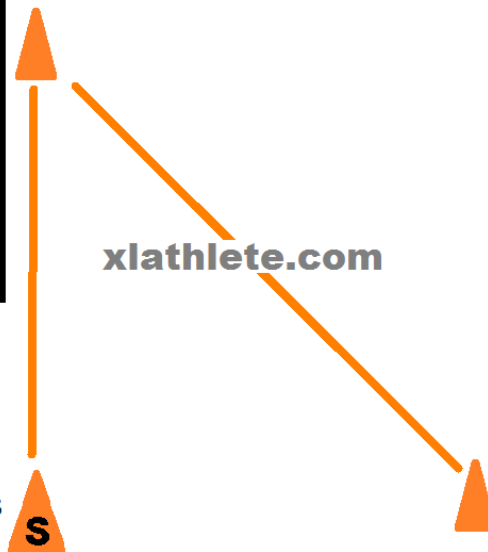
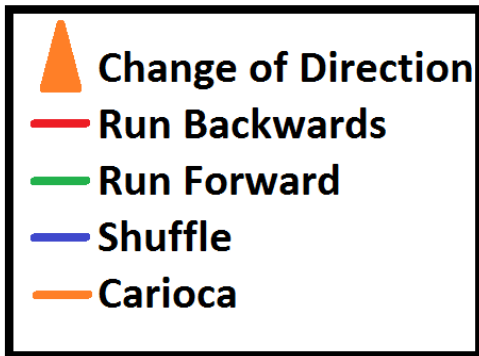


The duration of this drill is 5 seconds.

The distance between cones is 7 yards.

www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

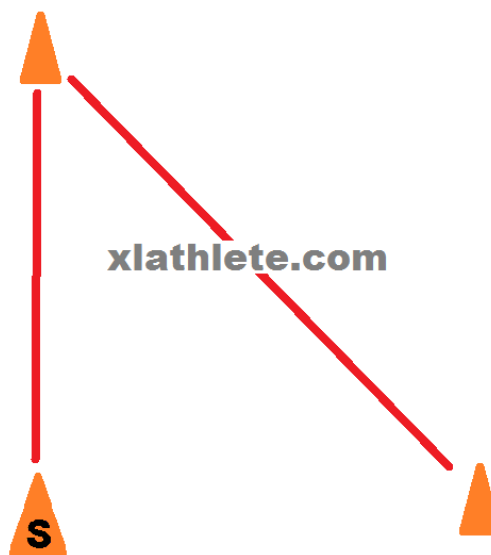
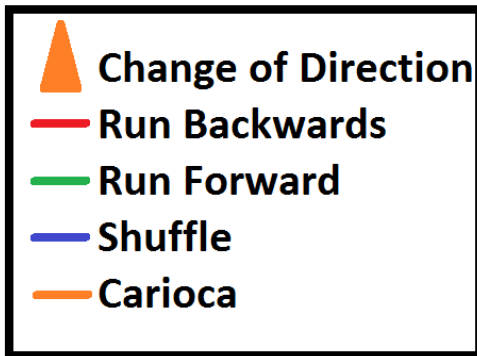


The duration of this drill is 5 seconds.

The distance between cones is 5 yards.

www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

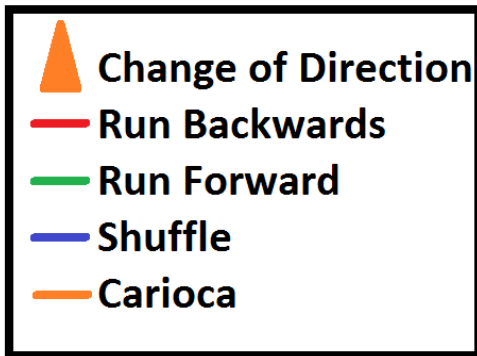


The duration of this drill is 5 seconds.

The distance between cones is 5 yards.

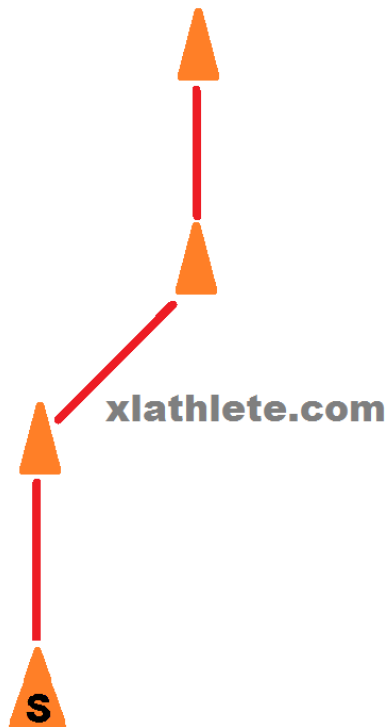
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



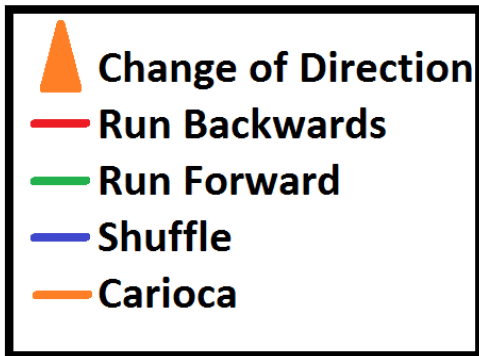
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 5 Yards.



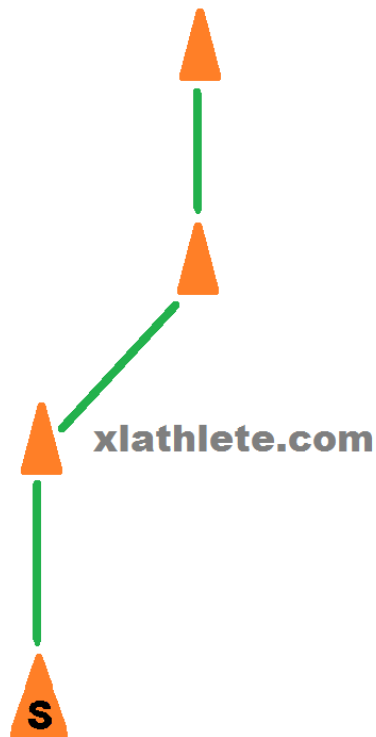
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



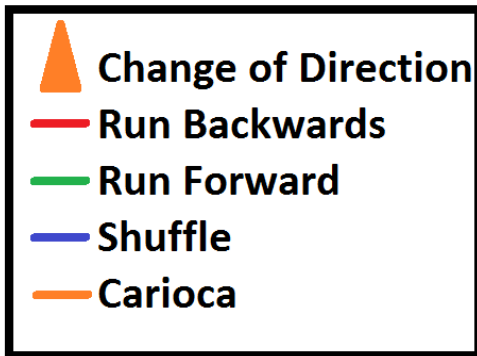
The duration of this drill is 5 seconds.

The distance between cones is 10 yards.



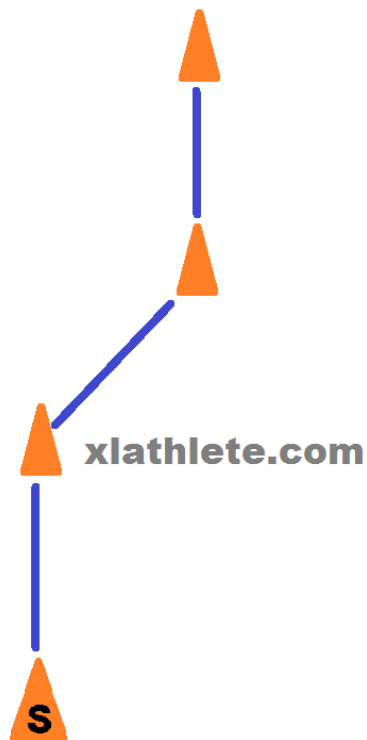
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



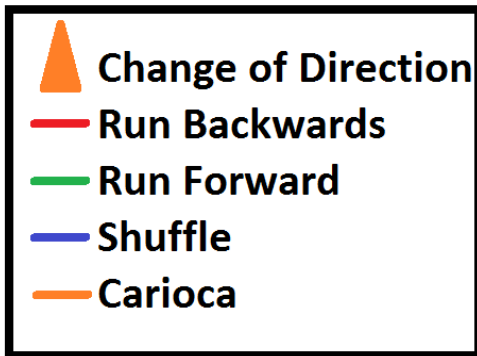
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 5 Yards.



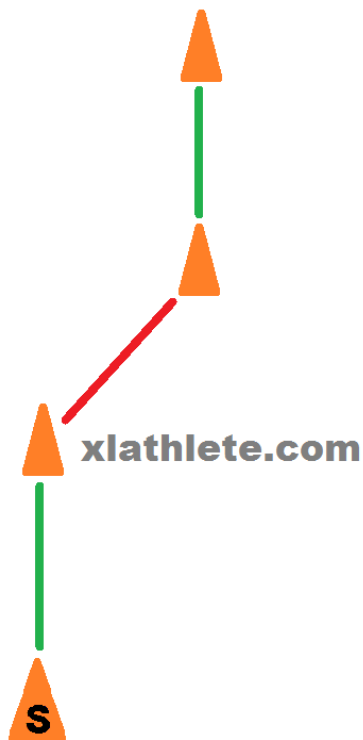
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



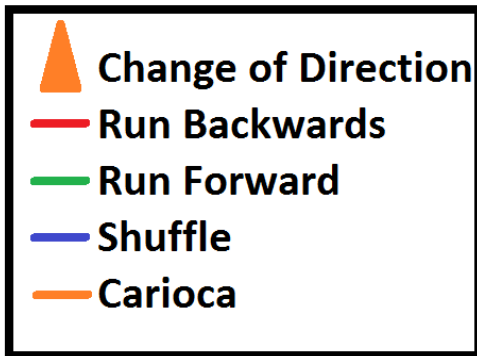
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 6 Yards.



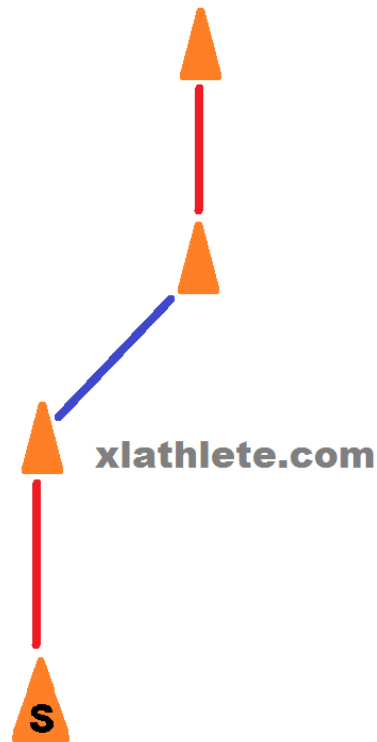
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



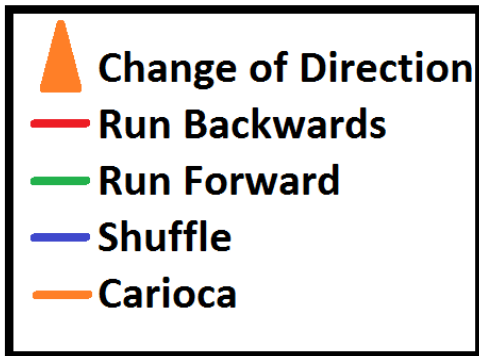
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 5 Yards.



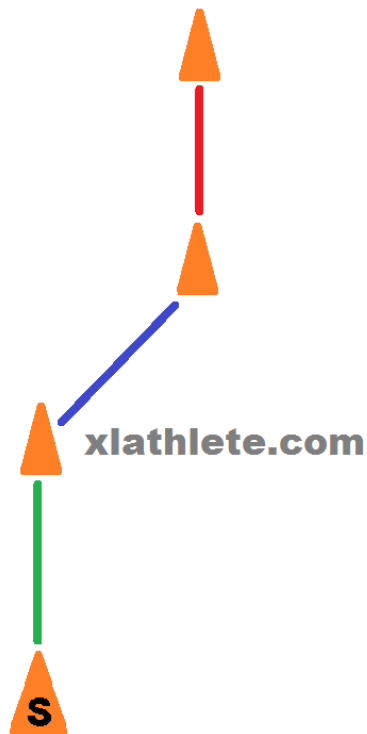
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



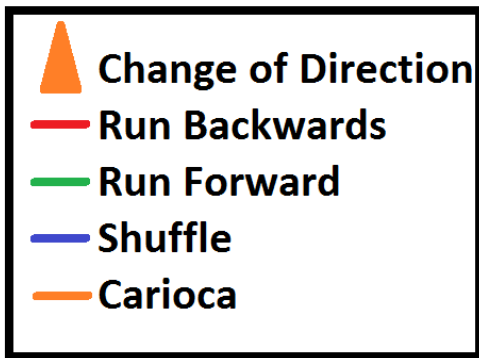
The duration of this drill is 5 seconds

The distance between cones is 5 yards



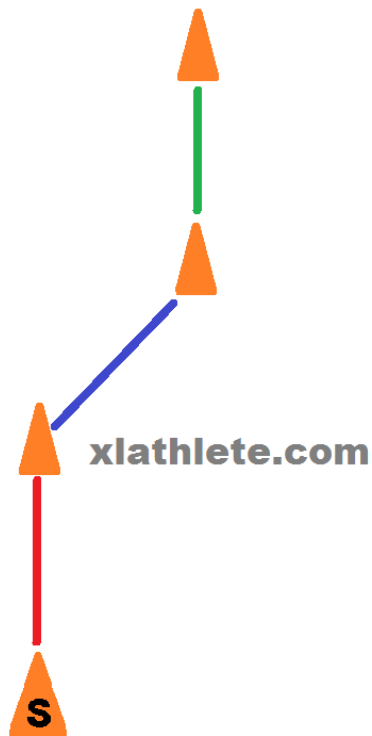
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



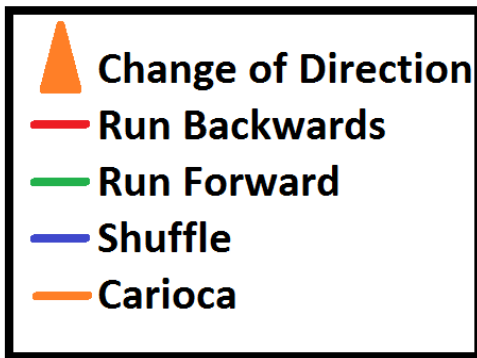
The duration of this drill is 5 seconds

The distance between cones is 5 yards



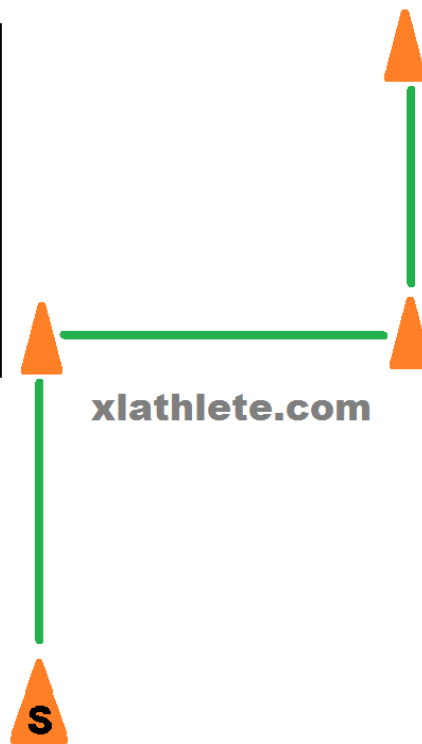
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



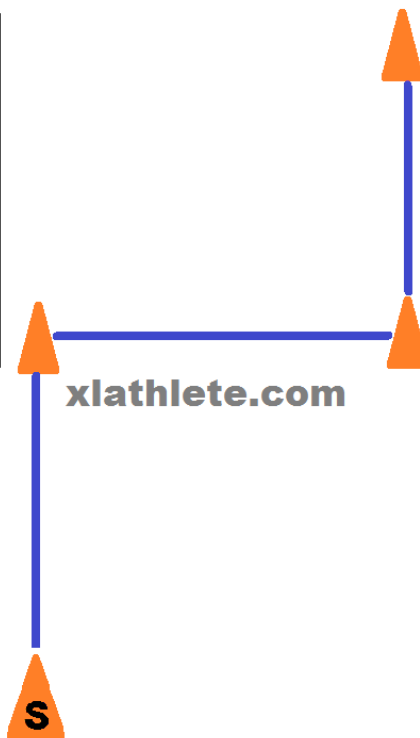
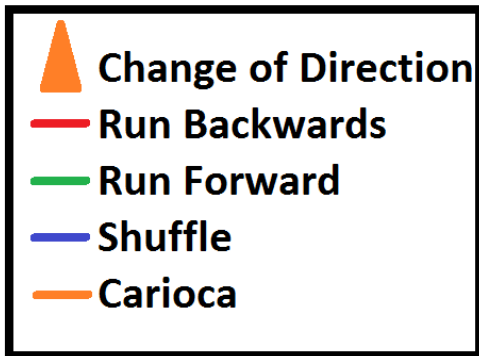
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 8 Yards.



www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

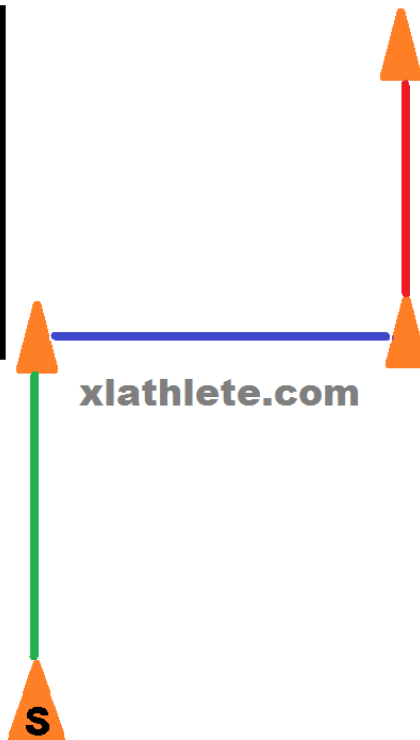
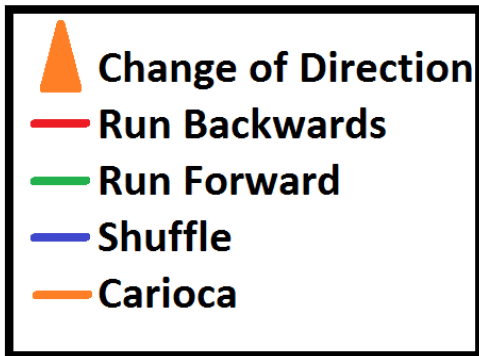


The duration of this drill is
5 seconds

The distance between cones is
5 yards

www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

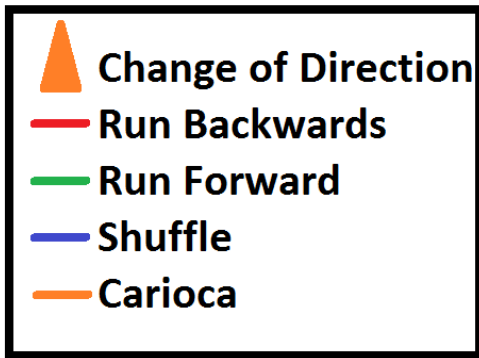


The duration of this drill is
5 seconds

The distance between cones is
5 yards

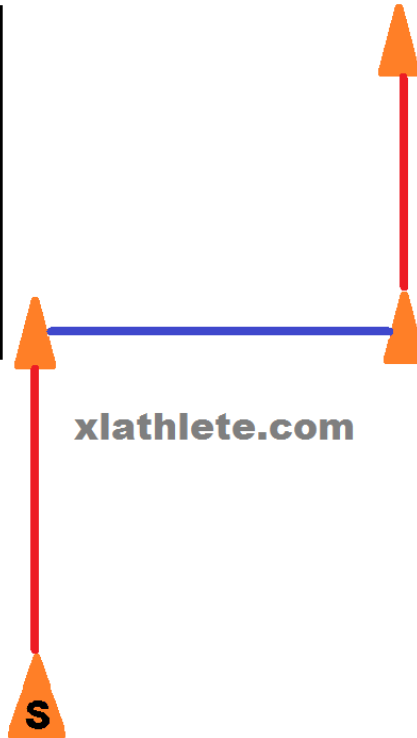
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



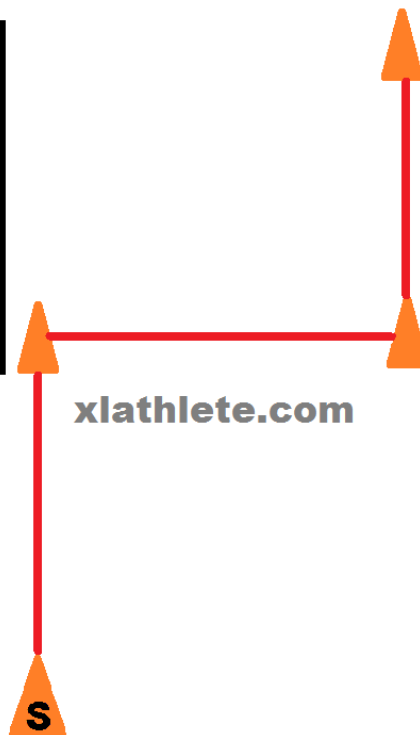
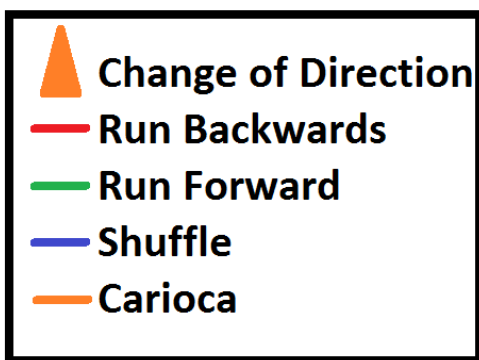
The duration of this drill is
5 Seconds

The distance between cones is
5 yards



www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The duration of this drill is

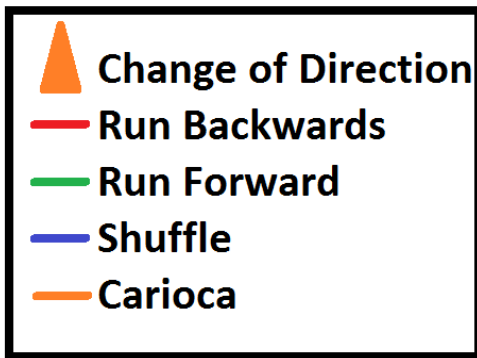
5 seconds

The distance between cones is

5 yards

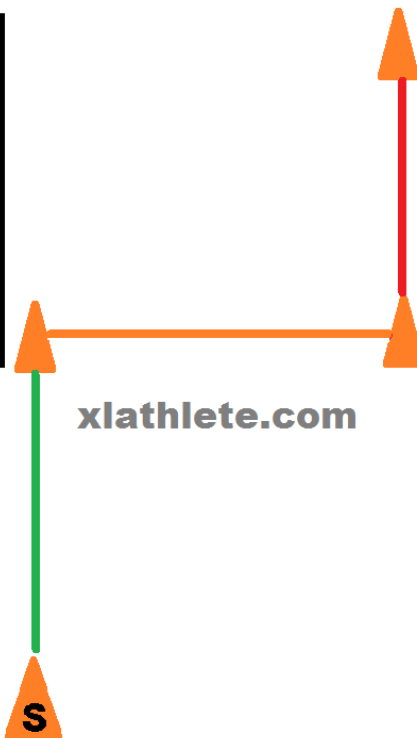
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



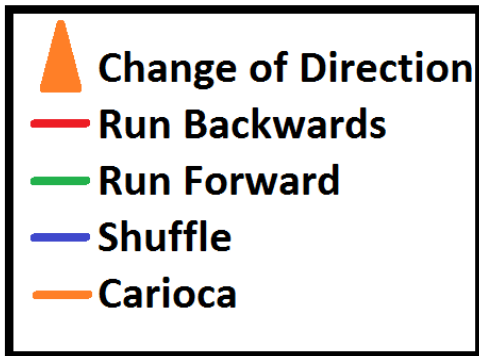
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 5 Yards.



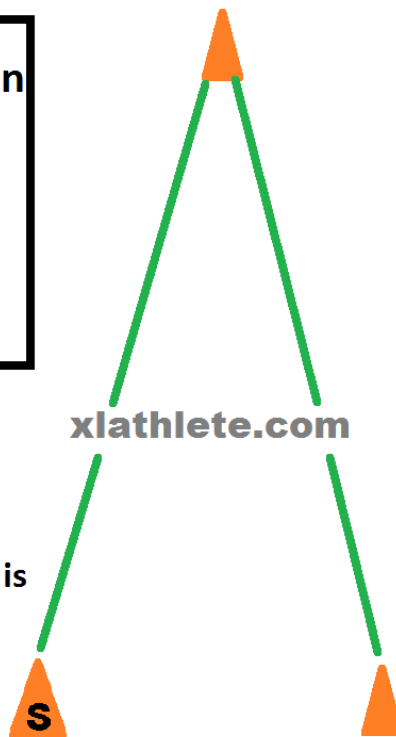
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



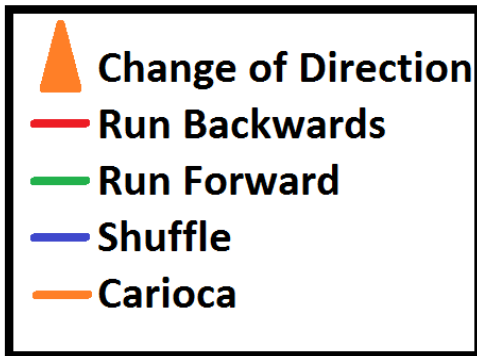
The duration of this drill is
5 sec

The distance between cones is
10 yds



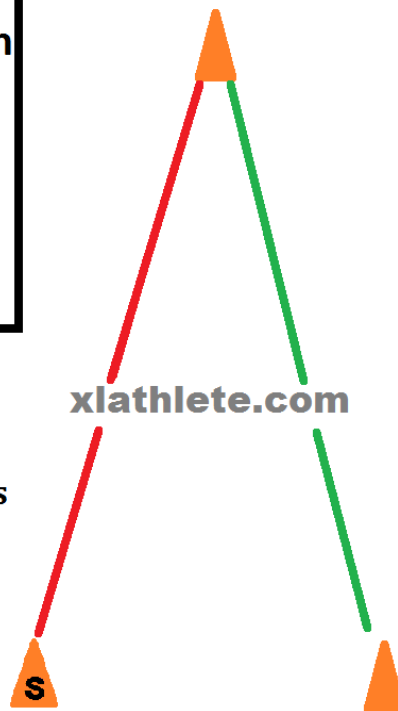
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



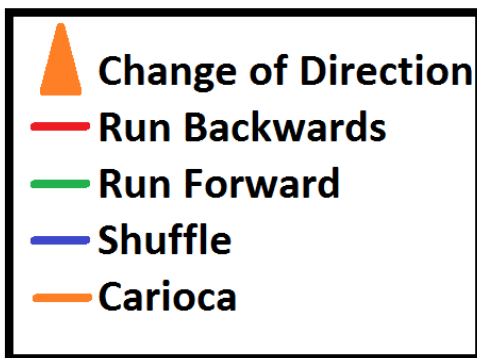
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 9 Yards.



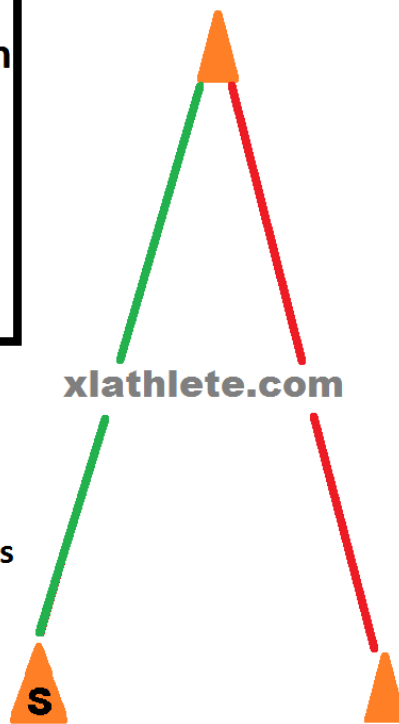
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



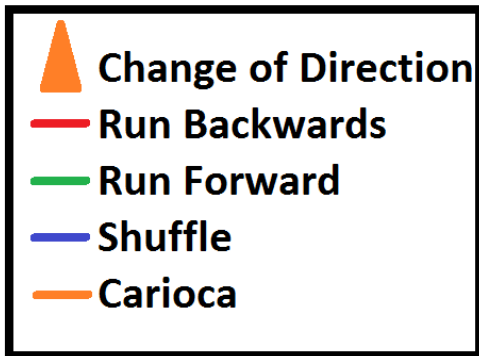
The duration of this drill is
5 sec

The distance between cones is
10 yds



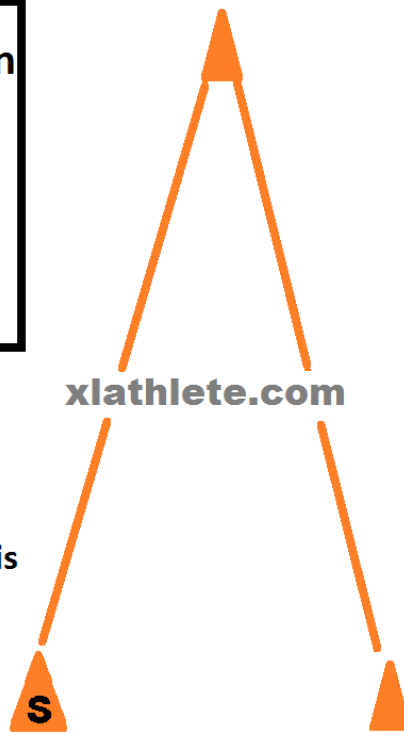
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



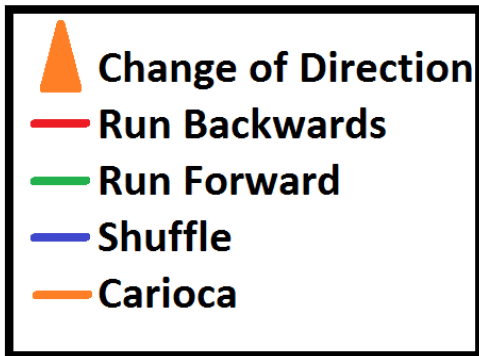
The duration of this drill is
5 sec

The distance between cones is
8 yds



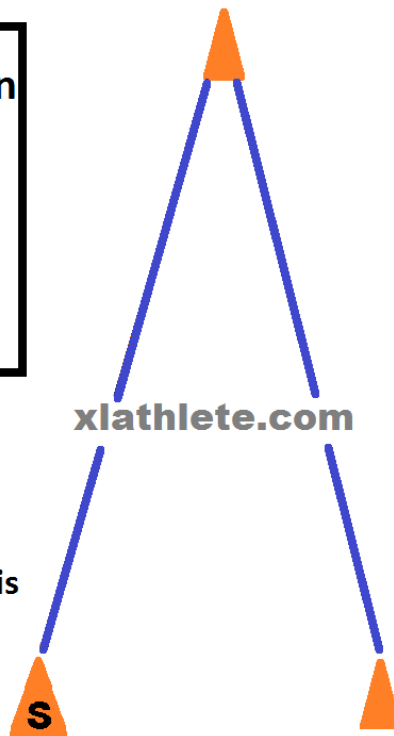
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



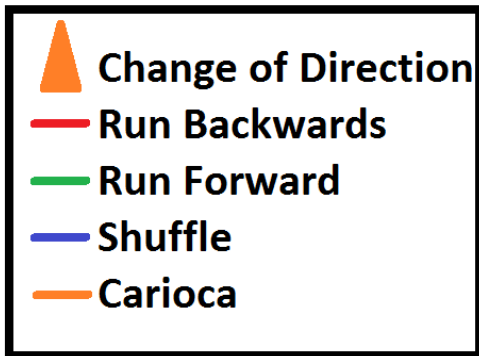
The duration of this drill is
5 sec

The distance between cones is
9 yds



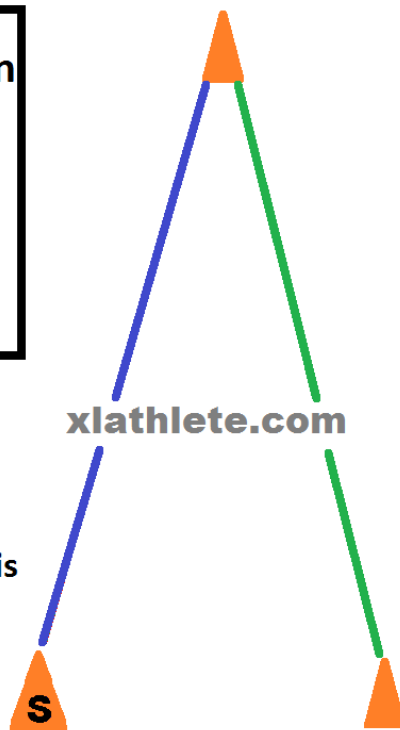
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



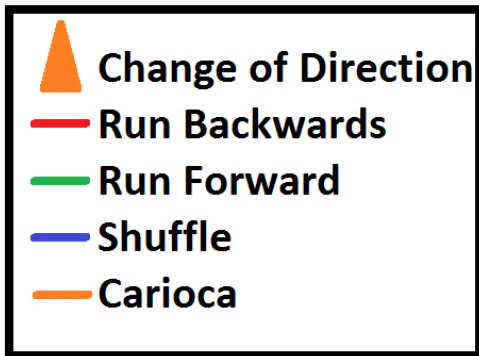
The duration of this drill is
5 sec

The distance between cones is
10 yds



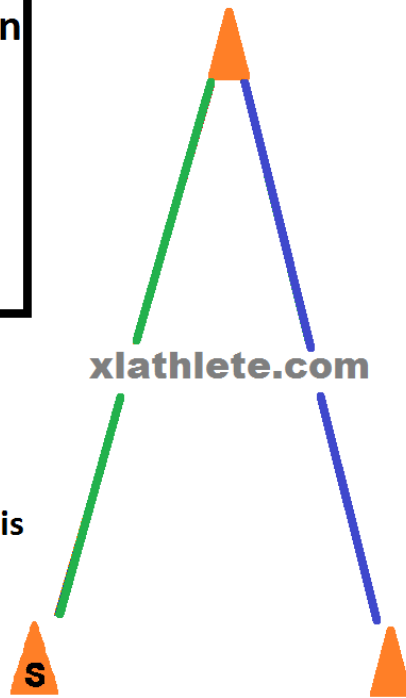
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



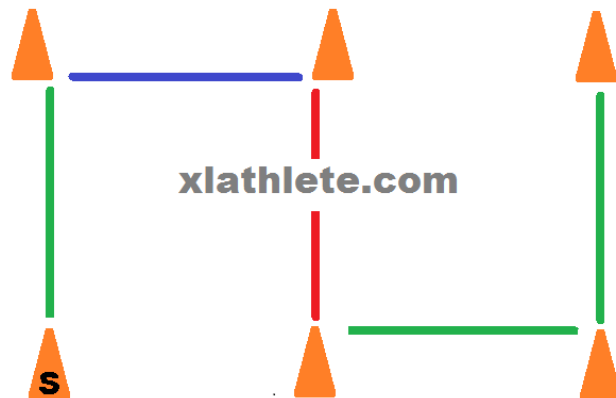
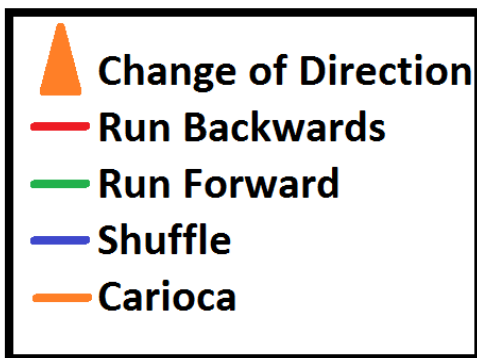
The duration of this drill is
5 sec

The distance between cones is
10 yds



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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

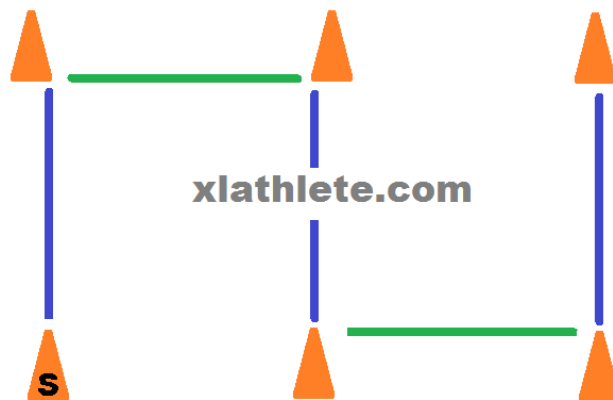
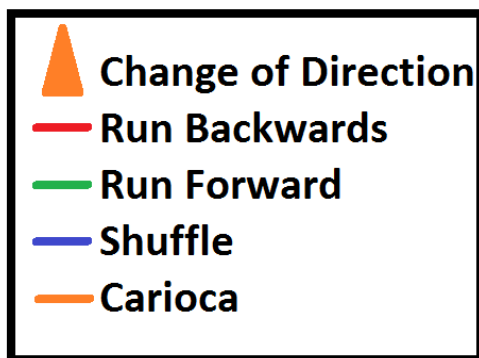


The duration of this drill is 5 seconds

The distance between cones is 4 yards.

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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

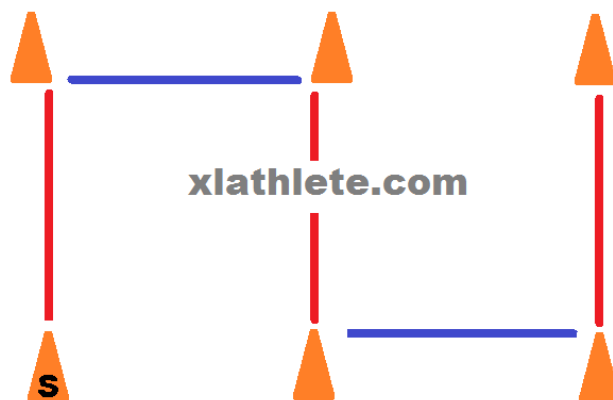
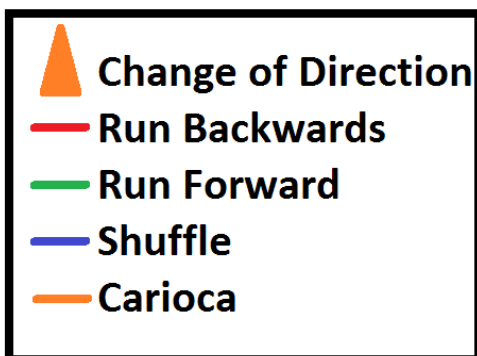


The Duration of This Drill is
5 Seconds.

The Distance Between Cones is
4 yards.

www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

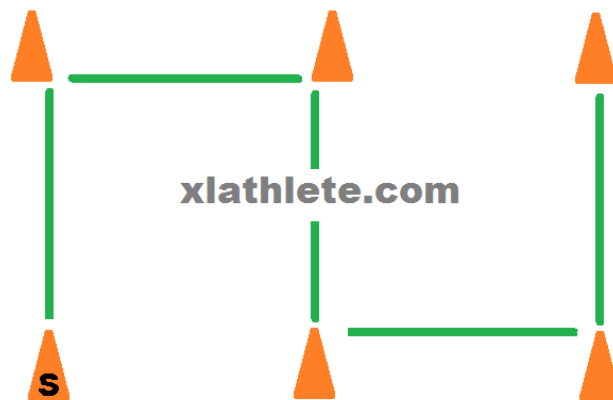
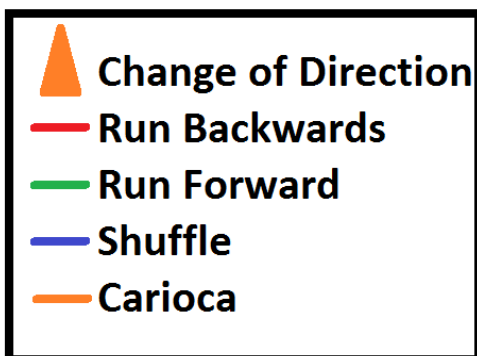


The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 3 Yards.

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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

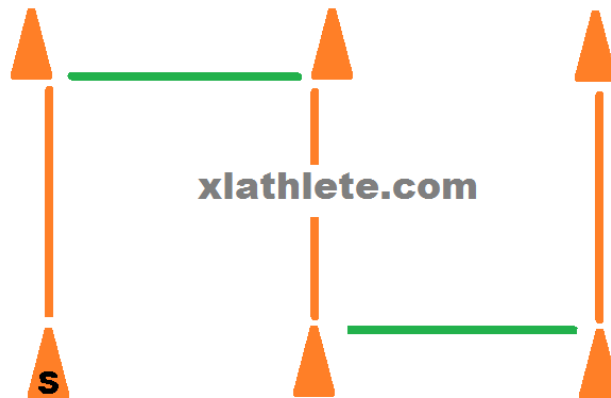
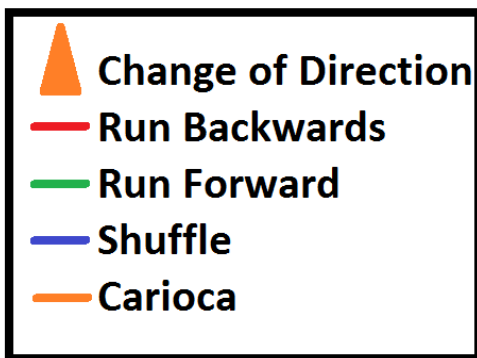


The Duration of This Drill is
5 Seconds.

The Distance Between Cones is
5 yards.

www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

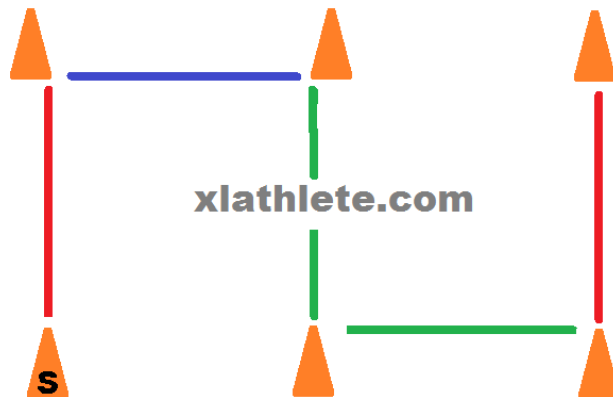
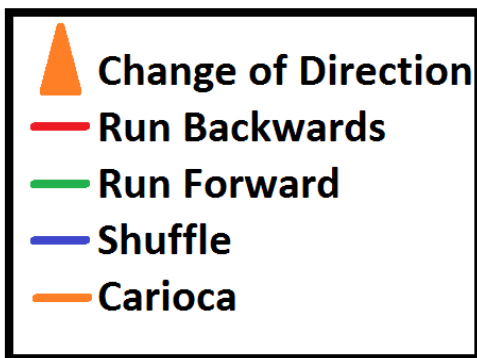


The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 4 yards.

www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

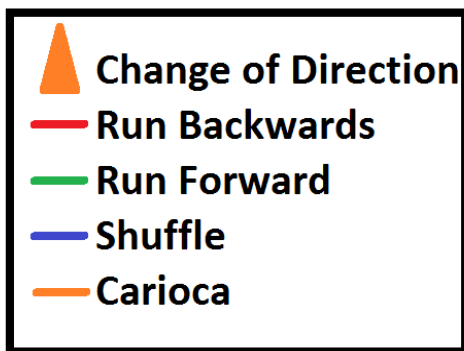


The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 4 yards.

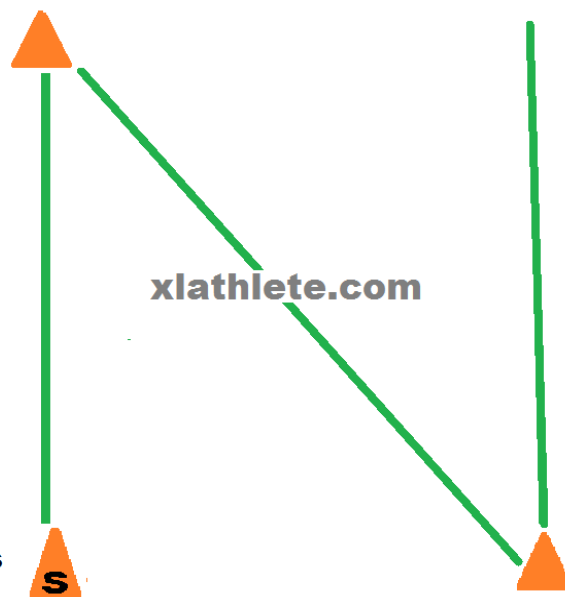
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



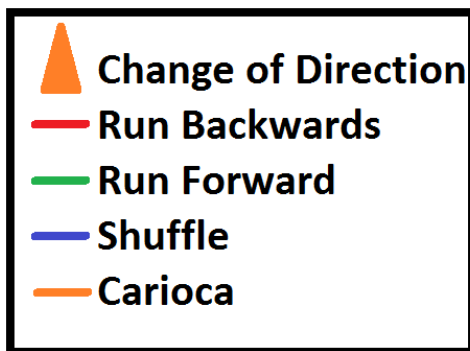
The Duration of This Drill is 5 seconds

The Distance Between Cones is 10 yards



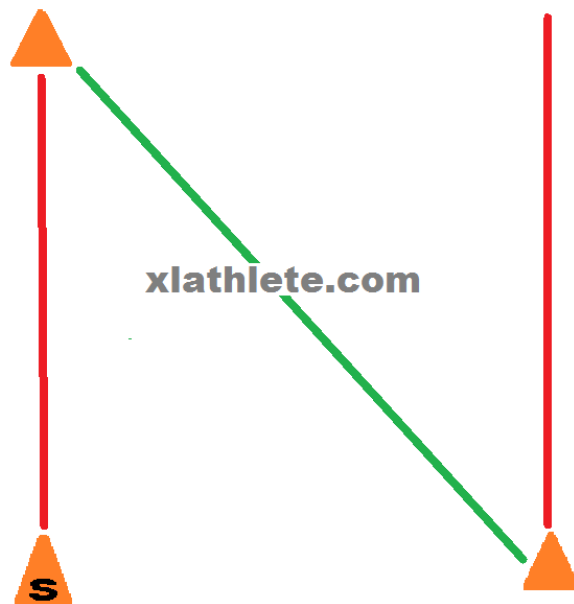
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



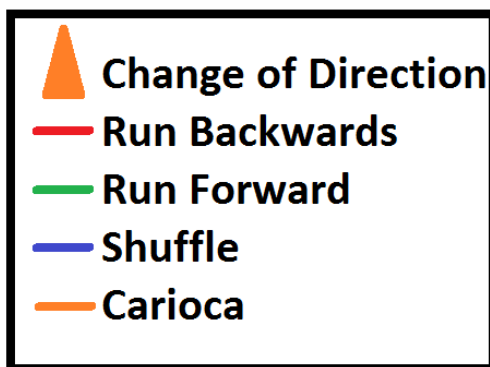
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 7 Yards.



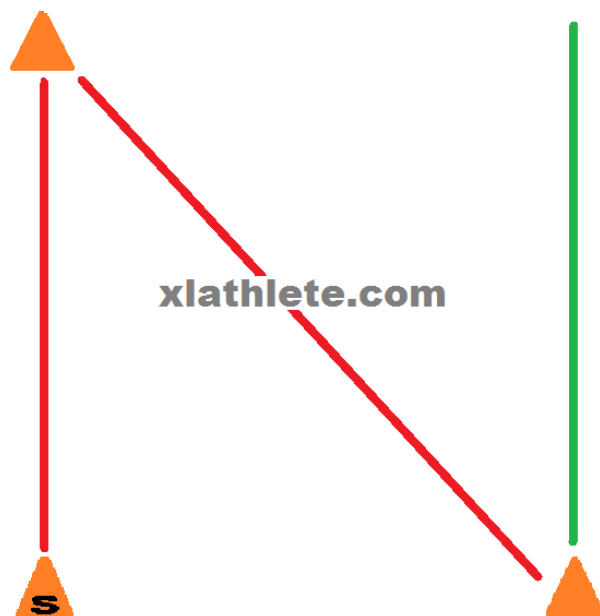
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



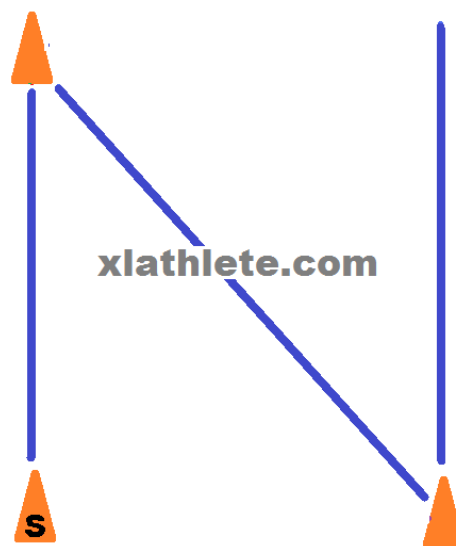
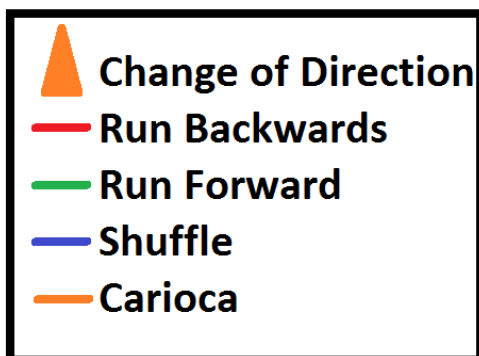
**The Duration of This Drill is
5 seconds**

**The Distance Between Cones is
5 yards**



www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

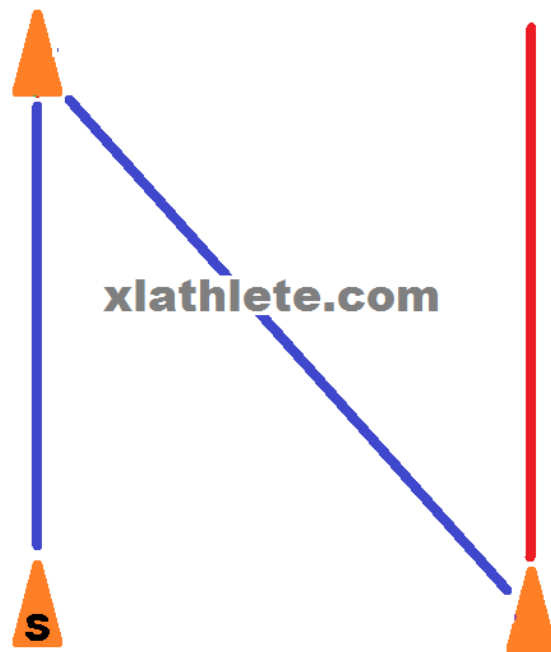
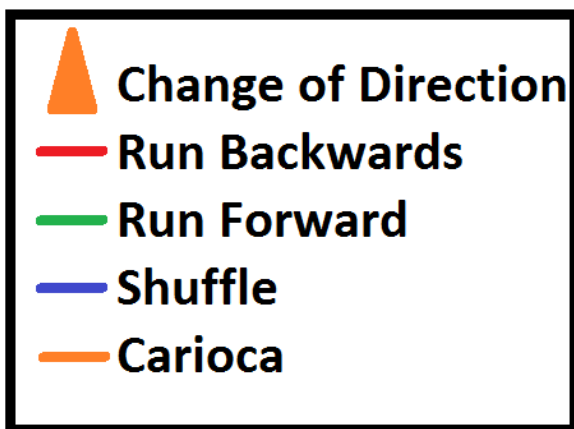


The duration of this drill is
5 Seconds.

The distance between cones is
5 Yards.

www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

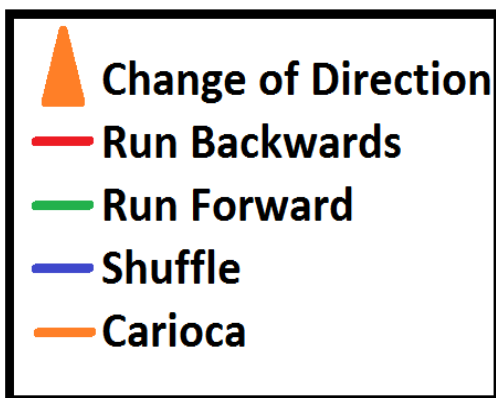


The duration of this drill is
5 Seconds.

The distance between cones is
6 Yards.

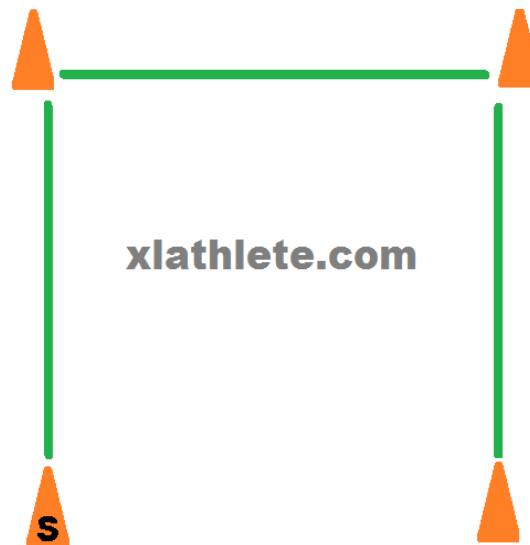
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



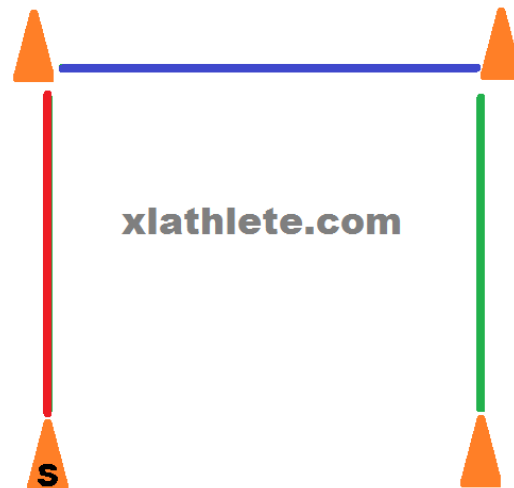
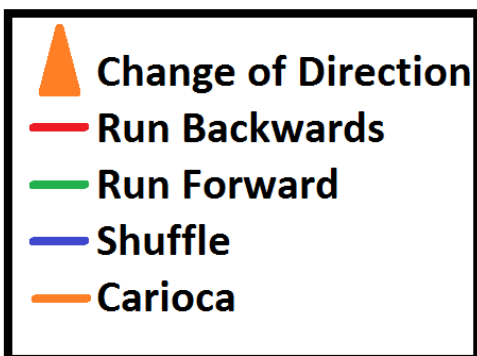
The Duration of This Drill is
5 Seconds.

The Distance Between Cones is
10 Yards.



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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

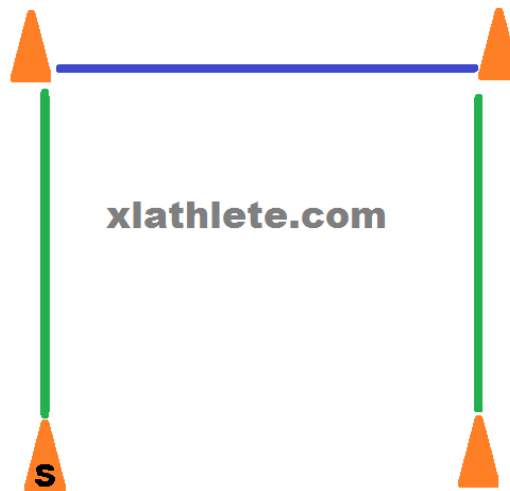
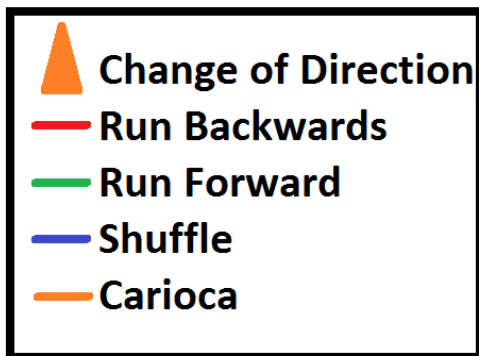


The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 9 Yards.

www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

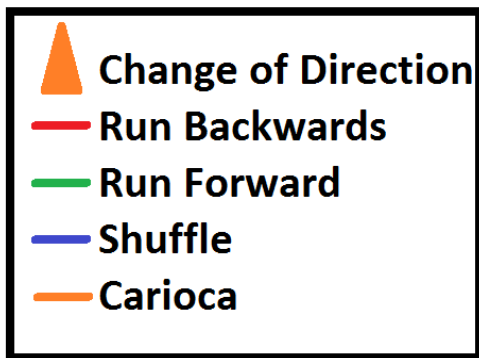


The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 10 Yards.

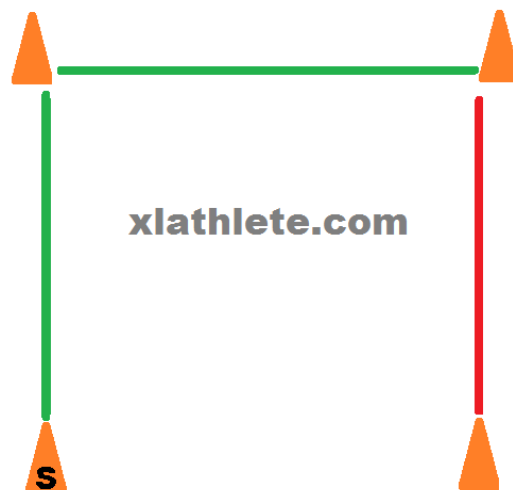
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



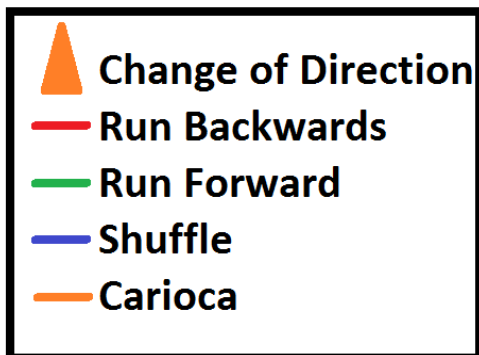
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 10 Yards.



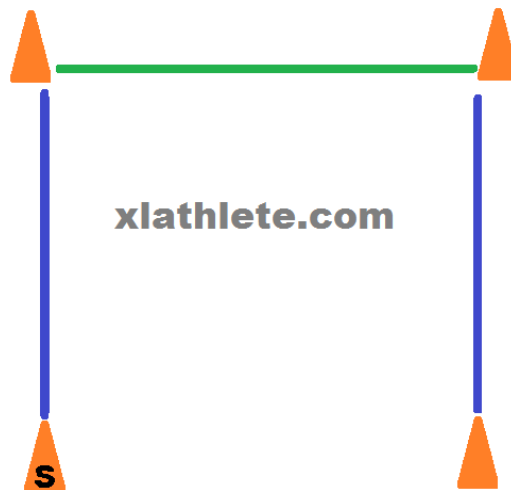
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



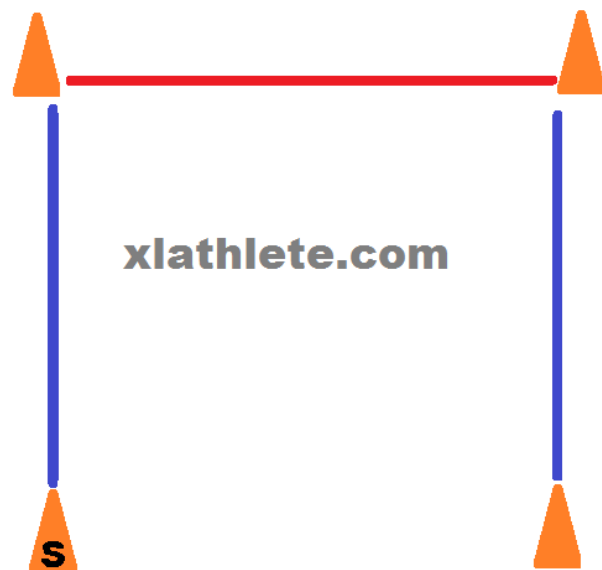
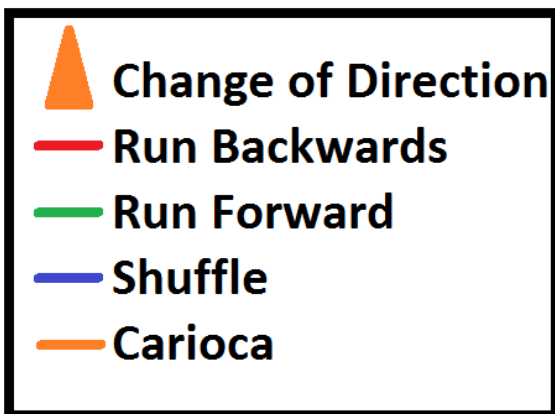
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 8 Yards.



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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

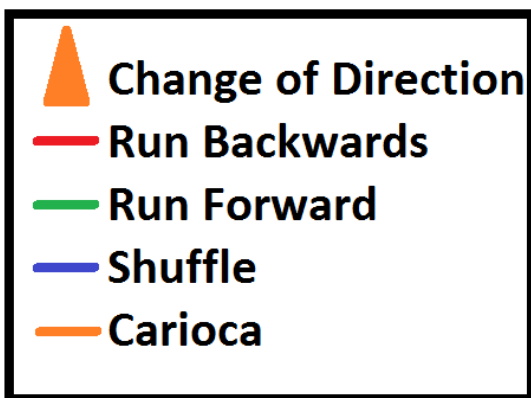


The duration of this drill is
5 Seconds.

The distance between cones is
5 yards

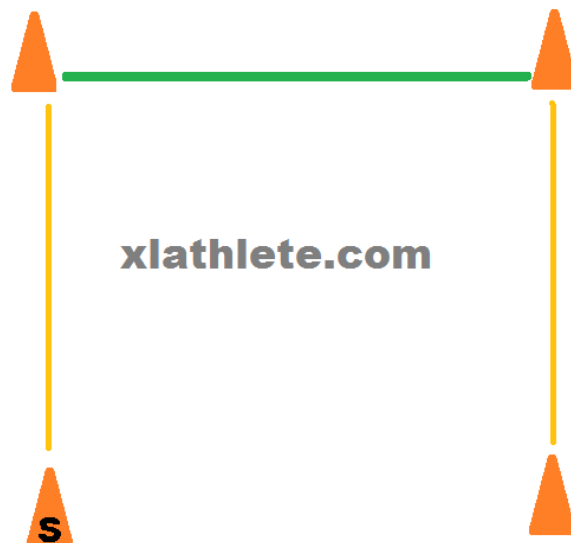
www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



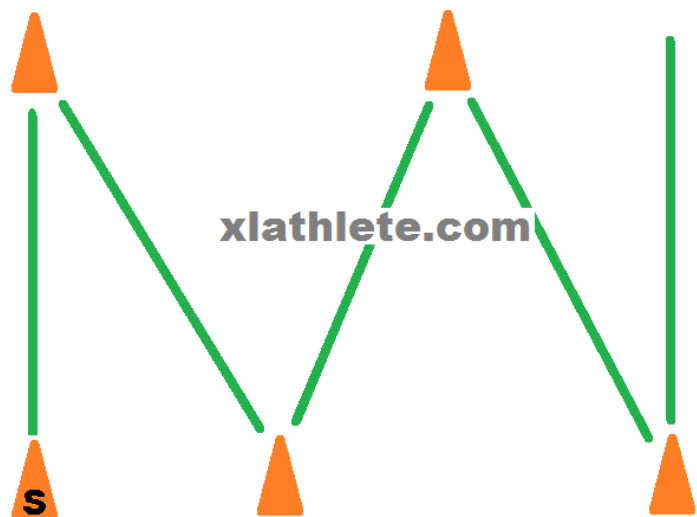
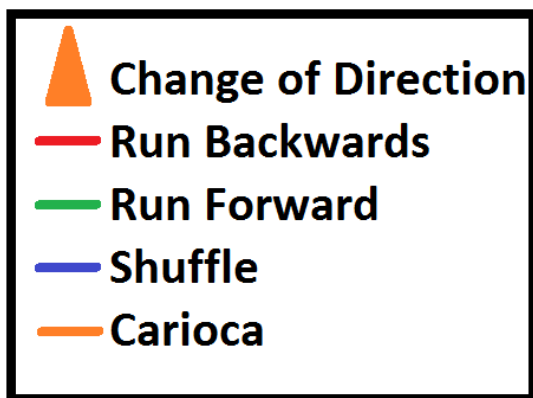
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 8 Yards.



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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

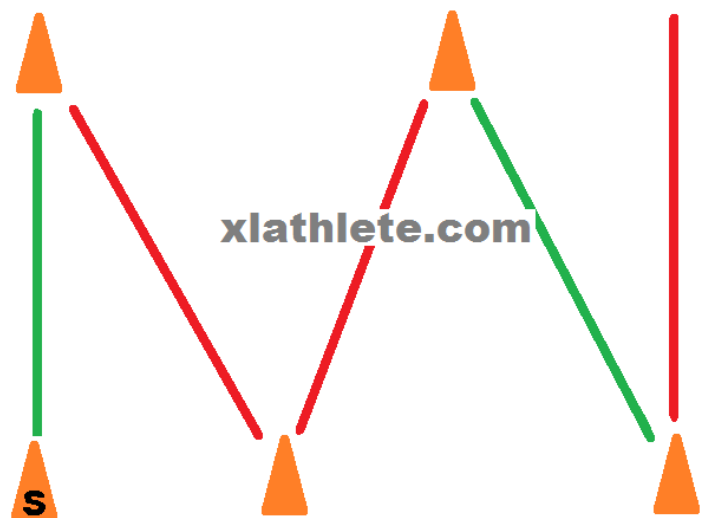
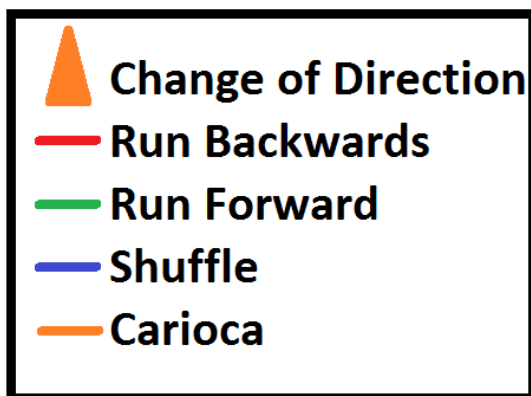


The duration of this drill is 5 seconds.

The distance between cones is 4 yards.

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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

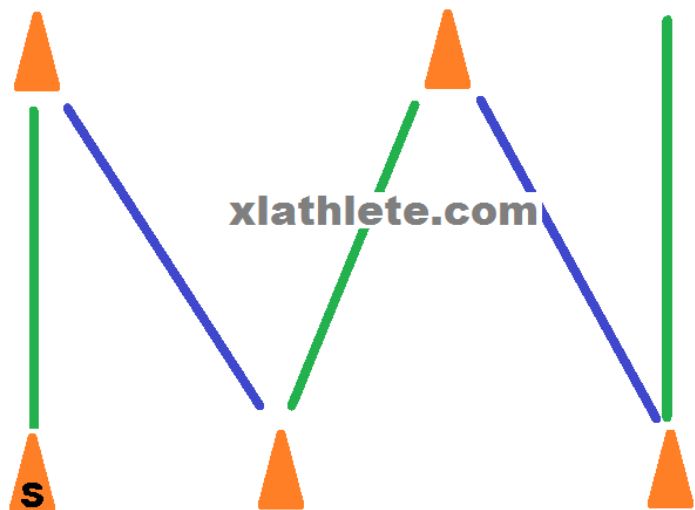
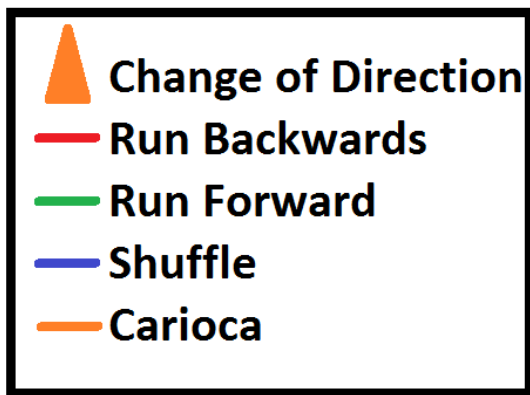


The duration of this drill is
5 Seconds.

The distance between cones is
3 Yards.

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These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

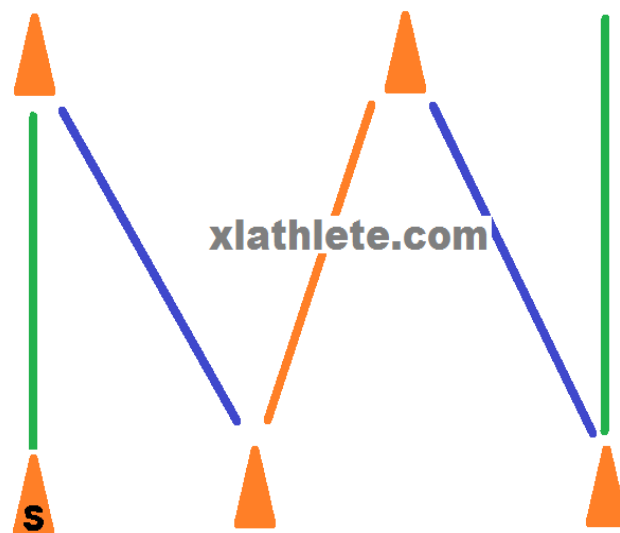
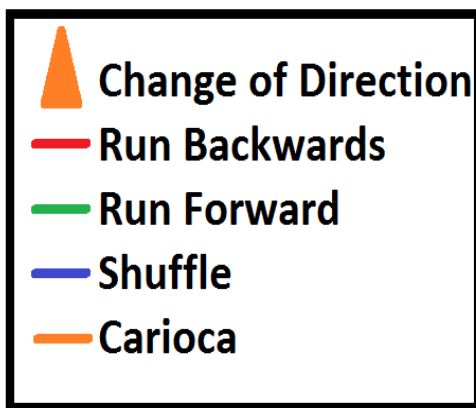


The duration of this drill is 5 Seconds.

The distance between cones is 3 Yards.

www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The duration of this drill is 5 seconds.

The distance between cones is 3 yards.

www.xlathlete.com

These drills are designed to last 5 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

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Agility Drill Speed Development Program

The following are a list of 7 second cone drills that can be used for speed development by focusing on work to rest ratios and the cones drills being used so that the coach gets the desired outcome. Stopping, starting and change of direction are of the utmost importance for many sports. Agility drills are one of the most effective methods for developing change of direction abilities, many people believe the agility ladder helps with change of direction, but if you look at the movements used during agility ladder training, you can see that these movements do not mimic what happens in sport. All drills that you see here are turning to the right; keep in mind the coach must have the athlete turn both right and left to develop symmetrical cutting and change of direction ability.

Agility Drills for Speed Development

When your main focus for agility drills is speed development then the most obvious time to complete the drills for speed development would be directly after your warm-up and right before going into the weight room or any other type of workout. At the high school level, I would recommend coaches do cone agility drills everyday they do workouts. The key focus for speed development is running cone agility drills as fast as possible and with that you must get plenty of rest so you can repeat a high-quality effort of maximal speed while doing the cone agility drills.

Rest Time for Speed Development

The suggested rest time for the 7 seconds cone agility drills for speed development and quickness is between 70 to 110 seconds between each repetition of a 7 second cone drill completed. This will give your athletes plenty of rest and keeps repetitions high-quality.

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Number of repetitions for Speed Development

With the 7 second cone drill the amount of repetitions that can be completed is usually between 6 to 8 high-quality repetitions. You would not want to complete more than this because the quality of the drill would suffer.

Administration of Drills

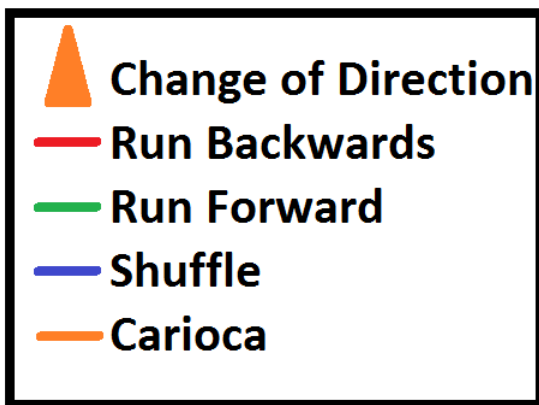
An effective way to set up cone agility drills for a large number of athletes is to pick the desired number of drills that you want to run, make sure you do the same drill to the left and right. Set the desired number of drills up on the field or in a gym. Then have one athlete at each station run the drill when the coach gives start signal, you may have as many as 12 athletes running at once depending on the desired number of drills and amount of space you have. Have the athletes walked to the next station so they get variations of the drills. Signal to let the next group of 12 athletes run the drills.

Coaching points

If you notice the cone agility drills never have athletes coming back through the drill or ending at the starting spot so you can actually run multiple athletes through the drill one after another because they will not cross paths. One of the most effective methods for speed development or conditioning is to set your agility drills up to have two starting lines, one line 3 yards behind the front starting line and have the athletes chase each other through the drills. The only rule is you can't leave your feet and reach across a cone to touch your chase partner; you can only touch the athlete in front of you on straight a ways.

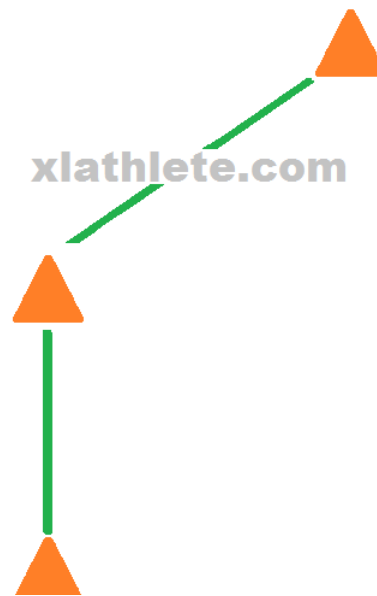
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



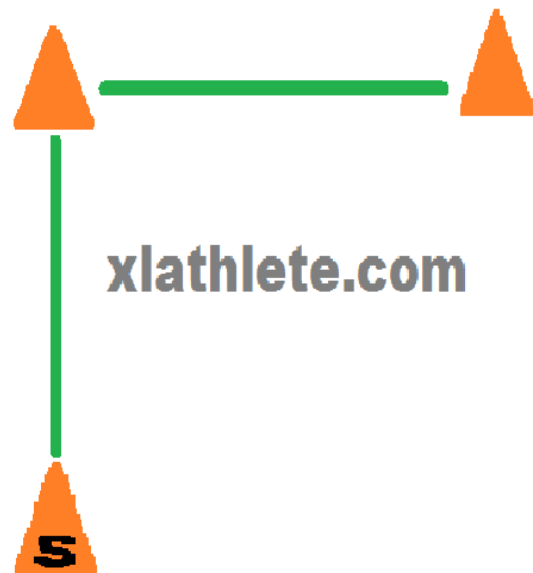
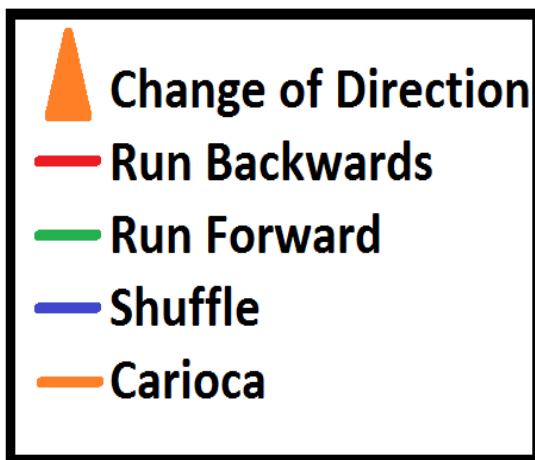
The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
20 Yards.



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These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

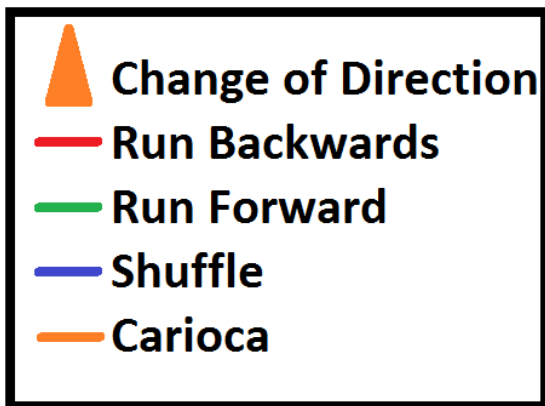


The Duration of This Drill is
10 Seconds.

The Distance Between Cones is
16 Yards.

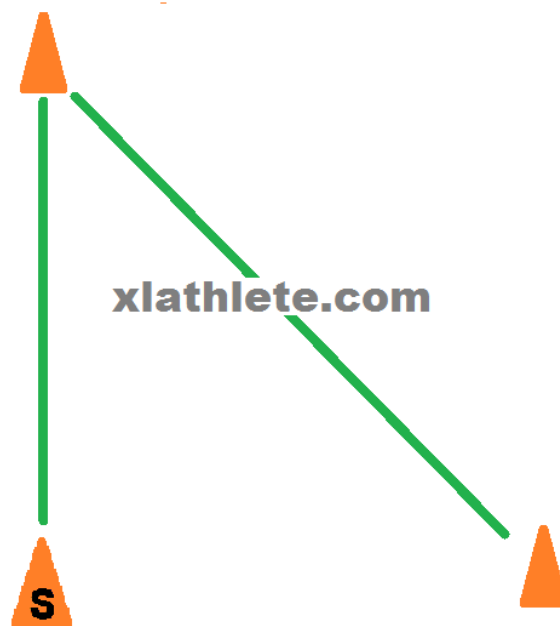
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



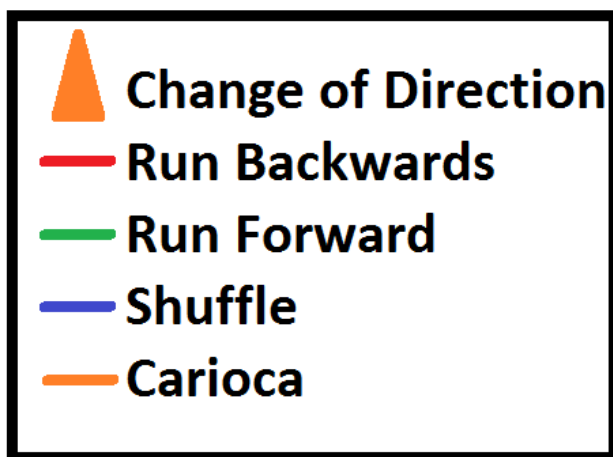
The duration of this drill is 7 Seconds.

The distance between cones is 15 yards.



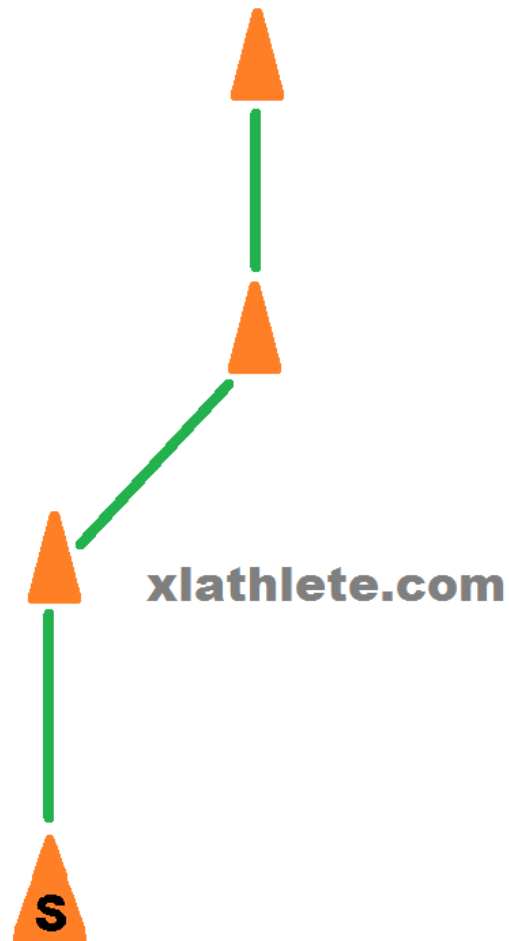
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



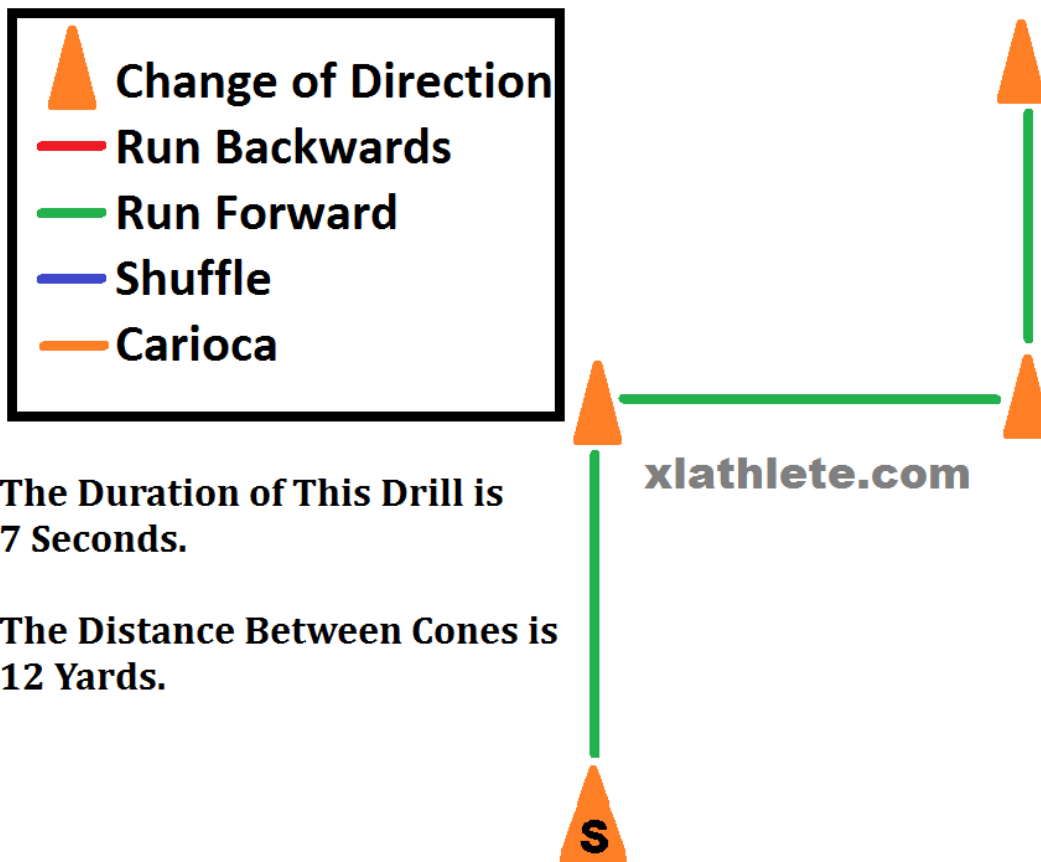
The duration of this drill is 7 seconds.

The distance between cones is 15 yards.



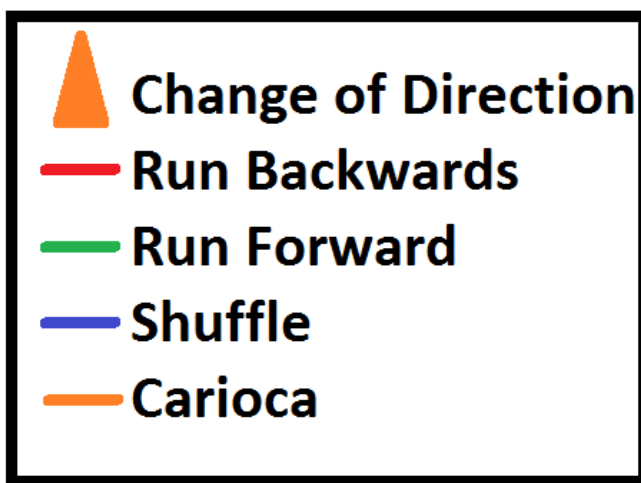
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



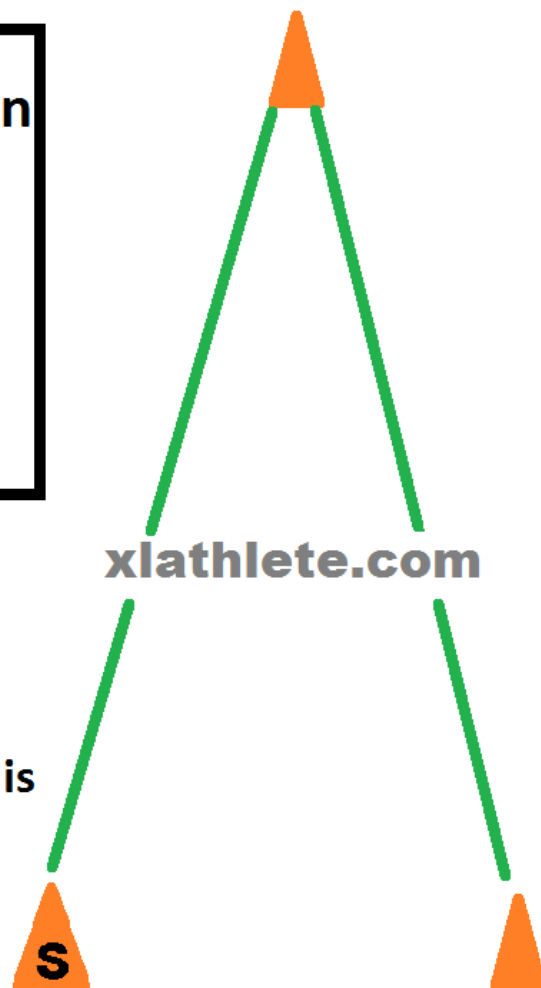
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



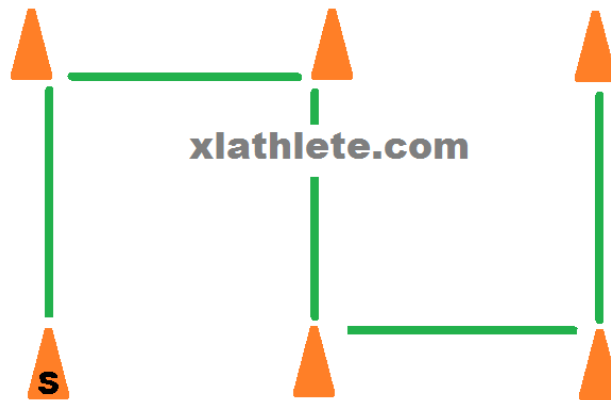
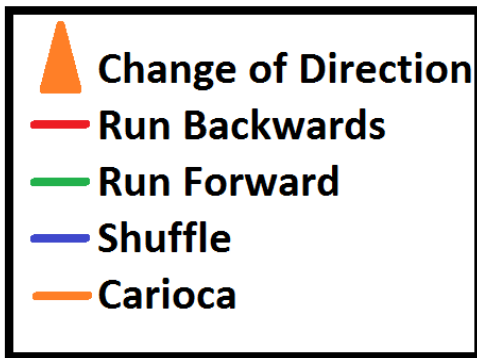
The duration of this drill is
7 sec

The distance between cones is
15 yds



www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

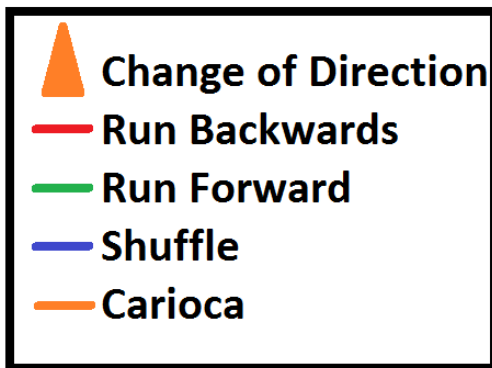


The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 6 yards.

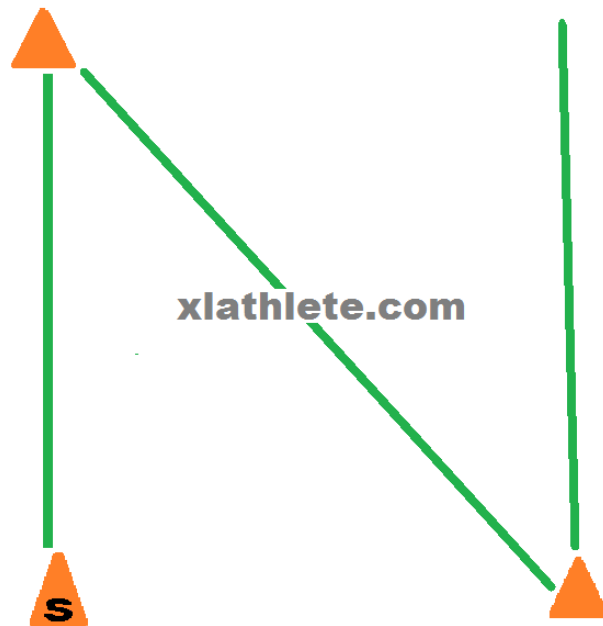
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



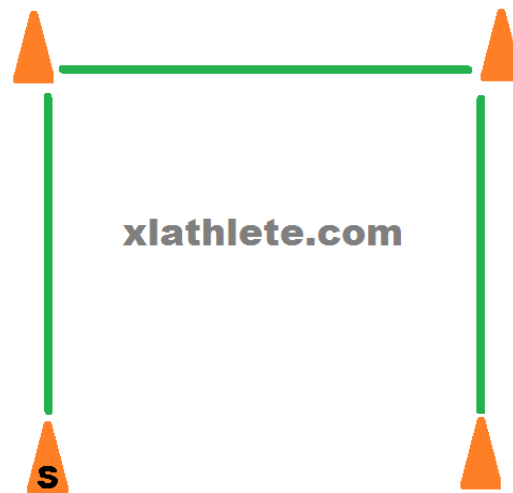
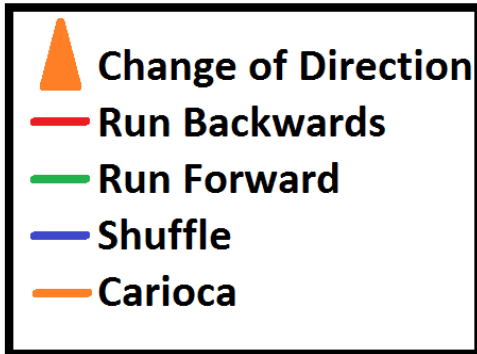
The Duration of This Drill is 7 seconds

The Distance Between Cones is 15 yards



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These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

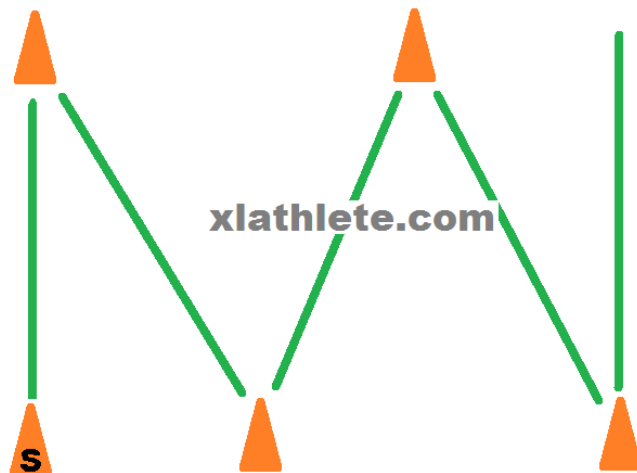
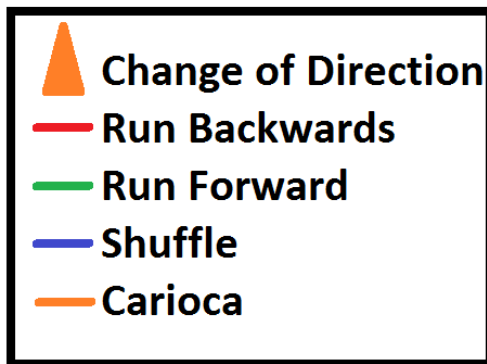


The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 15 Yards.

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These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The duration of this drill is 7 seconds.

The distance between cones is .5 yards.

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The following are a list of 7 second cone drills that can be used for speed development or conditioning by changing the emphasis placed on work to rest ratios and the cones drills being used so that the coach gets the desired outcome. Stopping, starting and change of direction are of the utmost importance for many sports. Agility drills are one of the most effective methods for developing change of direction abilities, many people believe the agility ladder helps with change of direction, but if you look at the movements used during agility ladder training, you can see that these movements do not mimic what happens in sport. All drills that you see here are turning to the right; keep in mind the coach must have the athlete turn both right and left to develop symmetrical cutting and change of direction ability.

Agility Drills for Speed Development

When your main focus for agility drills is speed development then the most obvious time to complete the drills for speed development would be directly after your warm-up and right before going into the weight room or any other type of workout. At the high school level, I would recommend coaches do cone agility drills everyday they do workouts. The key focus for speed development is running cone agility drills as fast as possible and with that you must get plenty of rest so you can repeat a high-quality effort of maximal speed while doing the cone agility drills.

Rest Time for Speed Development -The suggested rest time for the 7 seconds cone agility drills for speed development and quickness is between 70 to 110 second between each repetition of a 7 second cone drill completed. This will give your athletes plenty of rest and keeps repetitions high-quality.

Number of repetitions for Speed Development - With the 7 second cone drill the amount of repetitions that can be completed is usually between 6 to 8 high-quality repetitions. You would not want to complete more than this because the quality of the drill would suffer.

Agility drills for Conditioning

You want to complete the 7 seconds agility drills for conditioning at the end of your work. This is the only reasonable time to be conditioning because any attempt to do high-quality work will not be very effective.

Rest Time for Conditioning - The suggested rest time for the 7 seconds cone agility drills for conditioning is between 40 and 60 seconds between each repetition of the 7 second cone drill.

Number repetitions for Conditioning- With the 7 second cone drill the amount of repetitions that can be completed for conditioning is usually 12 to 18 repetitions. It will take this many repetitions to get a conditioning effect.

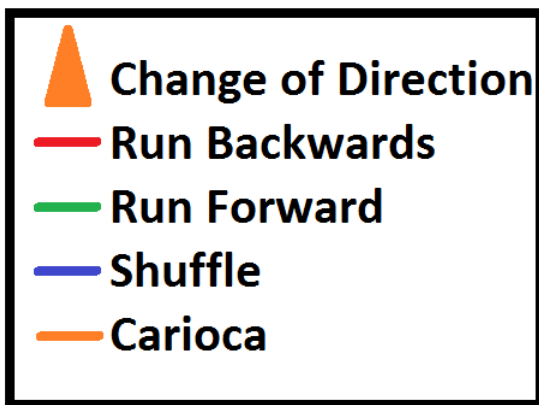
www.xlathlete.com

Administration of drills - An effective way to set up cone agility drills for a large number of athletes is to pick the desired number of drills that you want to run, make sure you do the same drill to the left and right. Set the desired number of drills up on the field or in a gym. Then have one athlete at each station run the drill when the coach gives start signal, you may have as many as 12 athlete running at once depending on the desired number of drills and amount of space you have. Have the athletes walked to the next station so they get variations of the drills. Signal to let the next group of 12 athletes run the drills.

Coaching points - If you notice the cone agility drills never have athletes coming back through the drill or ending at the starting spot so you can actually run multiple athletes through the drill one after another because they will not cross paths. One of the most effective methods for speed development or conditioning is to set your agility drills up to have two starting lines, one line 3 yards behind the front starting line and have the athletes chase each other through the drills. The only rule is you can't leave your feet and reach across a cone to touch your chase partner; you can only touch the athlete in front of you on straight a ways.

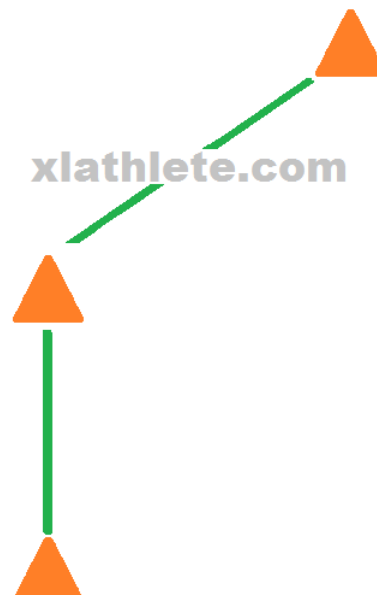
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



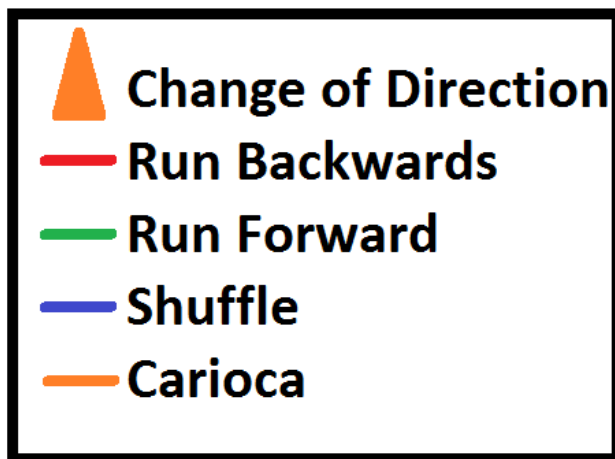
The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
20 Yards.



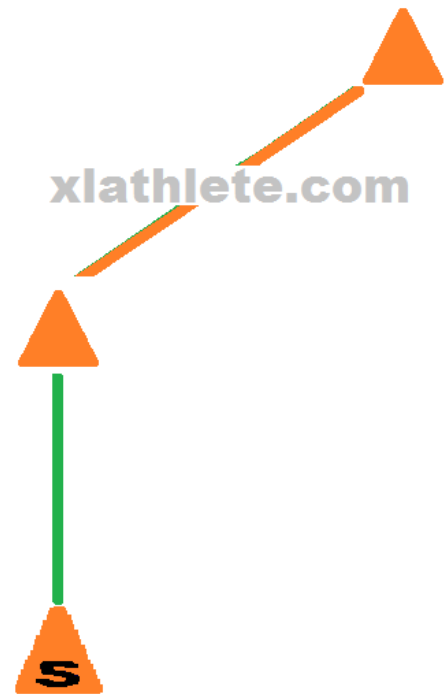
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



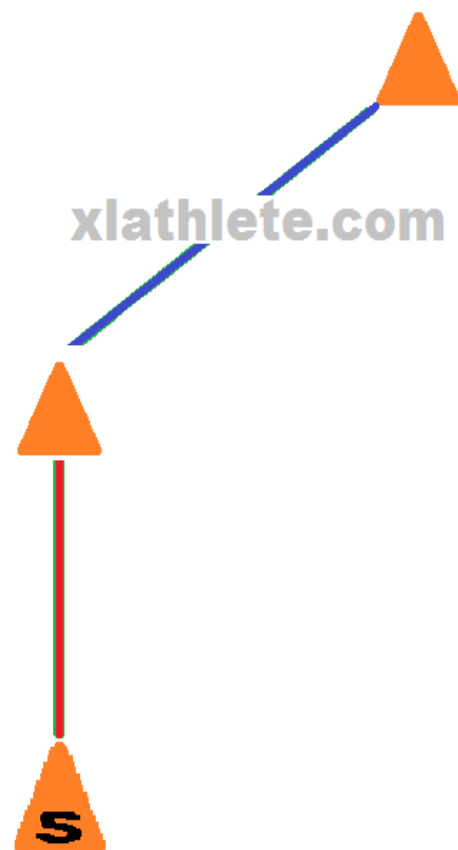
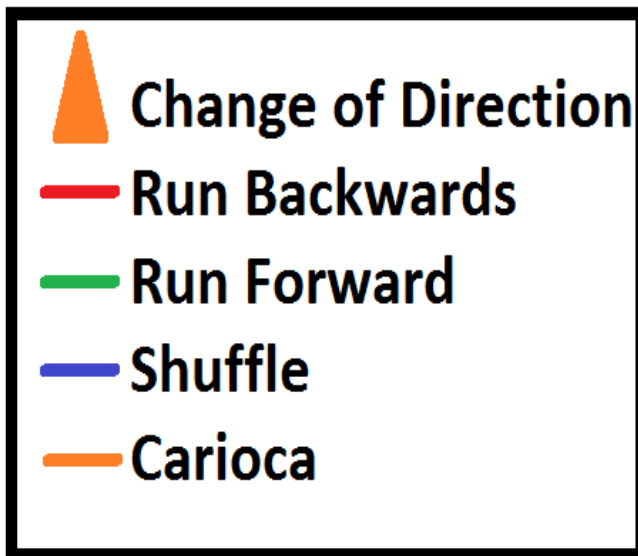
The duration of this drill is 7 seconds.

The distance between cones is 15 yards.



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These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

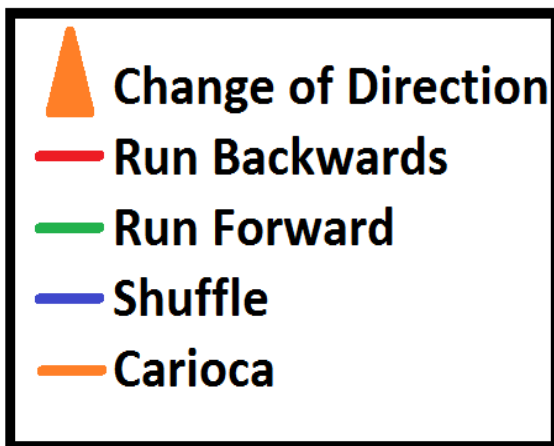


The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
12 Yards.

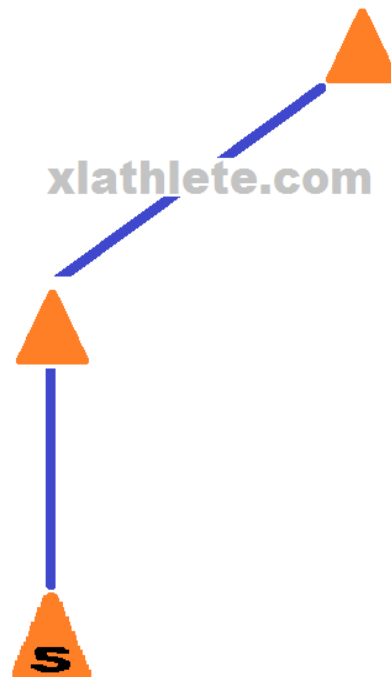
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



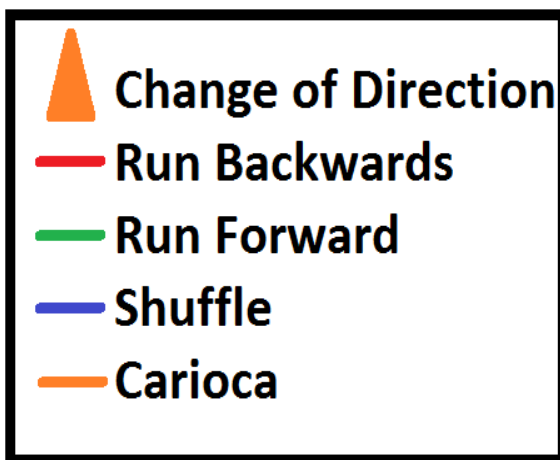
The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
12 Yards.



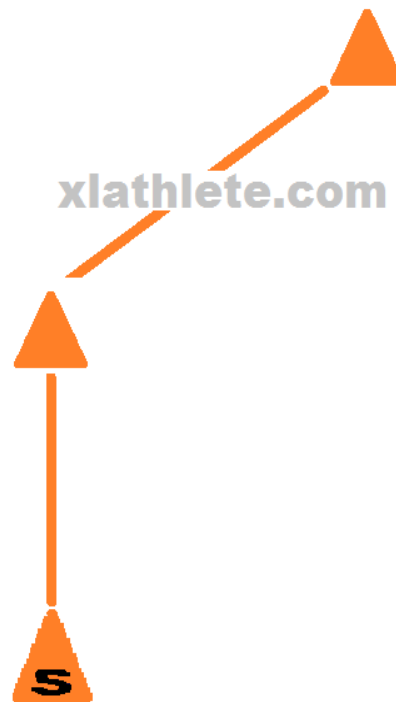
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



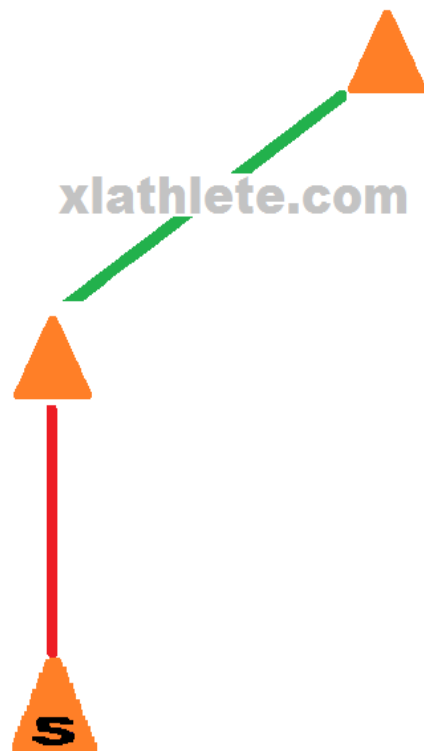
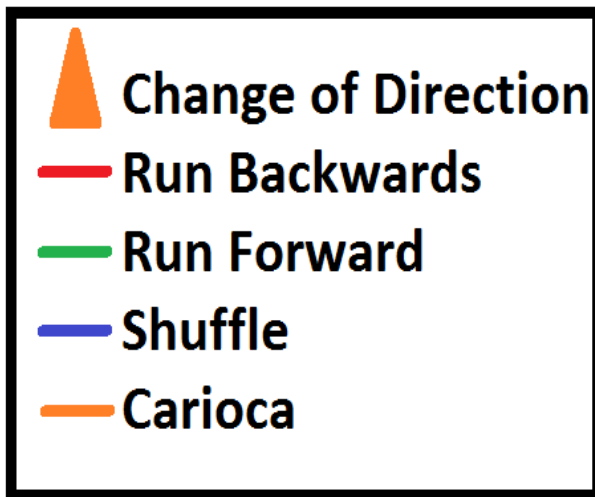
The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
12 Yards.



www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

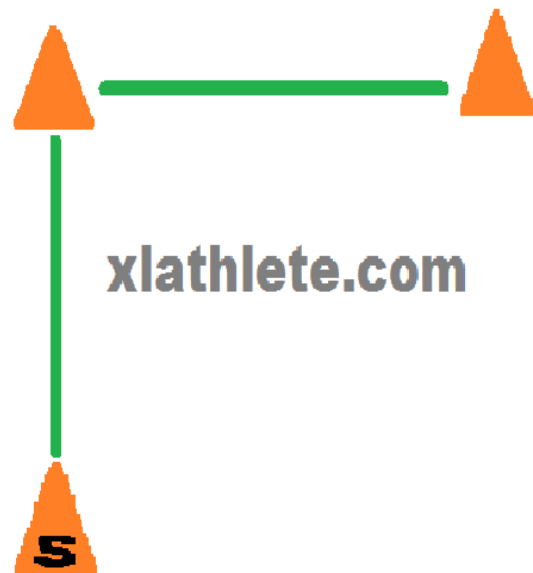
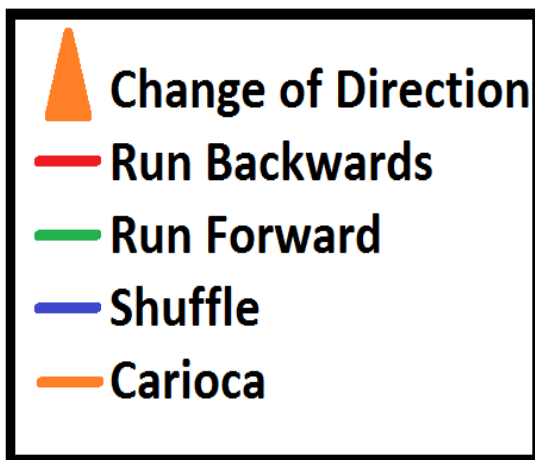


The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
15 Yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

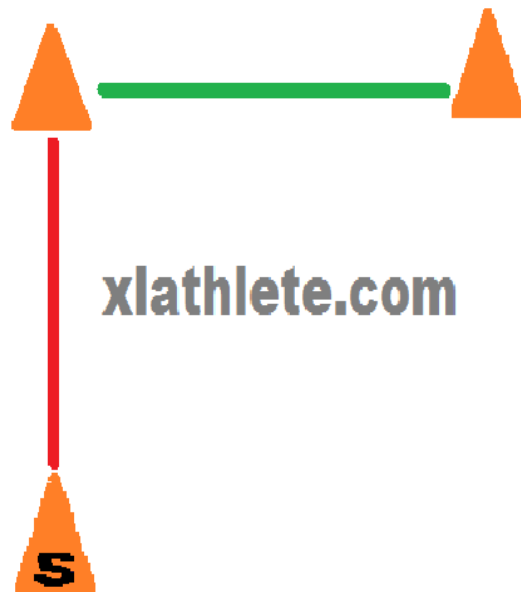
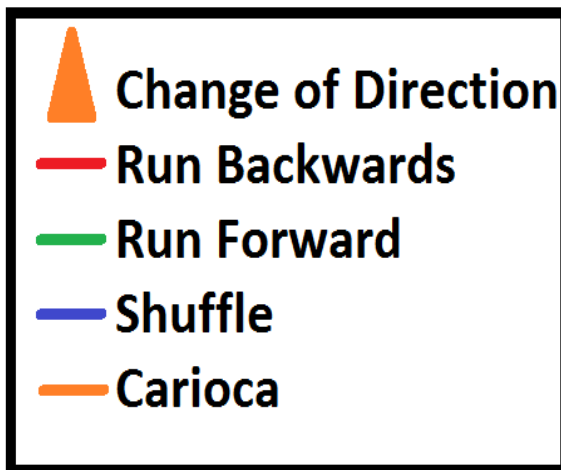


The Duration of This Drill is
10 Seconds.

The Distance Between Cones is
16 Yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

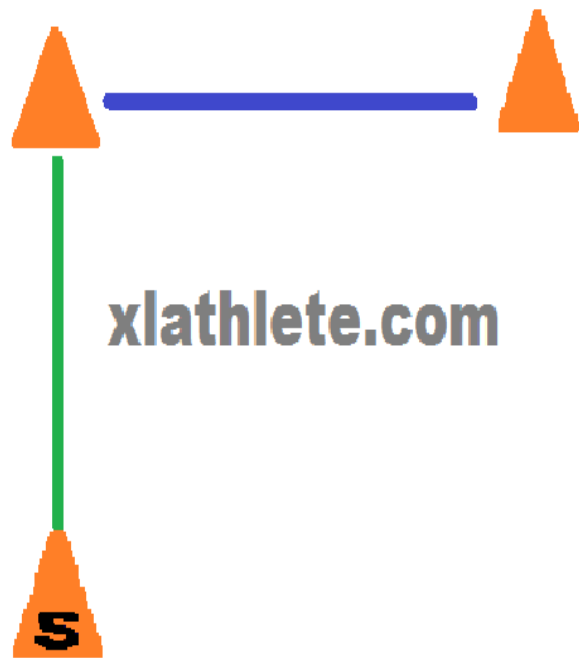
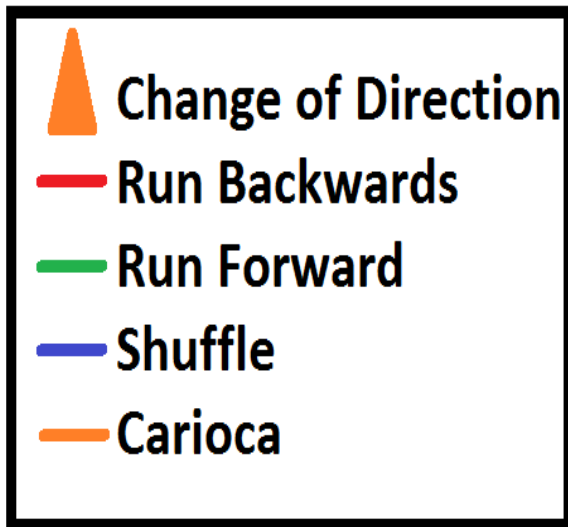


The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
14 Yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

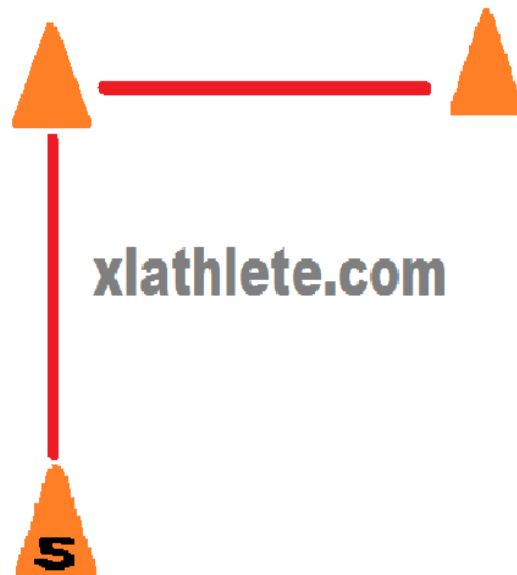
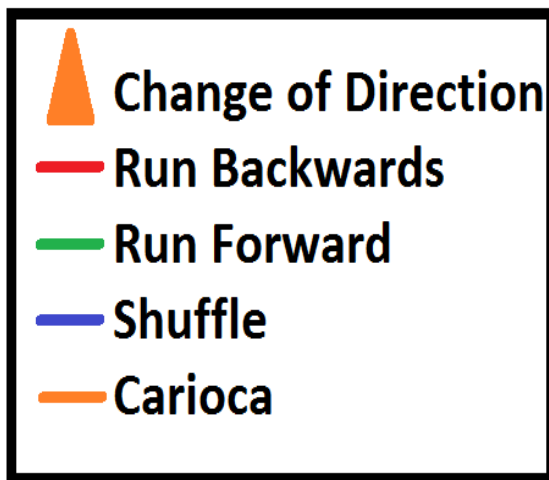


The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
13 Yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

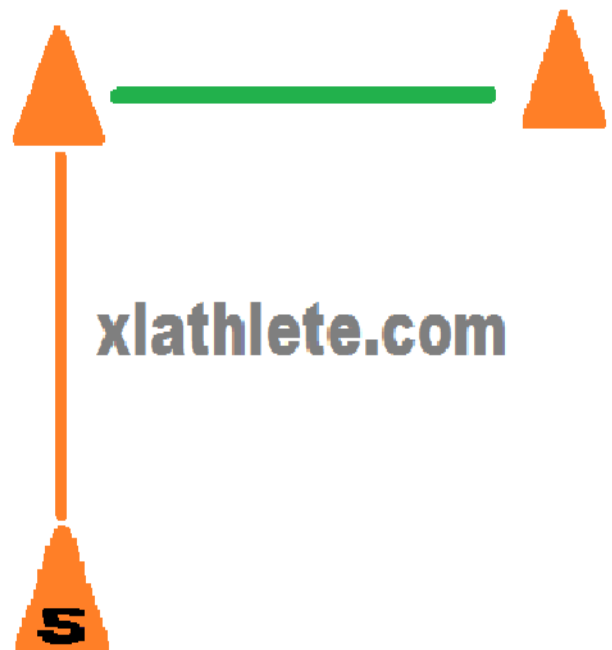
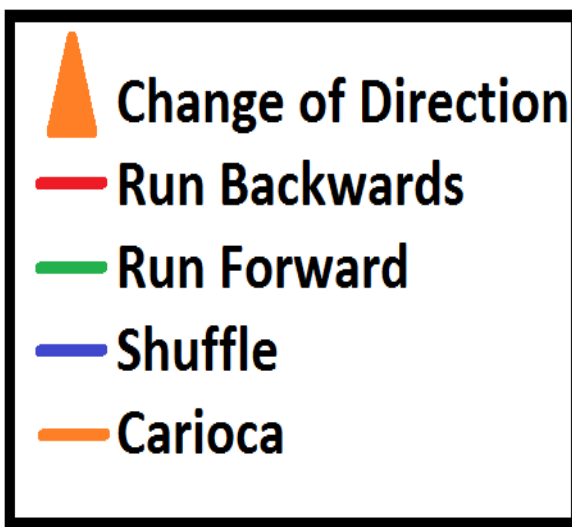


The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
12 Yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

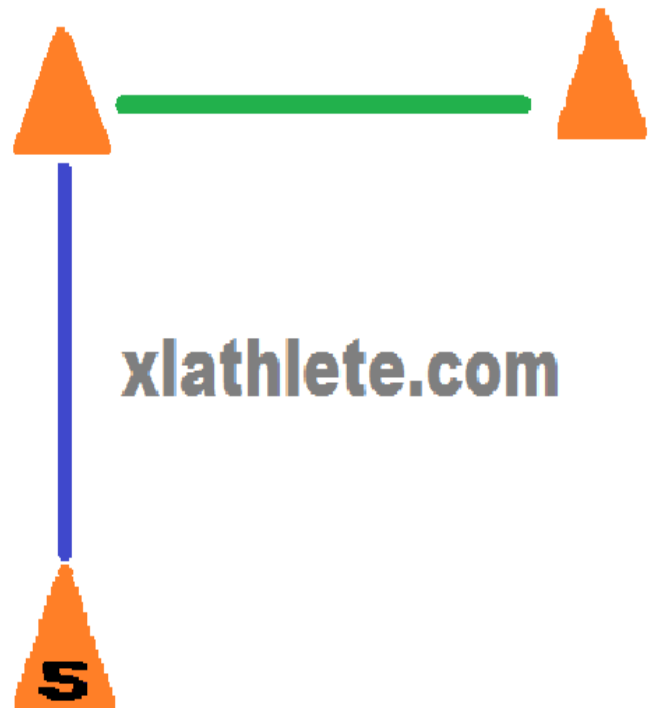
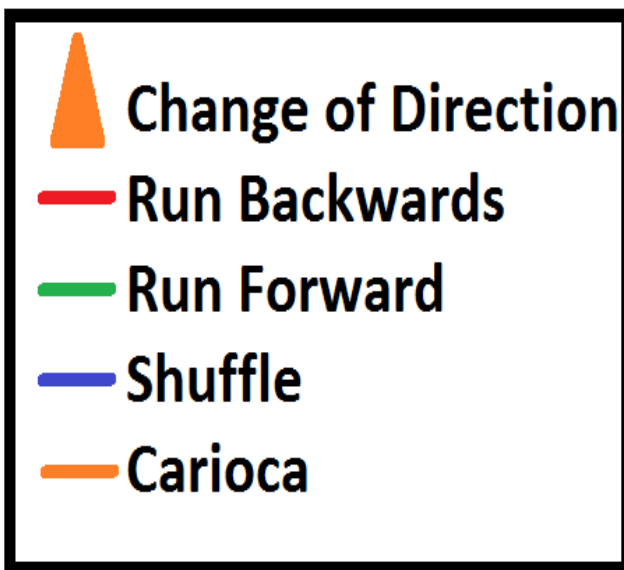


The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
13 Yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

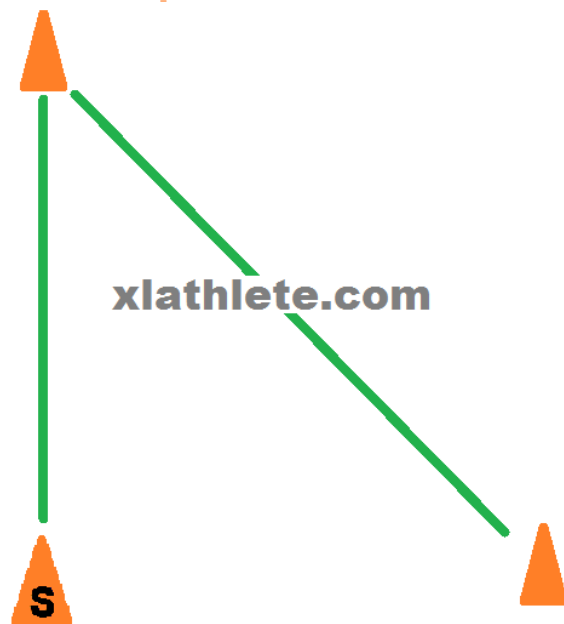
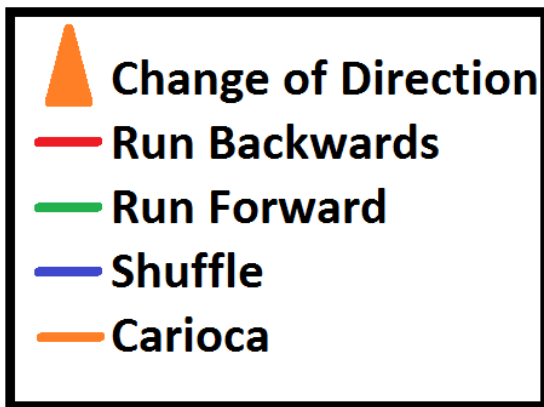


The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
14 Yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

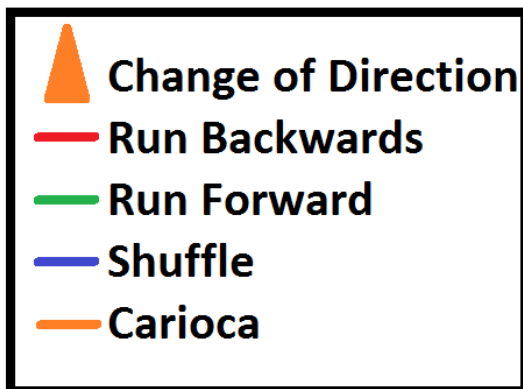


The duration of this drill is
7 Seconds.

The distance between cones is
15 yards.

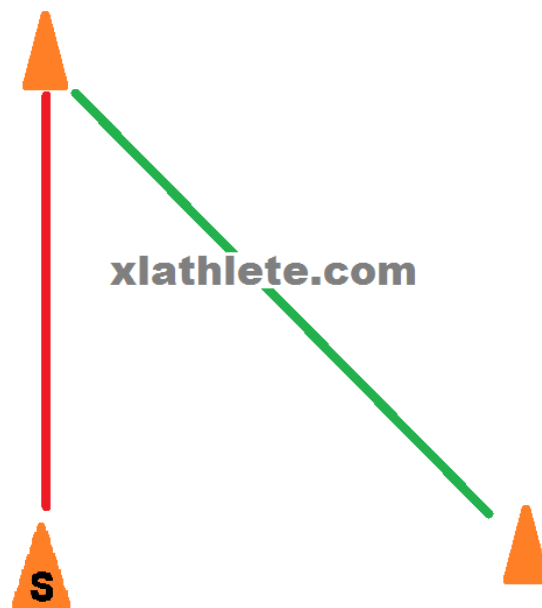
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



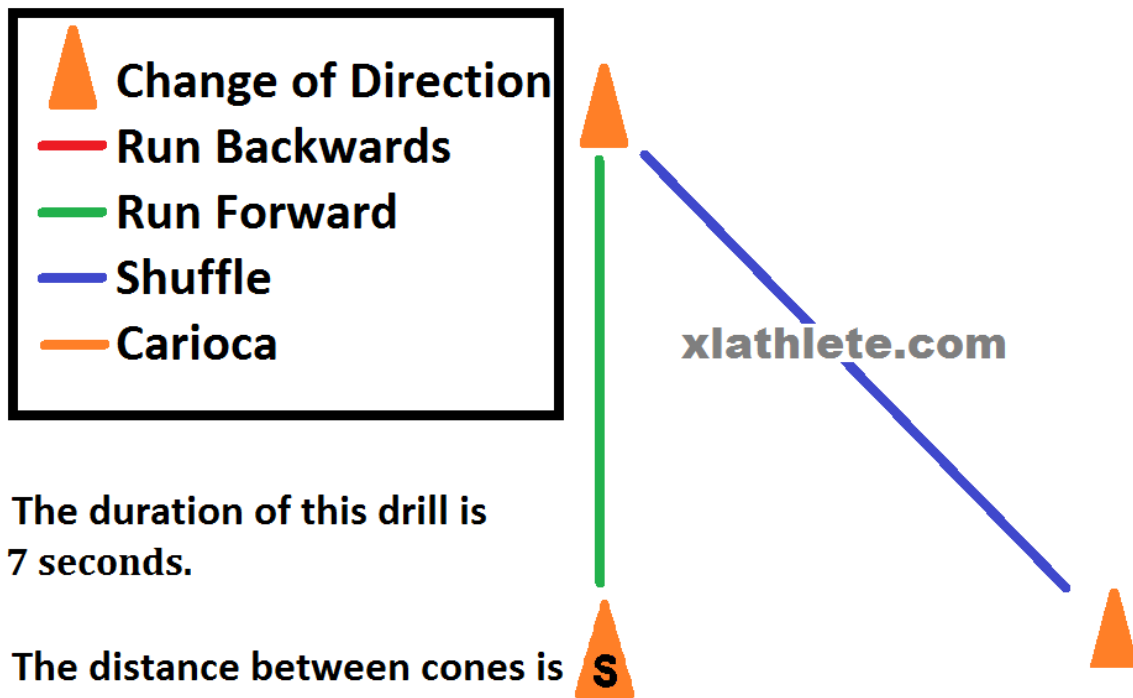
The duration of this drill is
7 Seconds.

The distance between cones is
13 yards.



www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

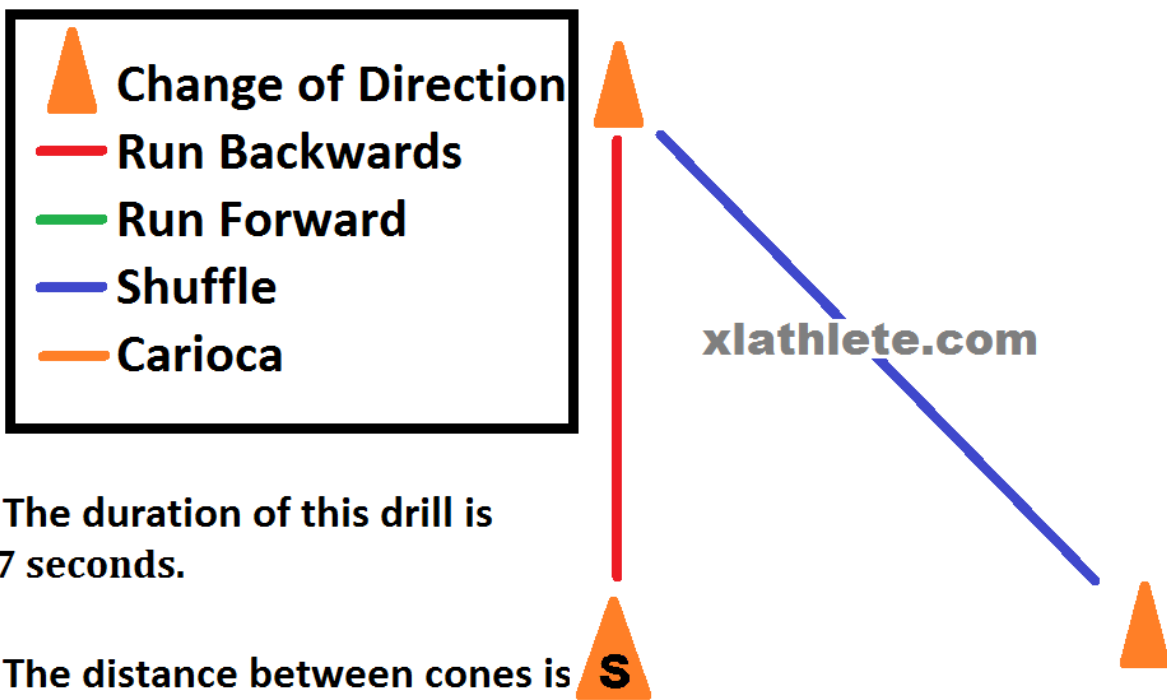


The duration of this drill is 7 seconds.

The distance between cones is 12 yards.

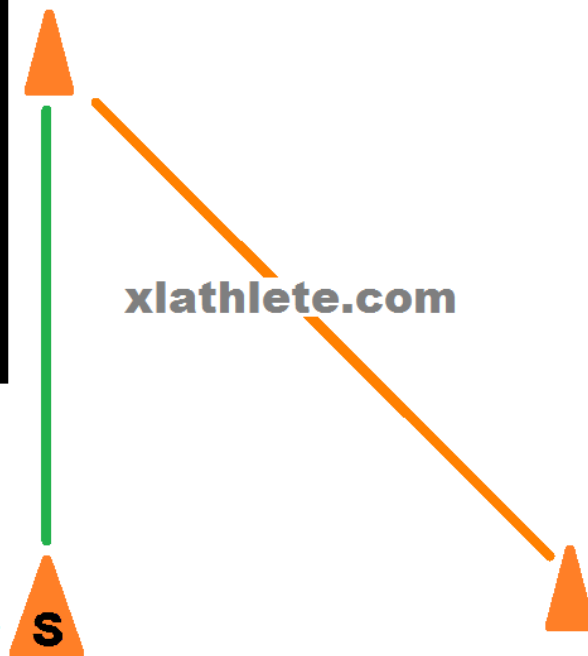
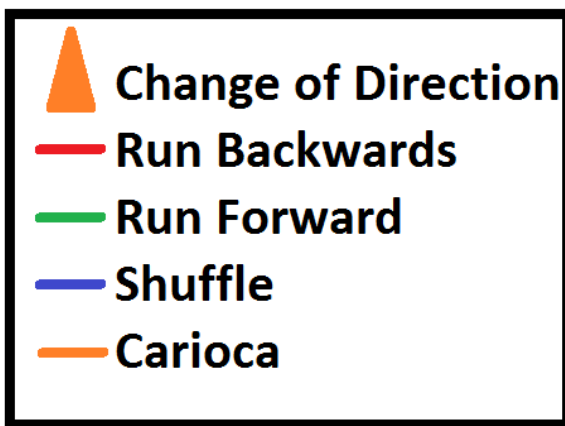
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

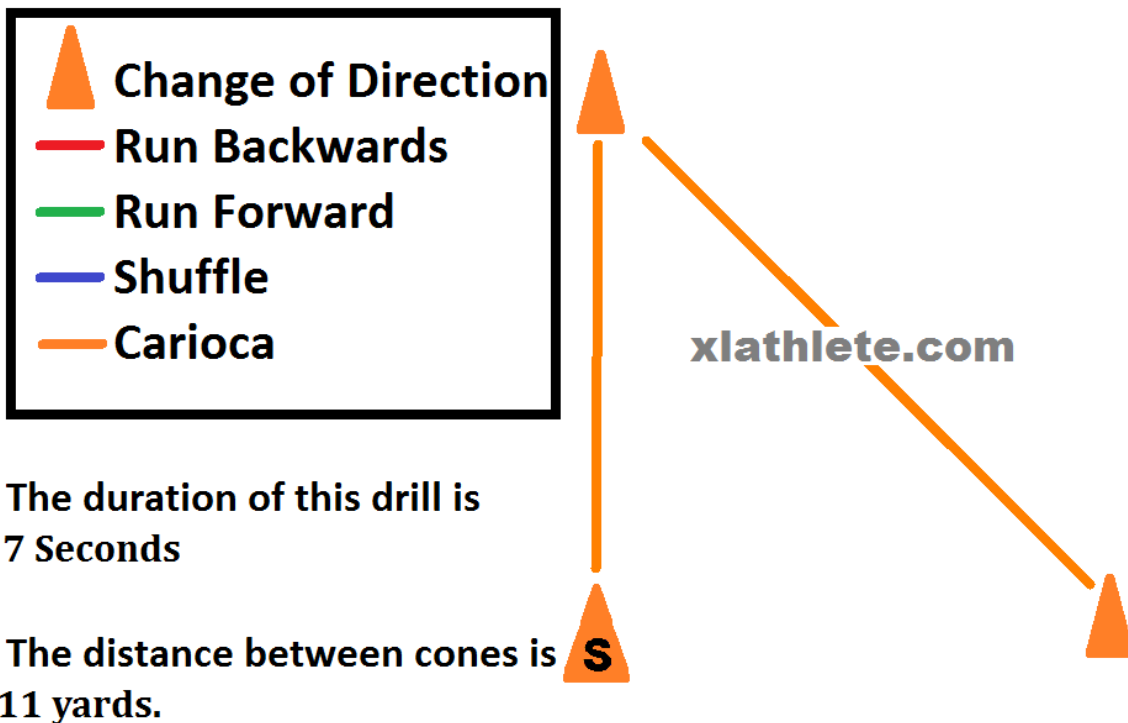


The duration of this drill is
7 seconds

The distance between cones is
13 yards.

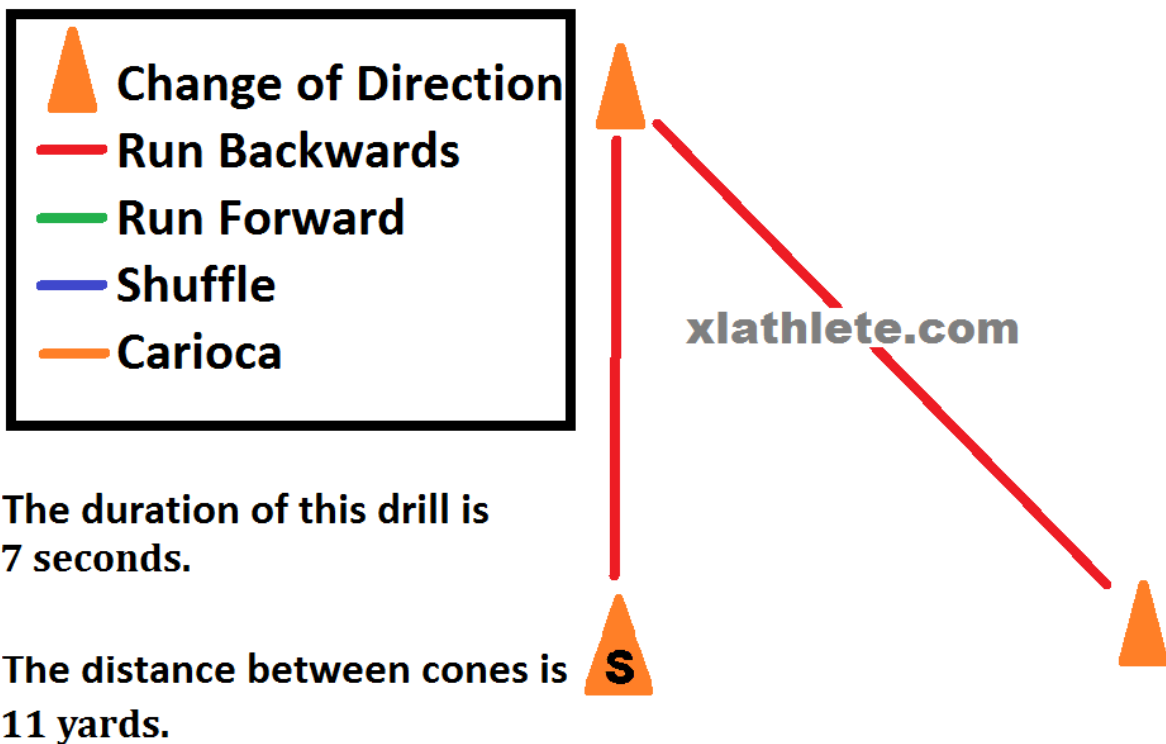
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



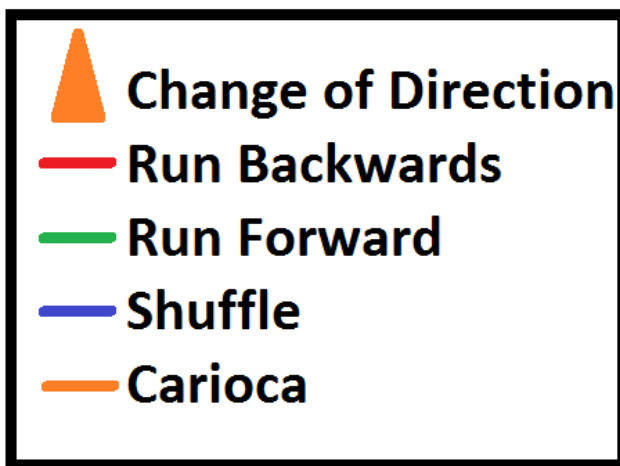
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



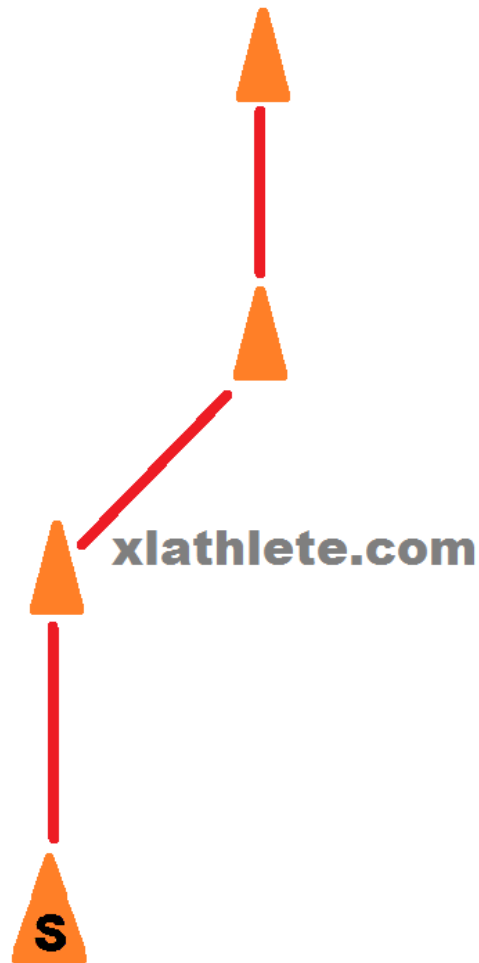
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



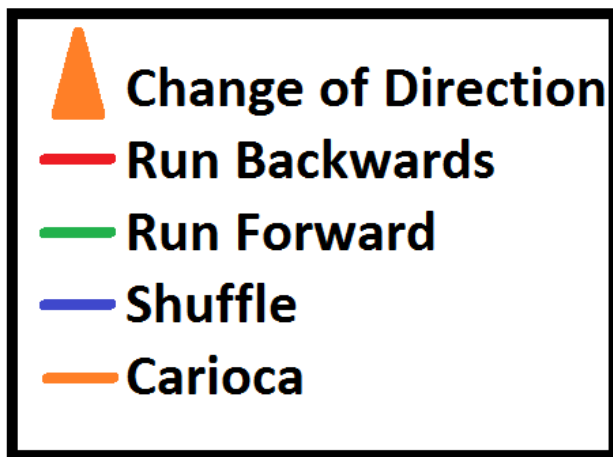
The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 7 Yards.



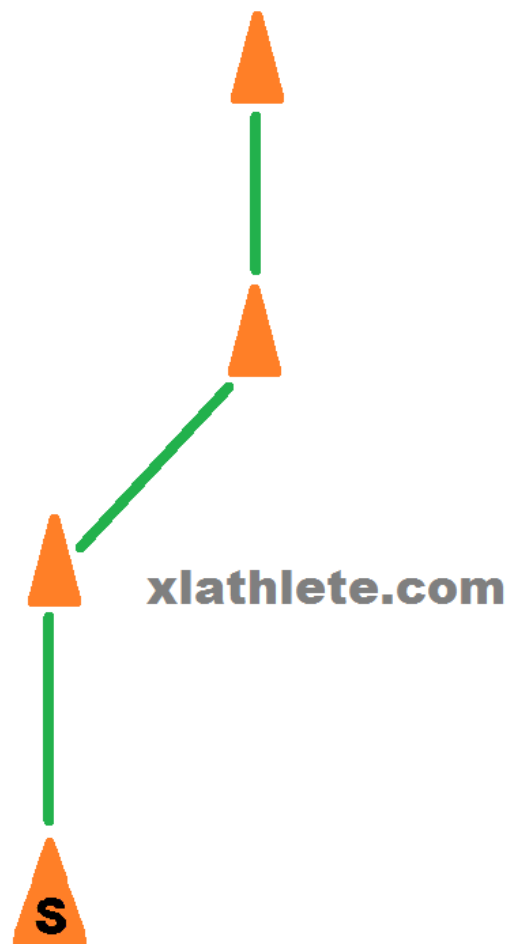
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



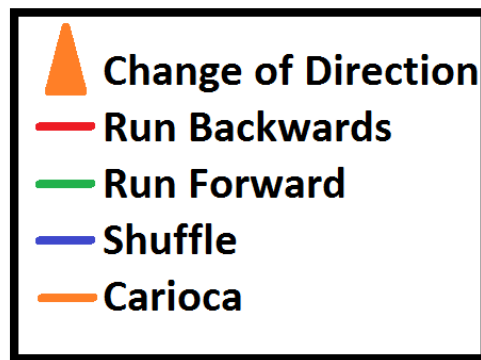
The duration of this drill is 7 seconds.

The distance between cones is 15 yards.



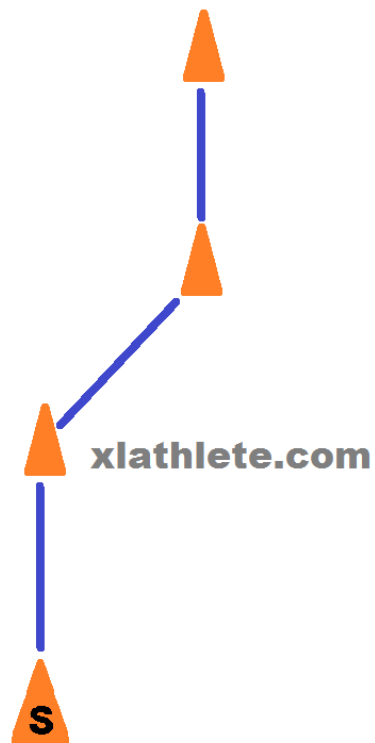
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



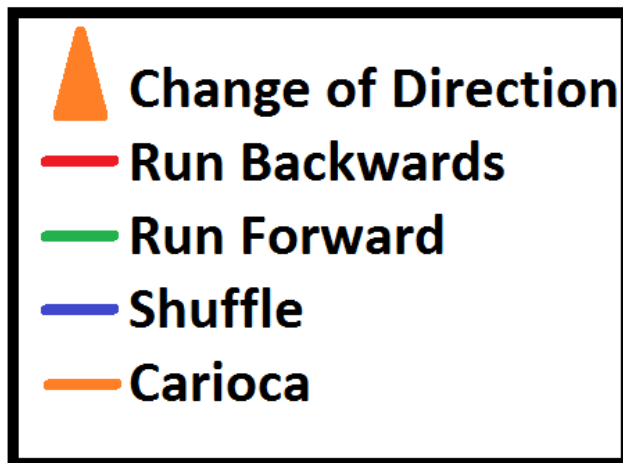
The duration of this drill is 7 seconds.

The distance between cones is 7 yards.



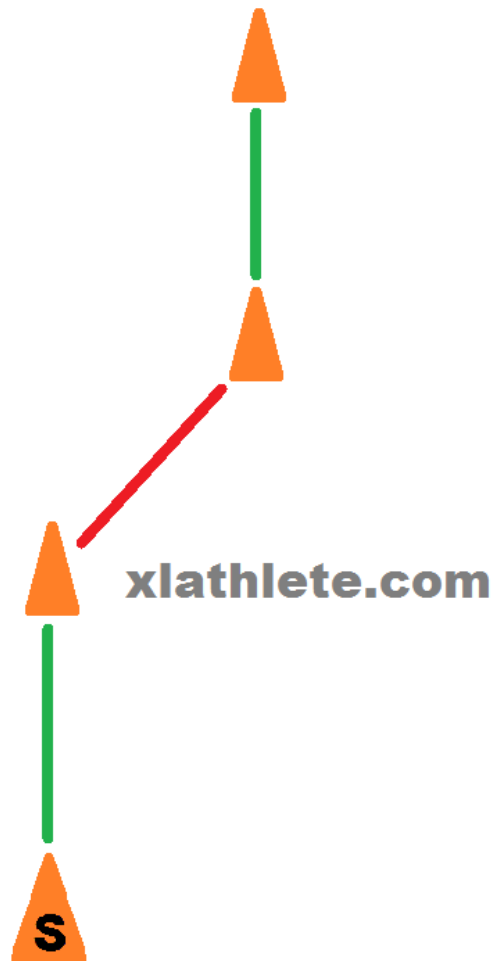
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



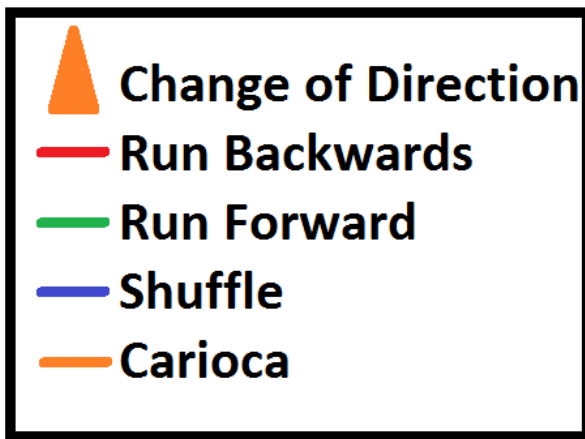
The duration of this drill is 7 seconds

The distance between cones is 10 yards



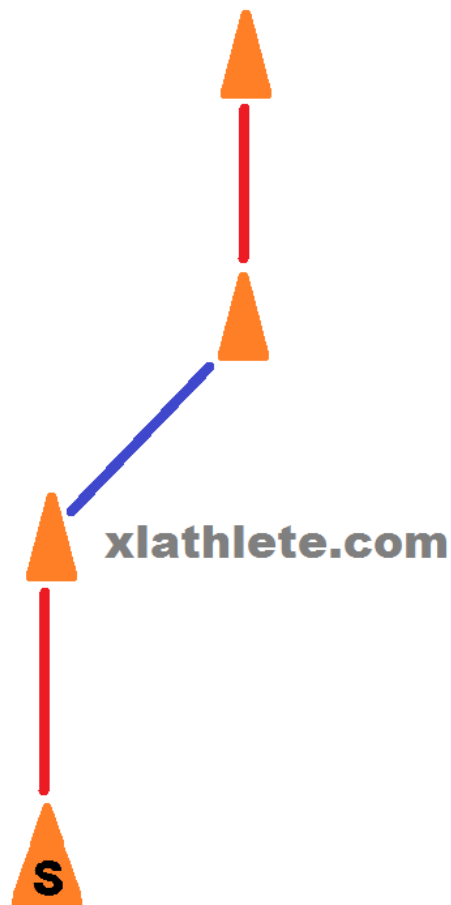
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



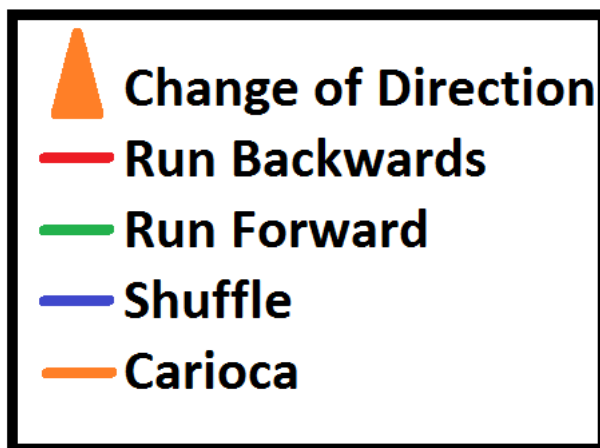
The duration of this drill is 7 seconds

The distance between cones is 8 yards



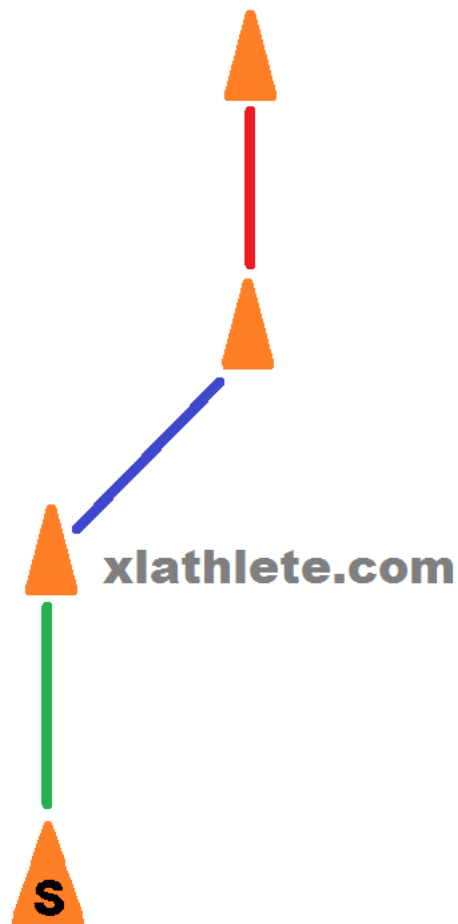
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



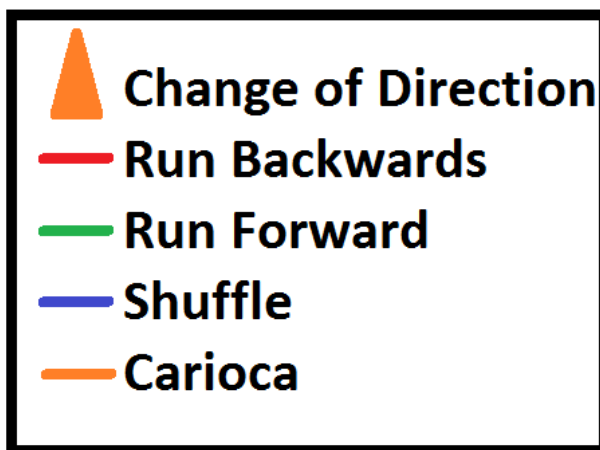
The duration of this drill is 7 seconds

The distance between cones is 10 yards



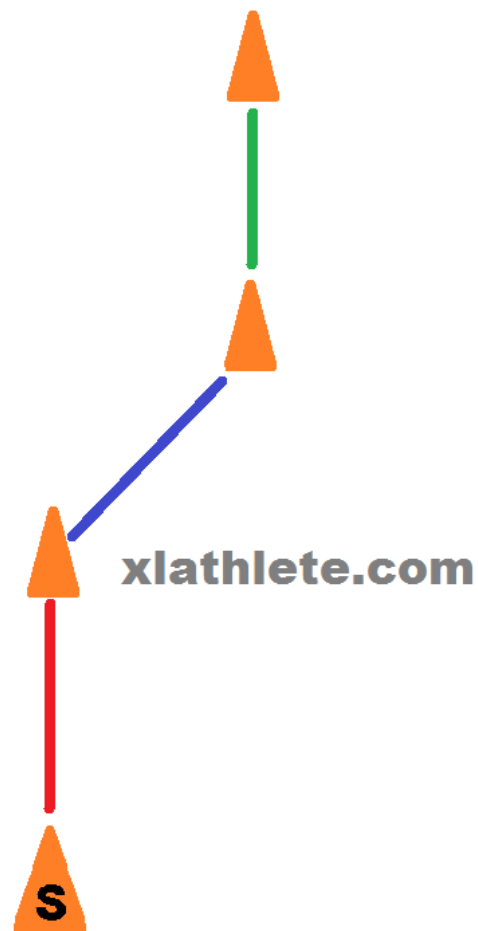
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



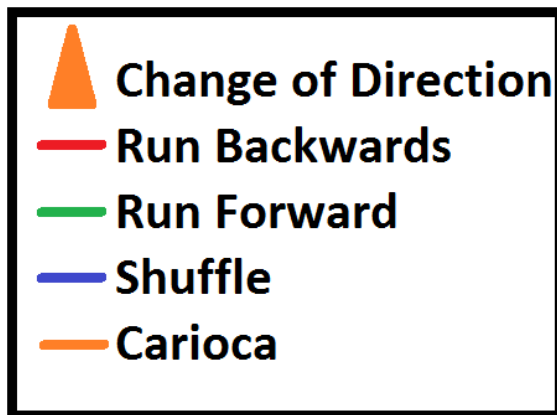
The duration of this drill is 7 seconds

The distance between cones is 8 yards



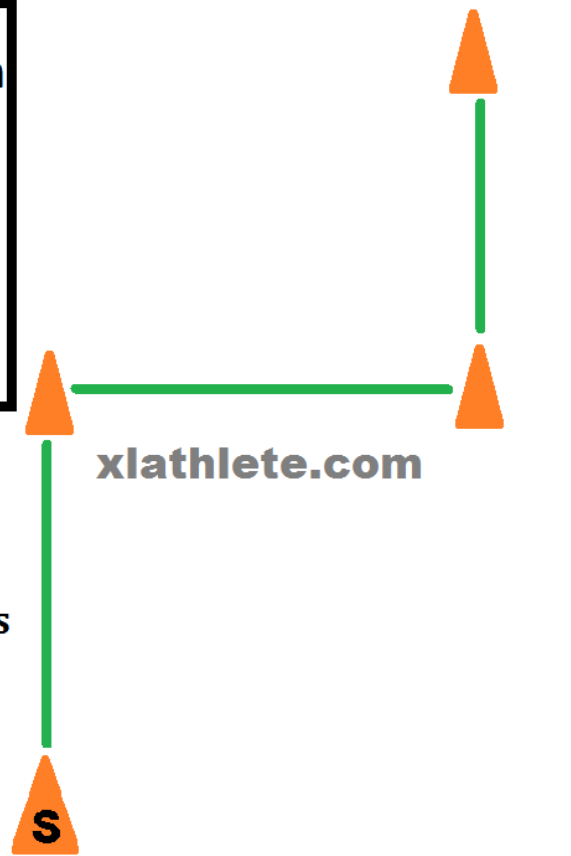
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



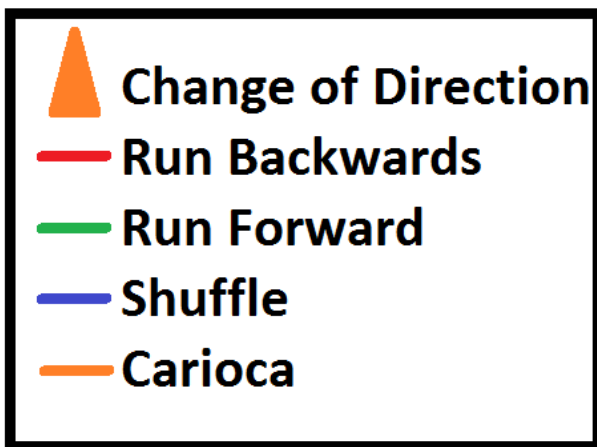
The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 12 Yards.



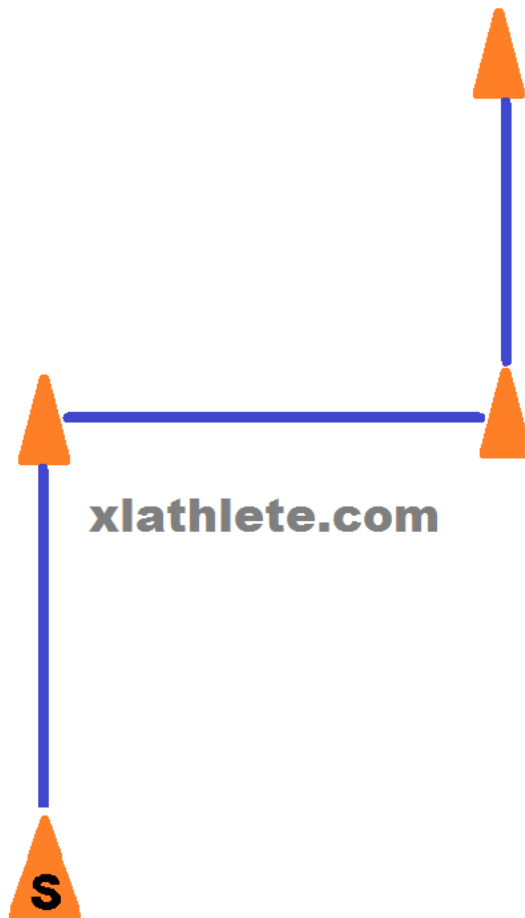
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



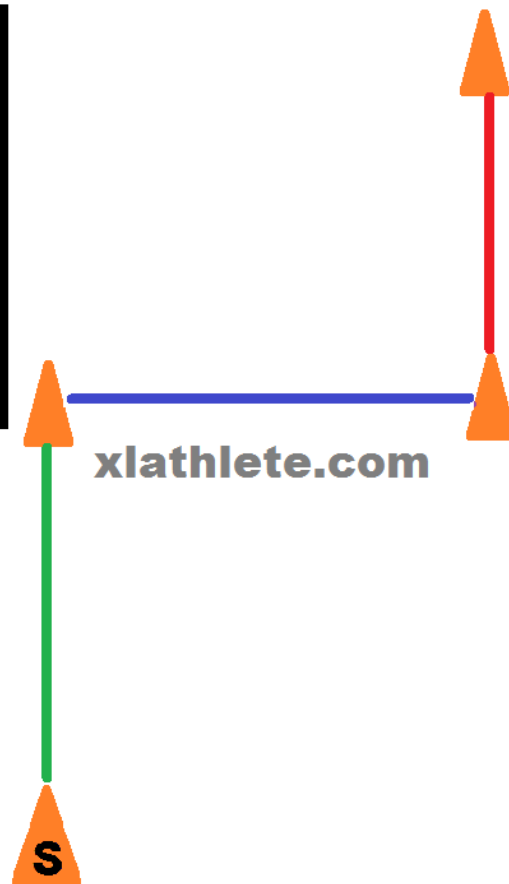
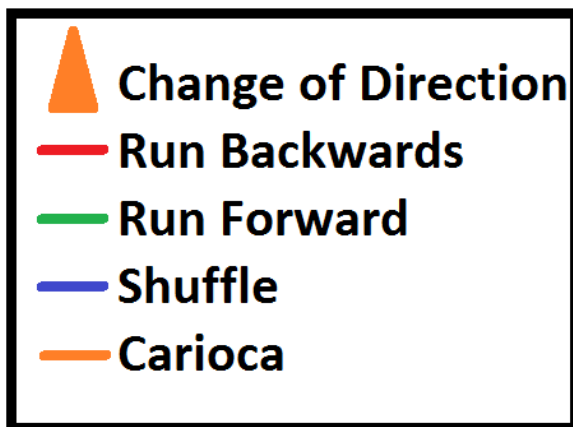
The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 10 Yards.



www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

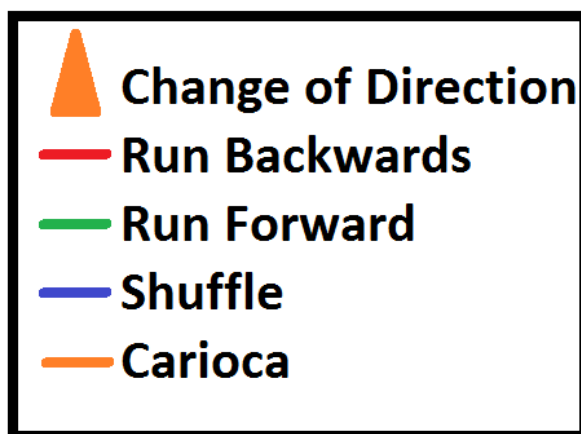


The duration of this drill is
7 seconds

The distance between cones is
10 yards

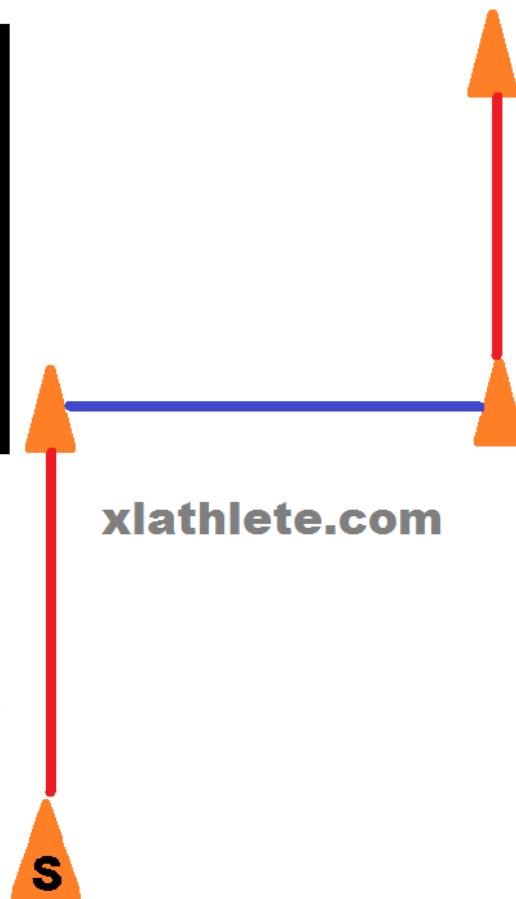
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



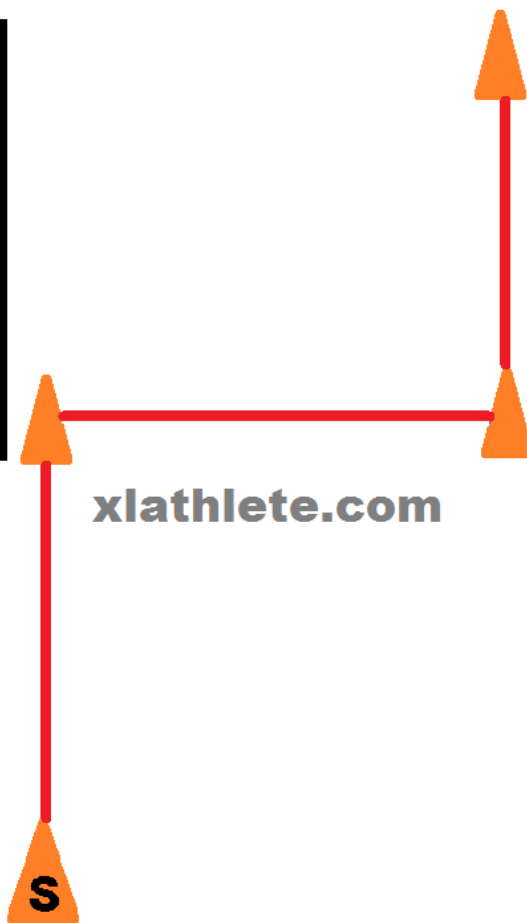
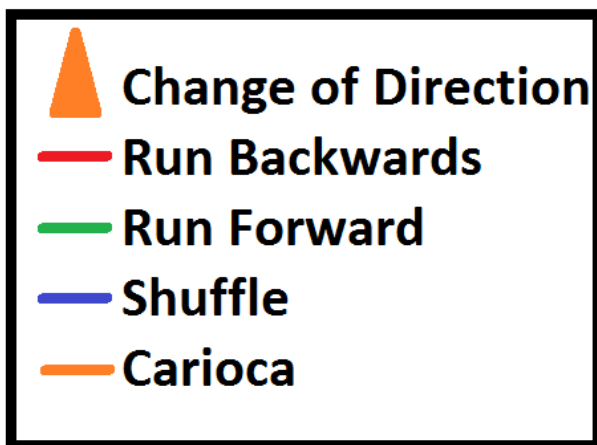
The duration of this drill is
7seconds

The distance between cones is
10 yards



www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

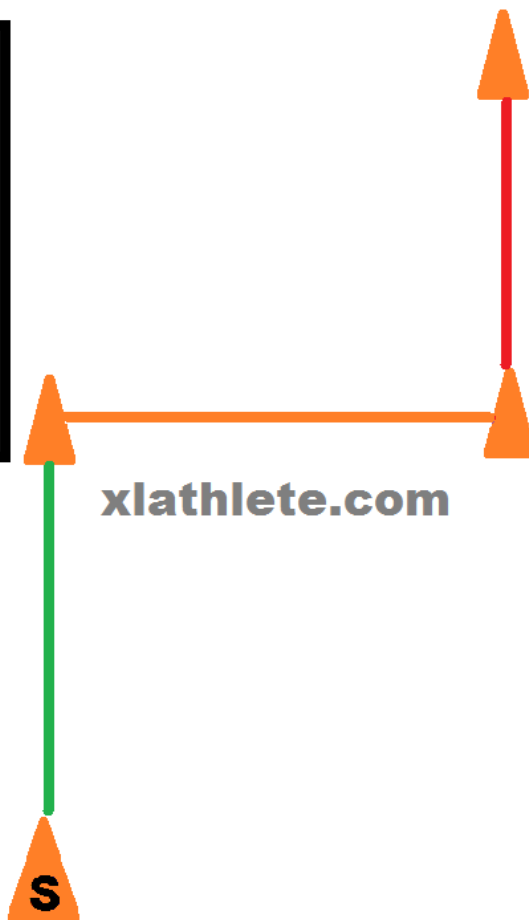
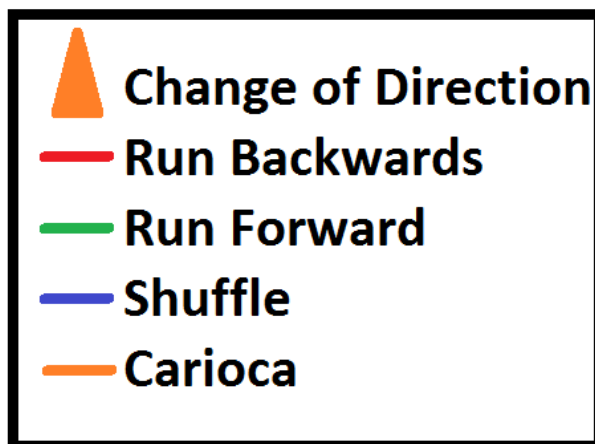


The duration of this drill is
7 seconds

The distance between cones is
8 yards

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

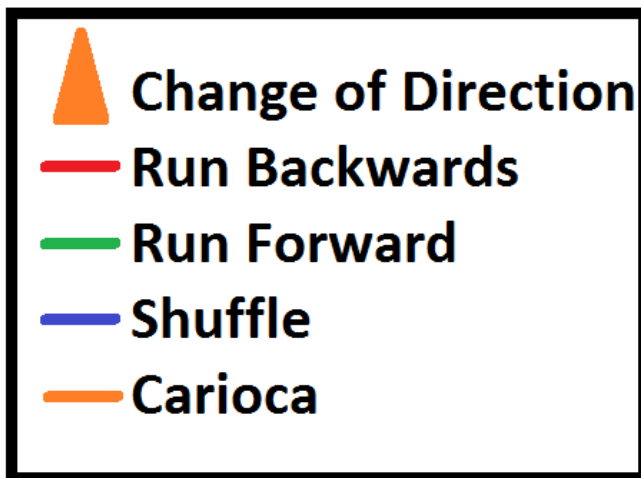


The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 10 Yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

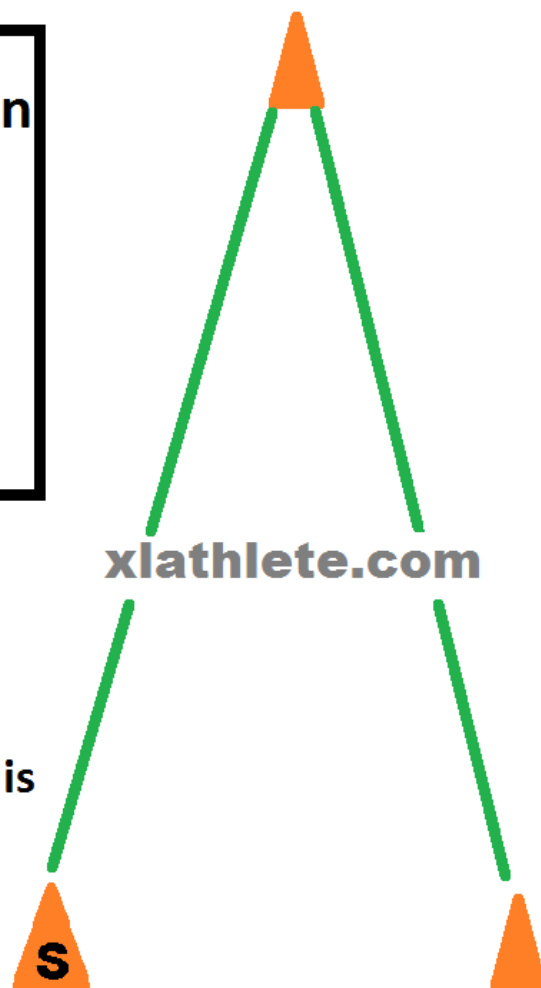


The duration of this drill is

7 sec

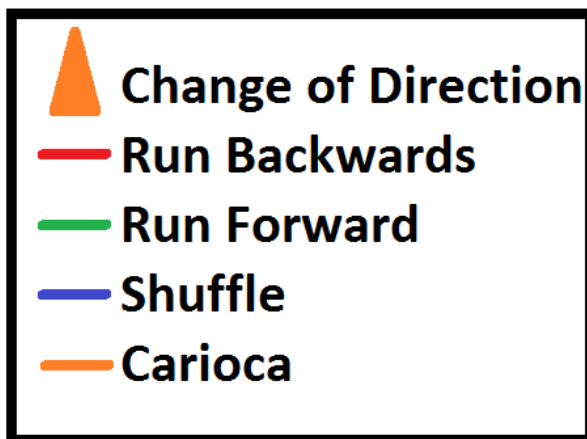
The distance between cones is

15 yds



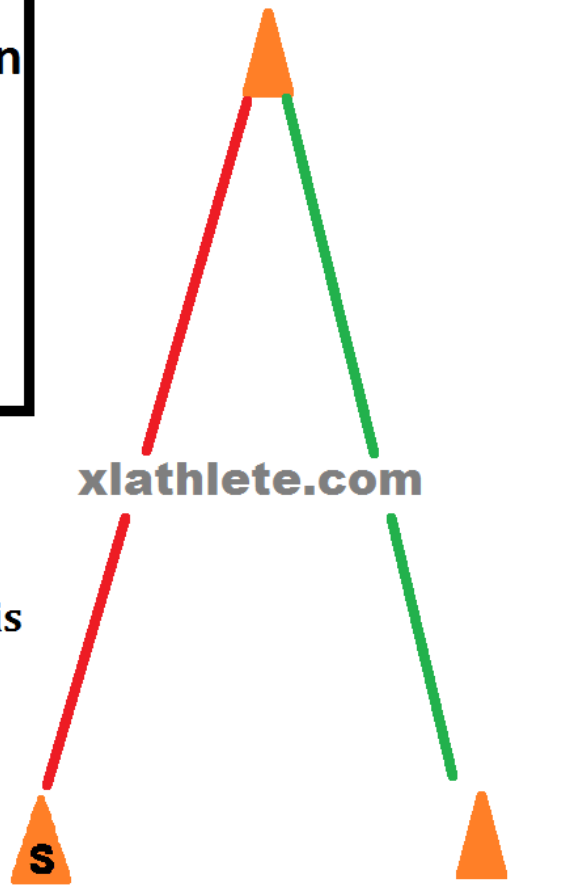
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



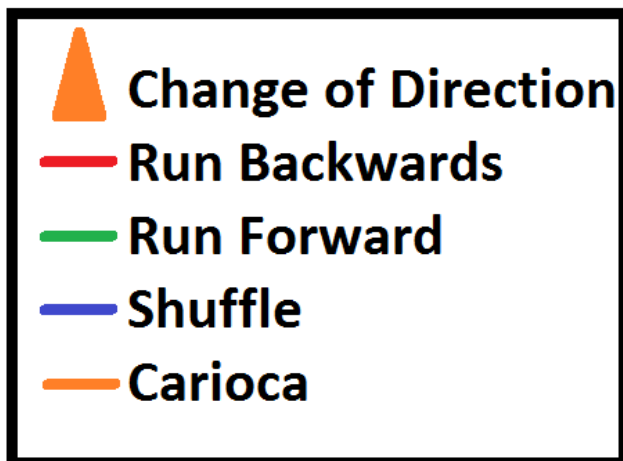
The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
14 Yards.



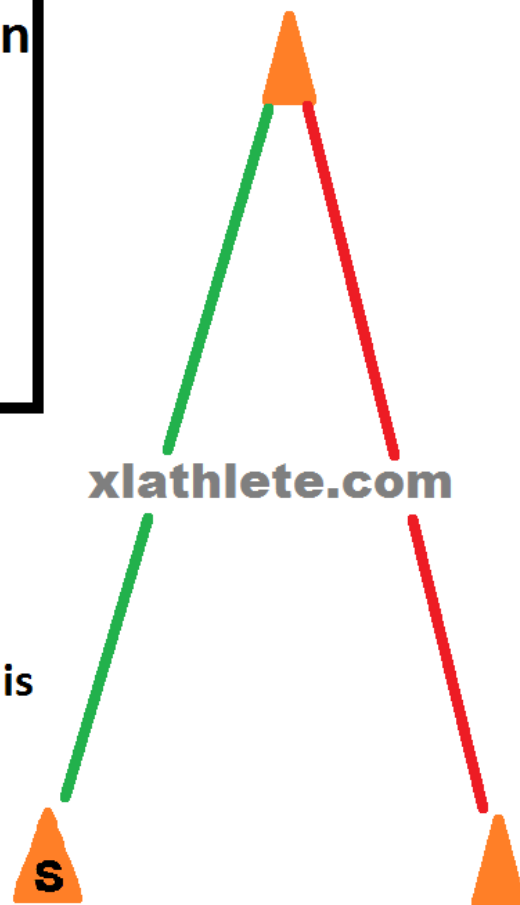
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



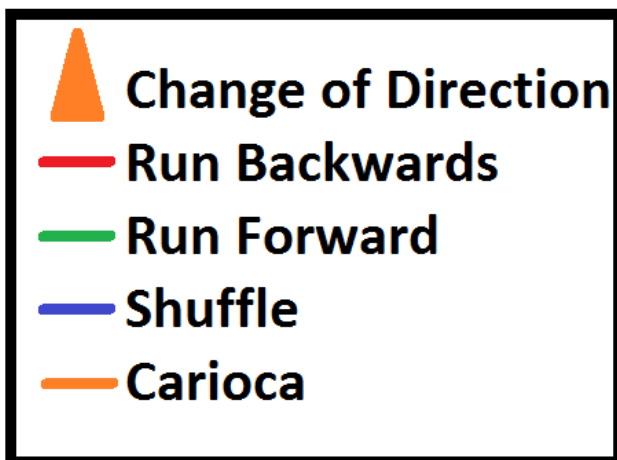
The duration of this drill is
7 sec

The distance between cones is
15 yds



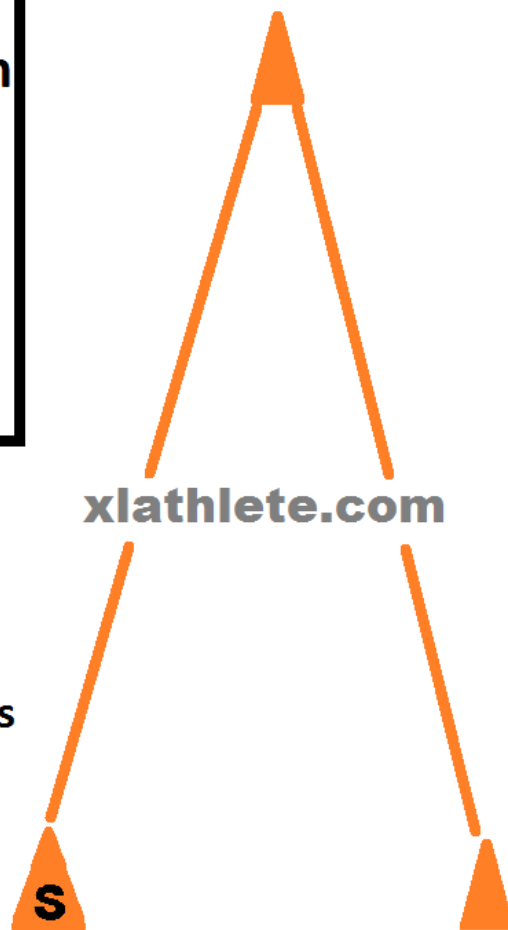
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The duration of this drill is
7 sec

The distance between cones is
14 yds

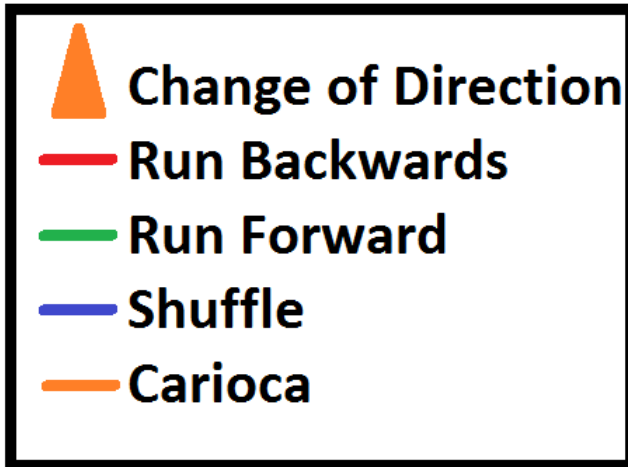


www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

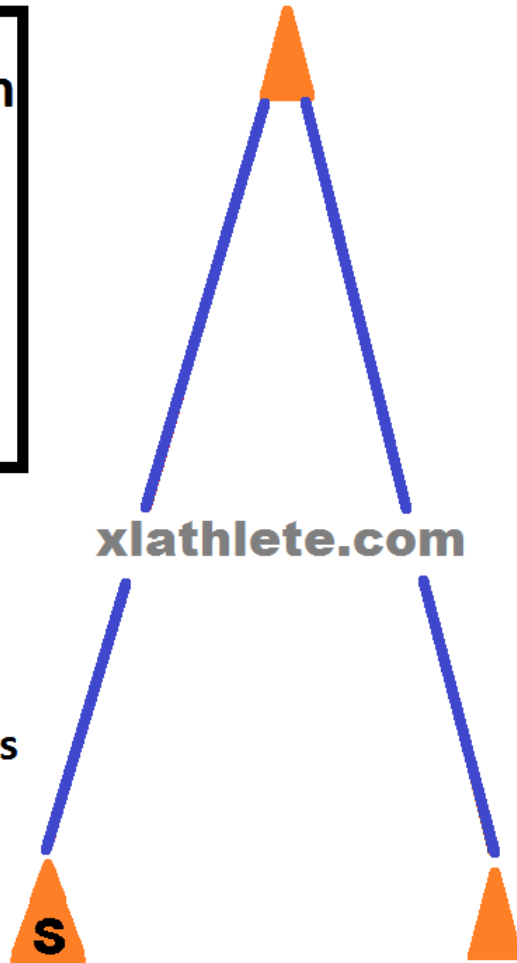
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



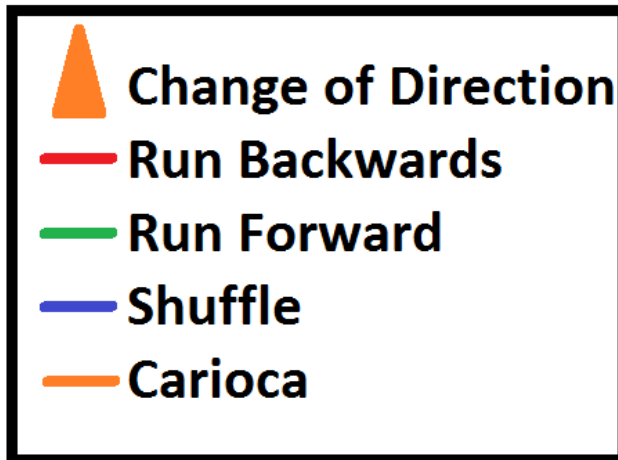
The duration of this drill is
7 sec

The distance between cones is
14 yds



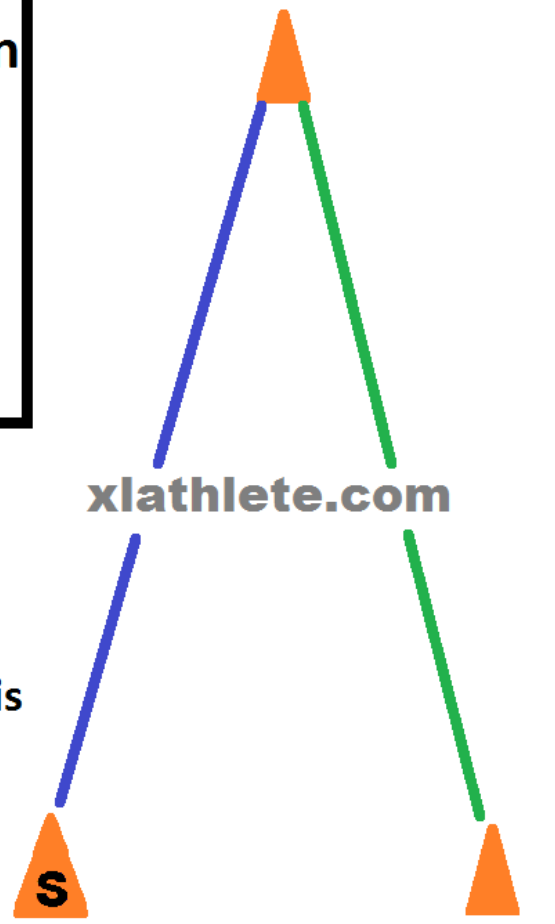
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



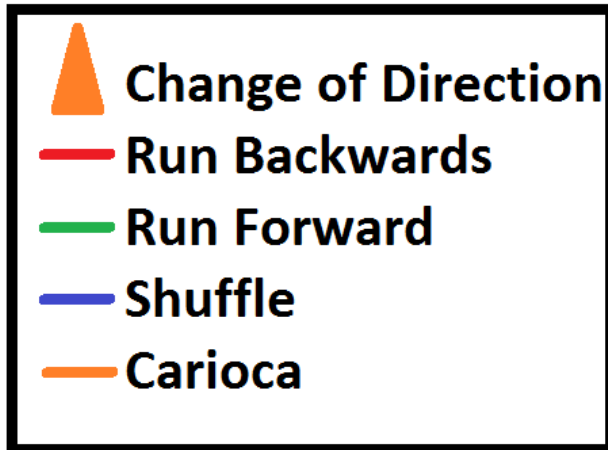
The duration of this drill is
7 sec

The distance between cones is
15 yds



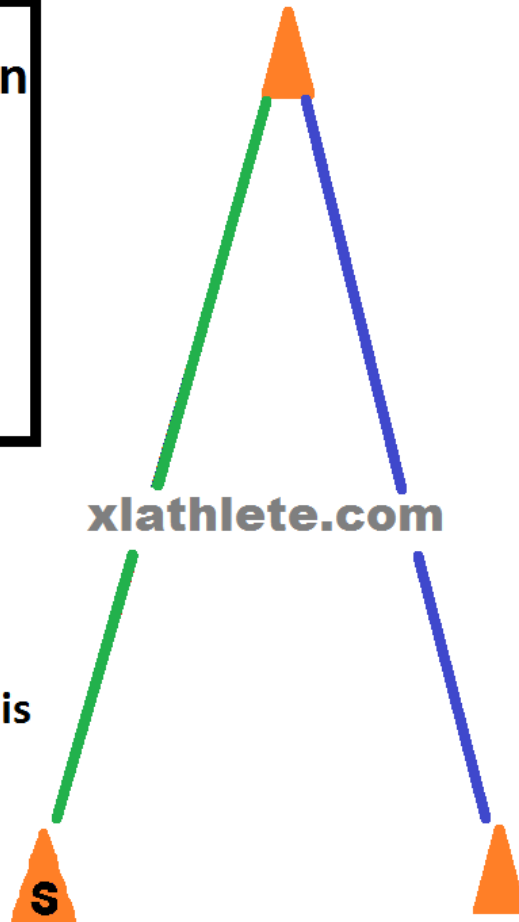
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



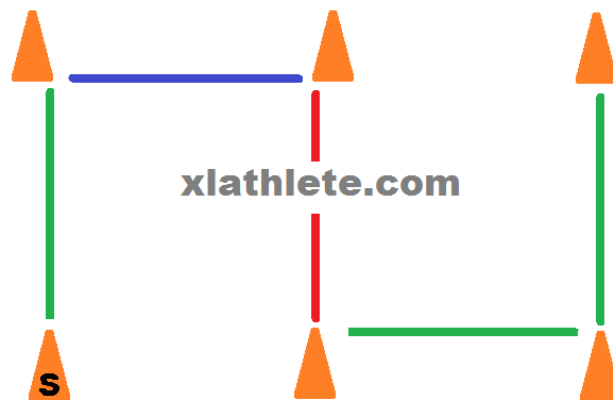
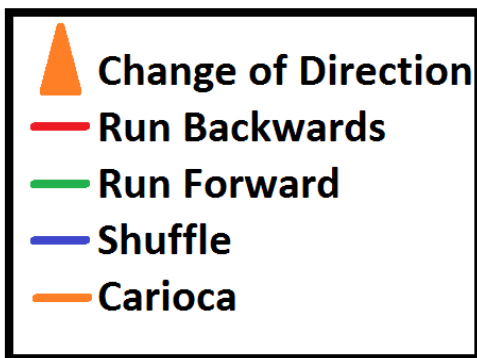
The duration of this drill is
7 sec

The distance between cones is
15 yds



www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

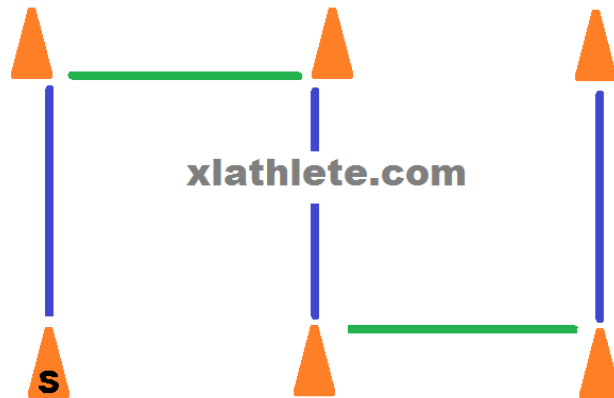
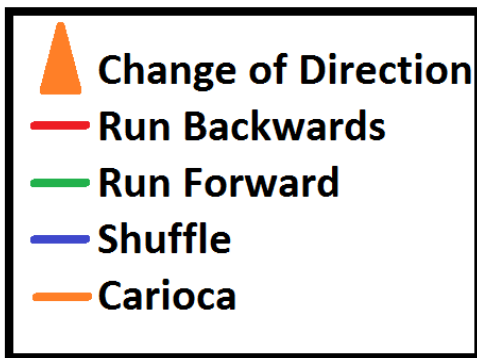


The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 5 Yards.

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These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

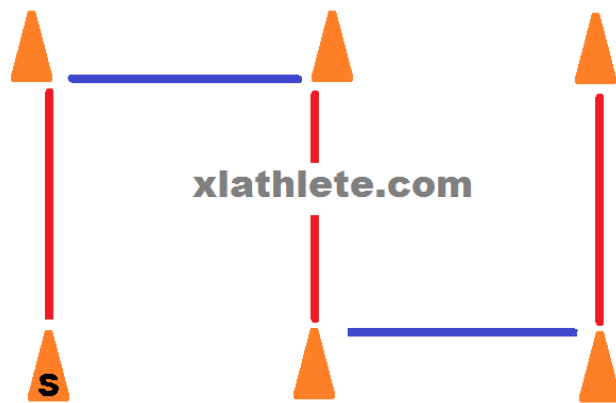
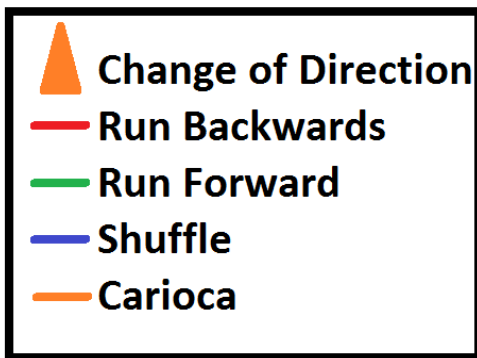


The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
5 yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

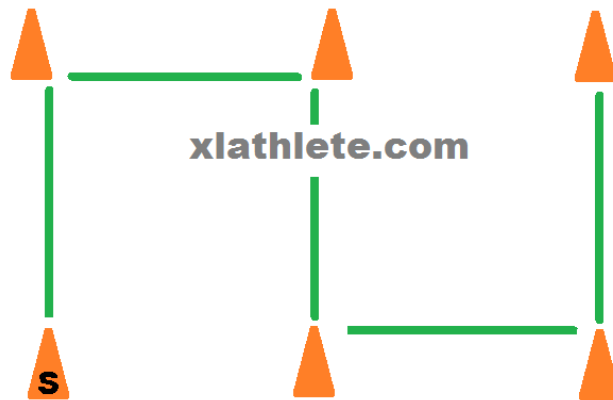
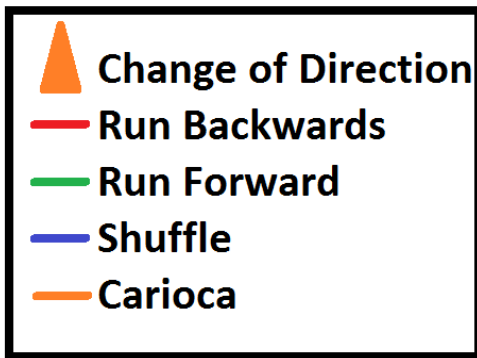


The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 4 yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

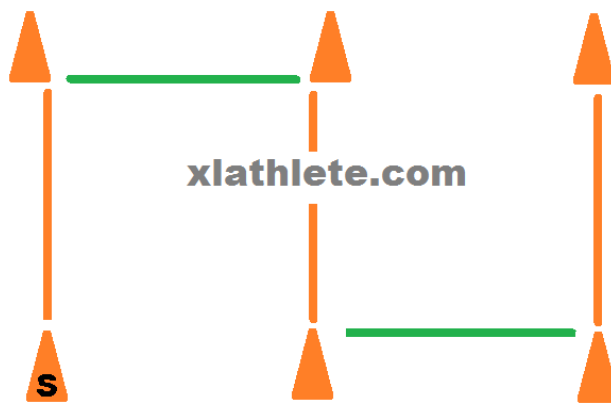
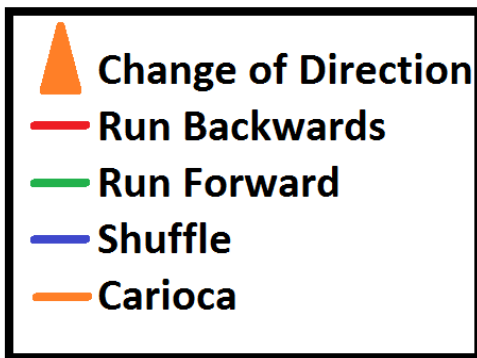


The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 6 yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

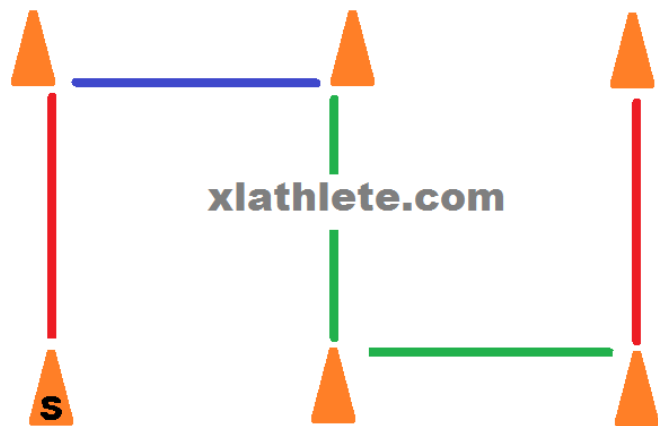
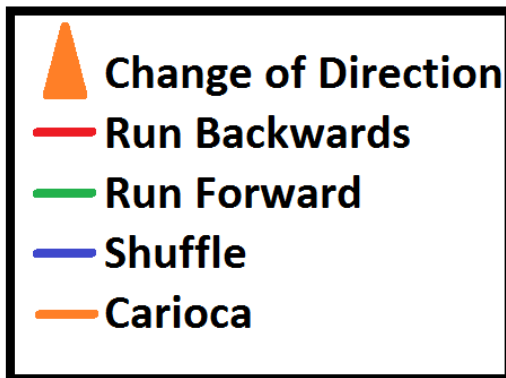


The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
5 yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

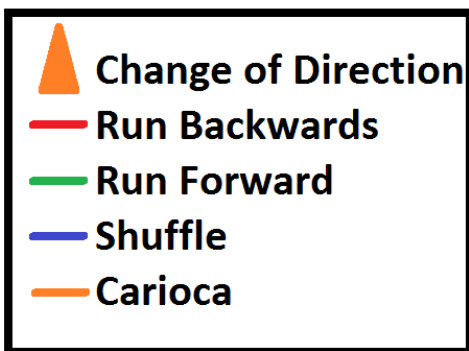


The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 5 yards.

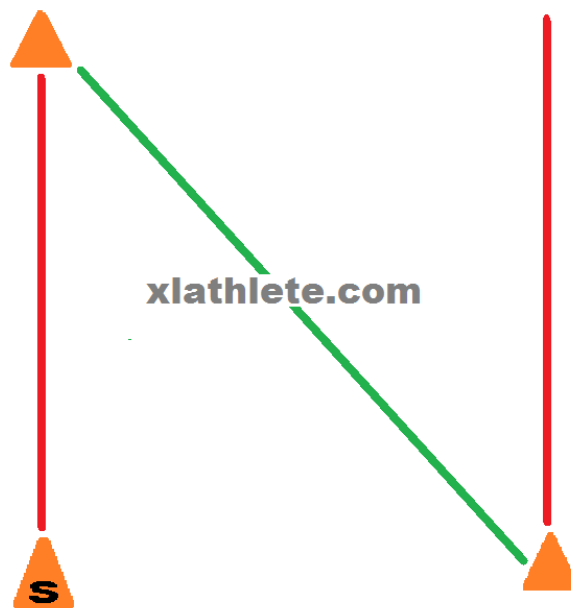
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



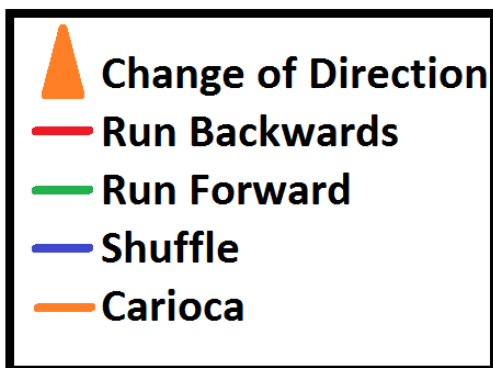
The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 10 Yards.



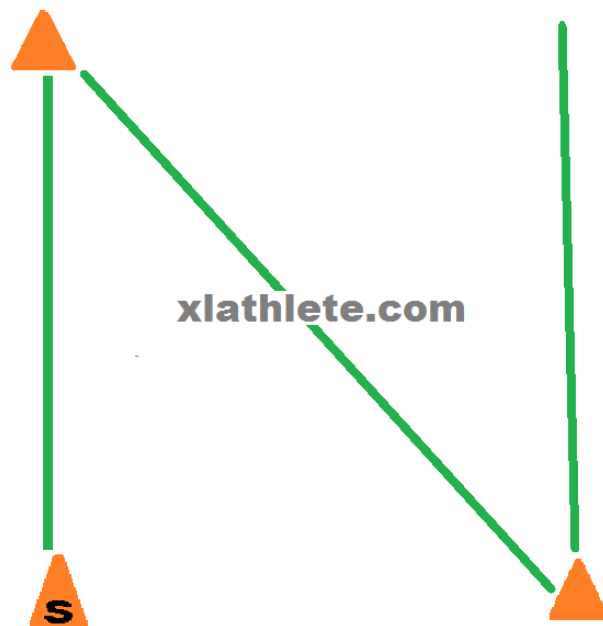
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



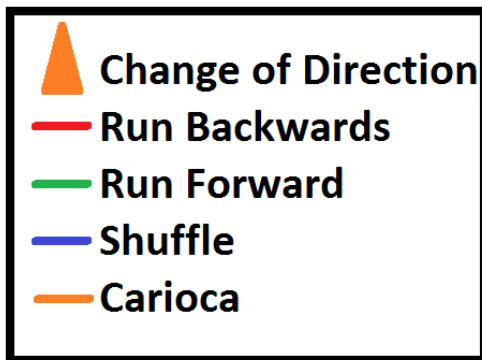
**The Duration of This Drill is
7 seconds**

**The Distance Between Cones is
15 yards**



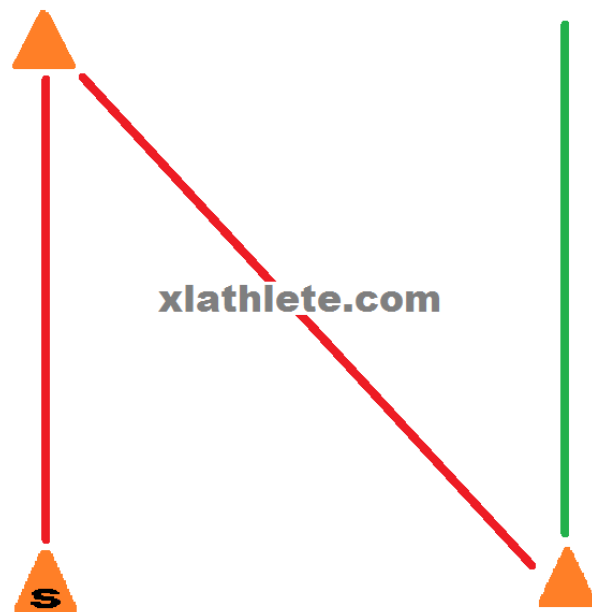
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



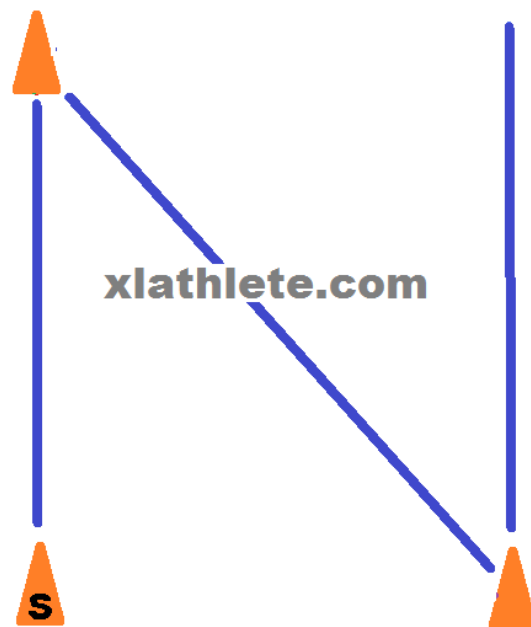
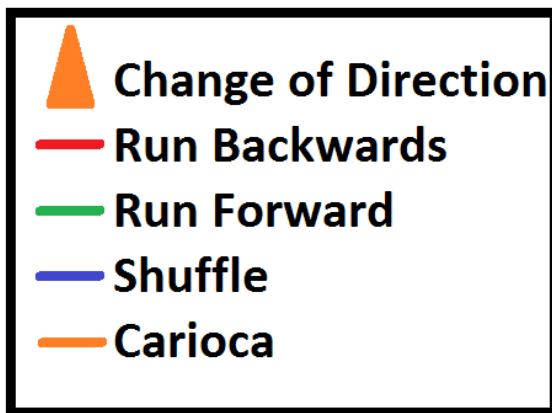
The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 9 Yards.



www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

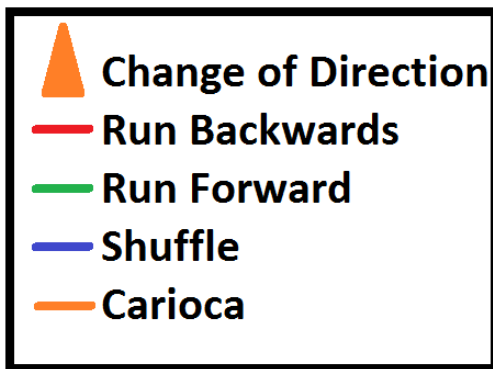


The duration of this drill is
7 Seconds.

The distance between cones is
7 Yards.

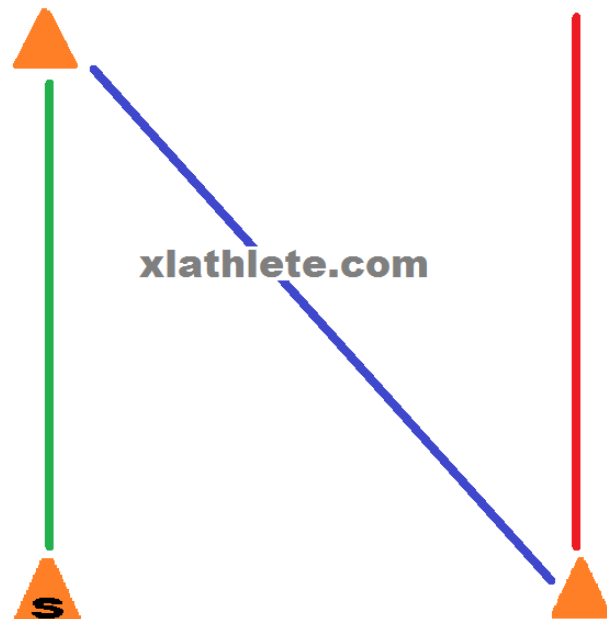
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



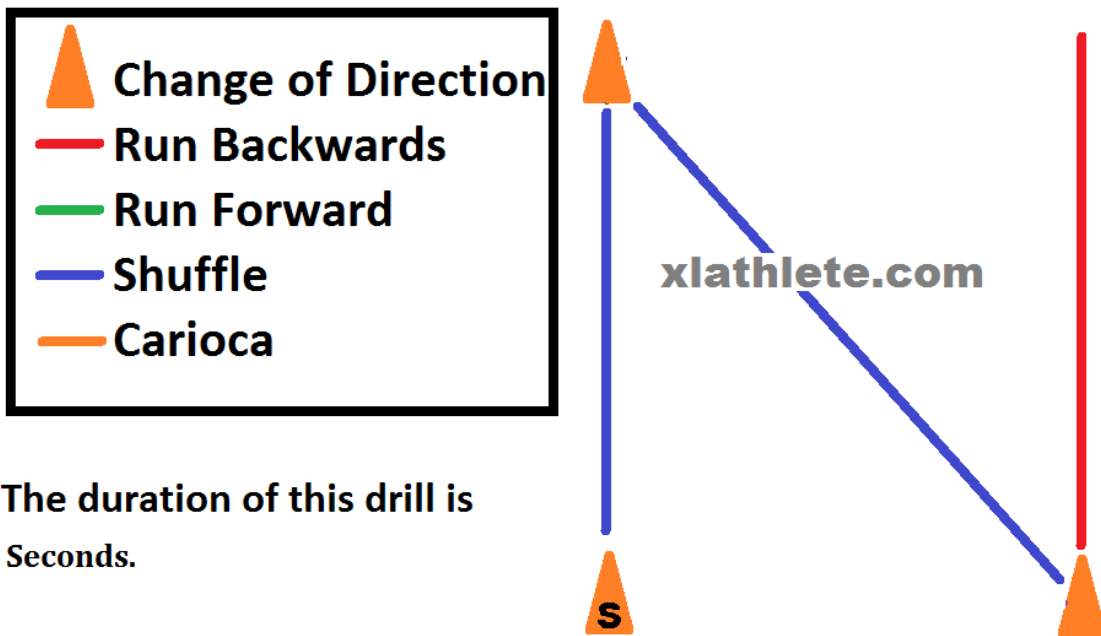
The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 10 Yards.



www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

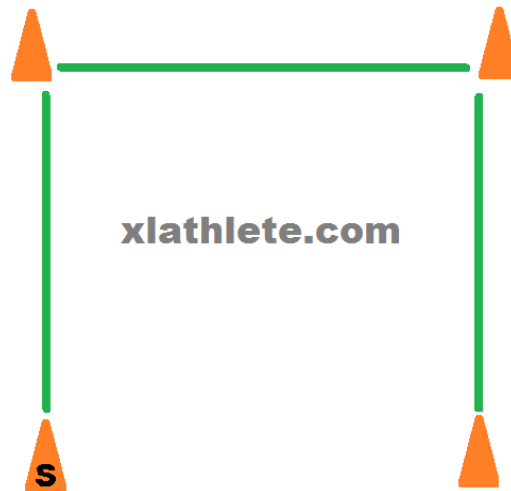
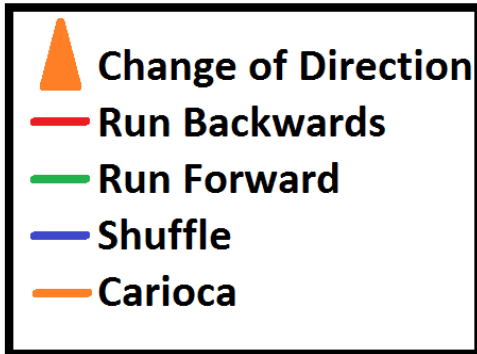


The duration of this drill is
7 Seconds.

The distance between cones is
10 Yards

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

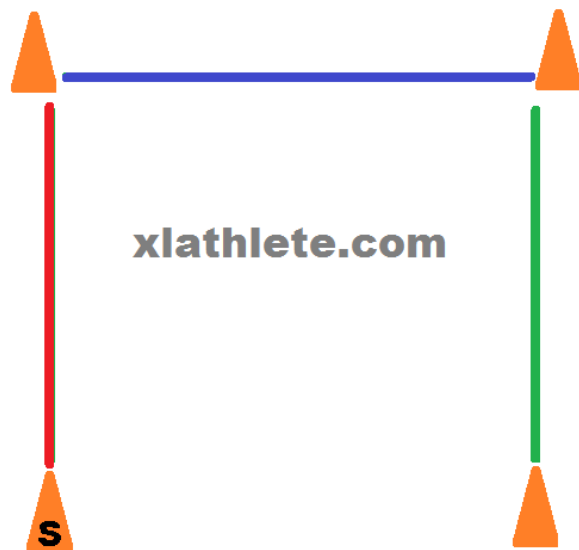
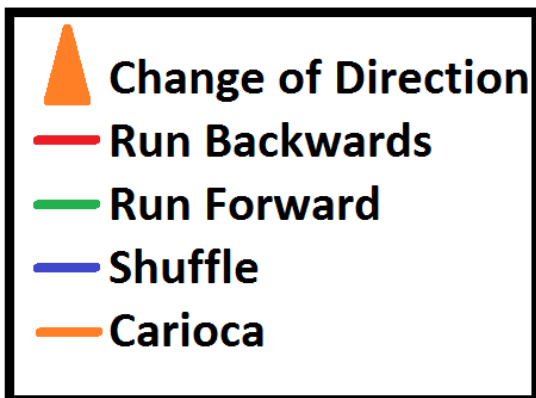


The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 15 Yards.

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These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

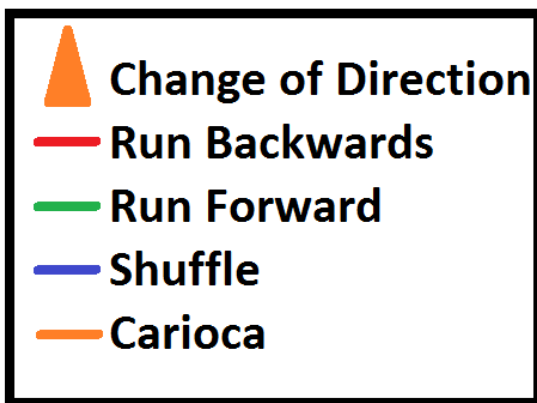


The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 16 Yards.

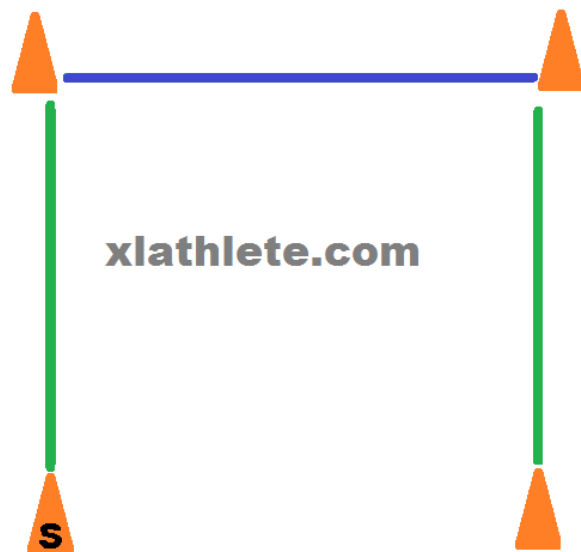
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



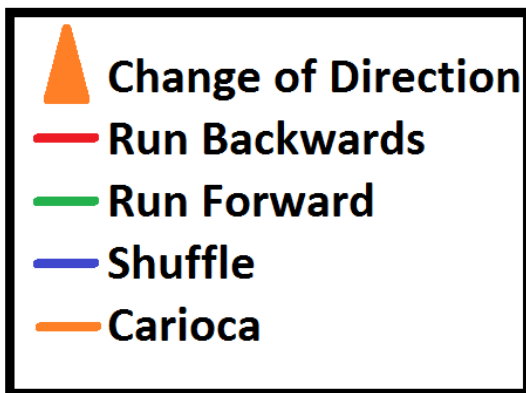
The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 15 Yards.



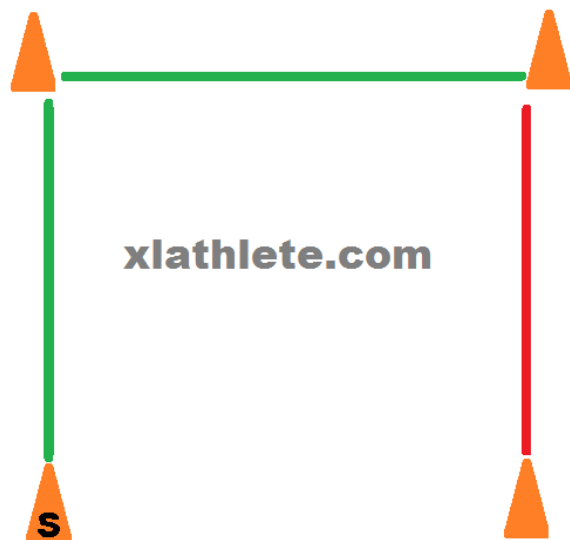
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



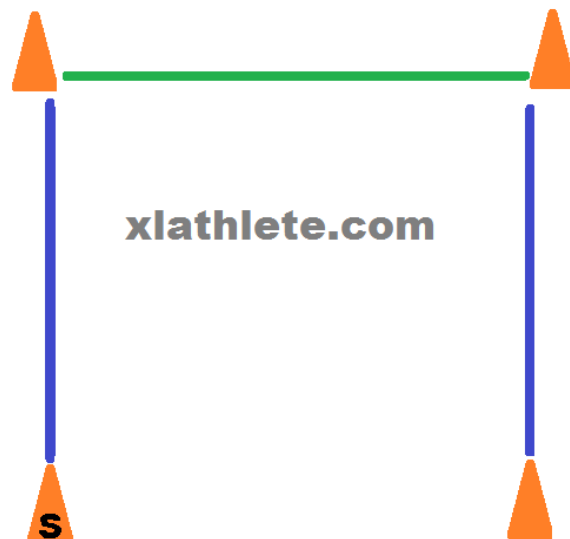
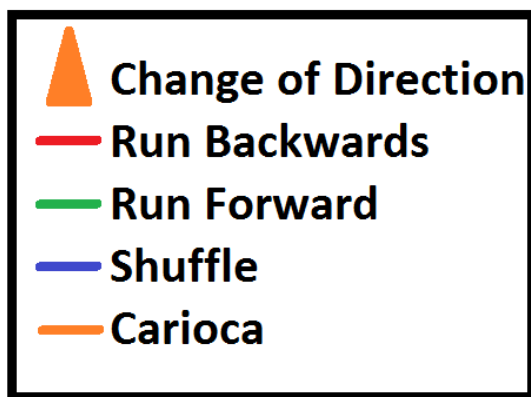
The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 15 Yards.



www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

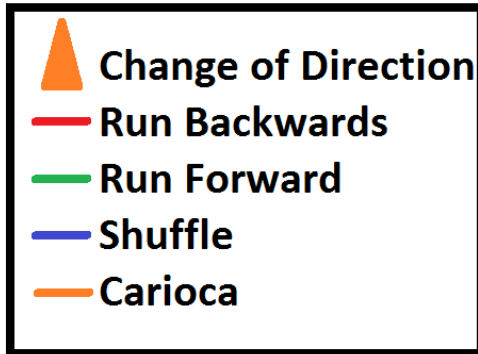


The Duration of This Drill is
7 Seconds.

The Distance Between Cones is
12 Yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

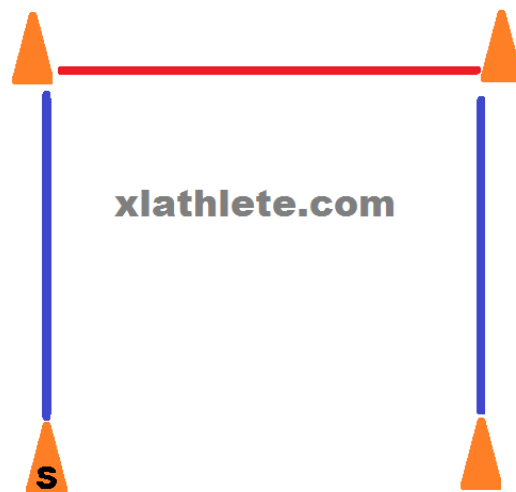


The duration of this drill is

7 seconds

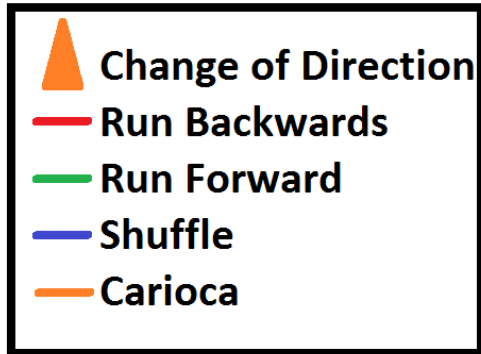
The distance between cones is

10 yards



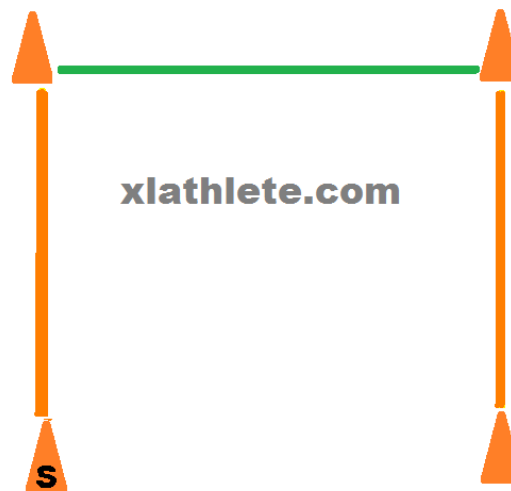
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



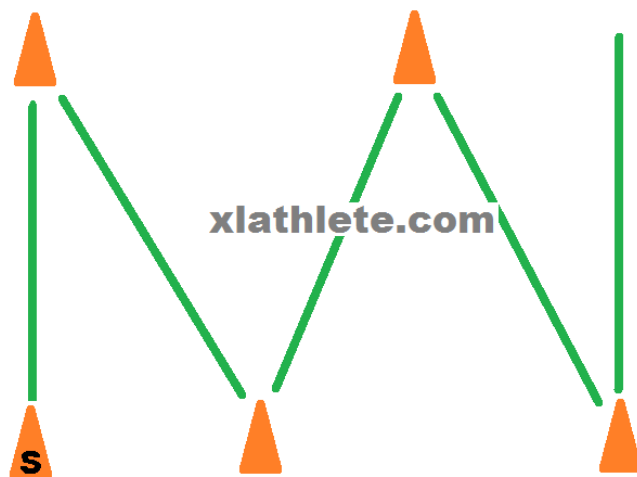
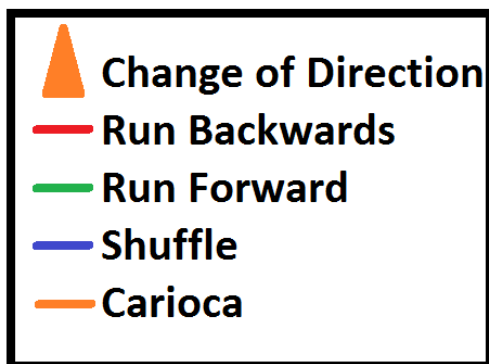
The duration of this drill is 7 Seconds.

The distance between cones is 10 yards.



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These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

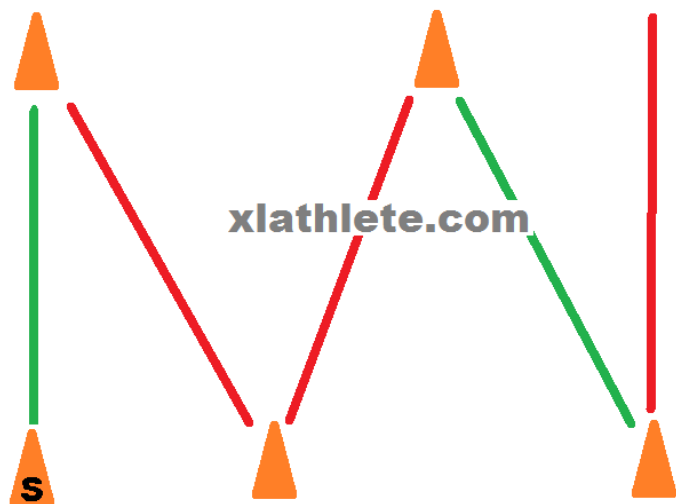
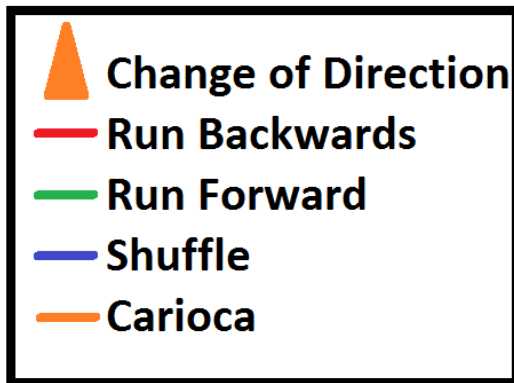


The duration of this drill is 7 seconds.

The distance between cones is .5 yards.

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These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

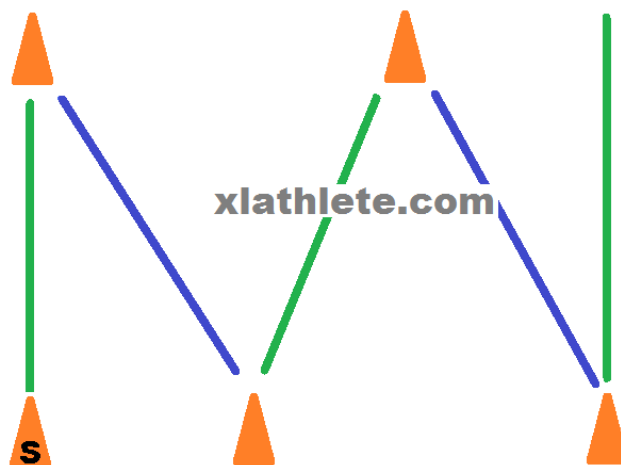
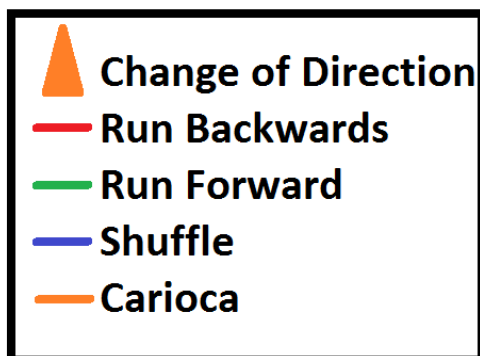


The duration of this drill is
7 Seconds.

The distance between cones is
4 yards.

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These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

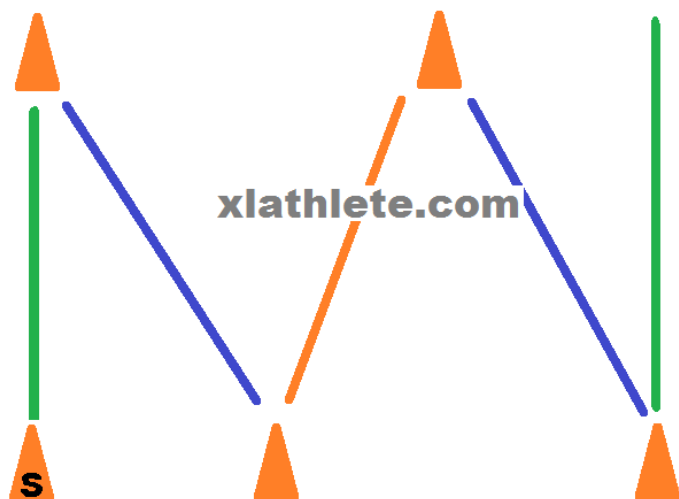
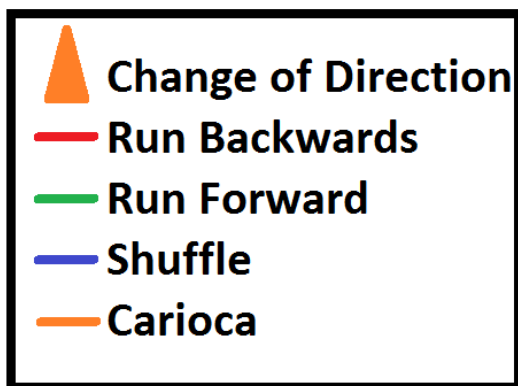


The duration of this drill is
7 Seconds.

The distance between cones is
4 Yards.

www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

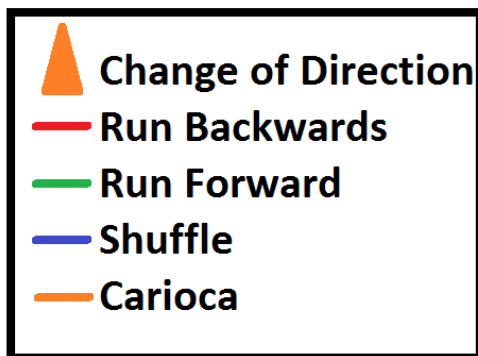


The duration of this drill is 7 Seconds.

The distance between cones is 4 yards.

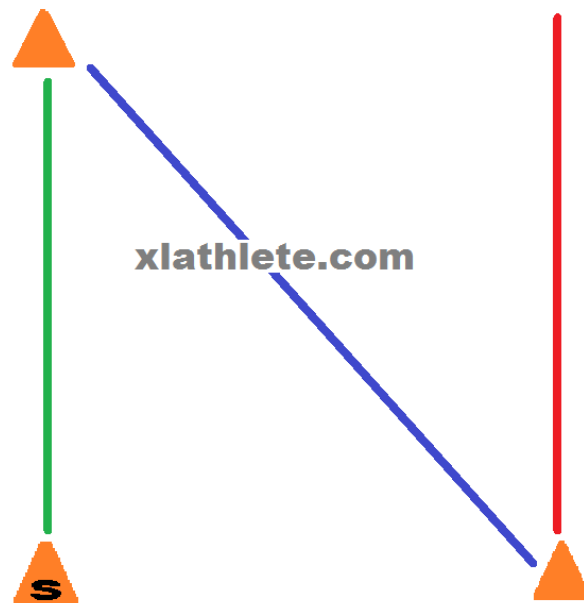
www.xlathlete.com

These drills are designed to last 7 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The Duration of This Drill is 7 Seconds.

The Distance Between Cones is 10 Yards.



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Agility Drill Speed Development Program

The following are a list of 10 second cone drills that can be used for speed development by focusing on work to rest ratios and the cones drills being used so that the coach gets the desired outcome. Stopping, starting and change of direction are of the utmost importance for many sports. Agility drills are one of the most effective methods for developing change of direction abilities, many people believe the agility ladder helps with change of direction, but if you look at the movements used during agility ladder training, you can see that these movements do not mimic what happens in sport. All drills that you see here are turning to the right; keep in mind the coach must have the athlete turn both right and left to develop symmetrical cutting and change of direction ability.

Agility Drills for Speed Development

When your main focus for agility drills is speed development then the most obvious time to complete the drills for speed development would be directly after your warm-up and right before going into the weight room or any other type of workout. At the high school level, I would recommend coaches do cone agility drills everyday they do workouts. The key focus for speed development is running cone agility drills as fast as possible and with that you must get plenty of rest so you can repeat a high-quality effort of maximal speed while doing the cone agility drills.

Rest Time for Speed Development

The suggested rest time for the 10 seconds cone agility drills for speed development and quickness is between 110 to 130 second between each repetition of a 10 second cone drill completed. This will give your athletes plenty of rest and keeps repetitions high-quality.

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Number of repetitions for Speed Development

With the 10 second cone drill the amount of repetitions that can be completed is usually between 6 to 8 high-quality repetitions. You would not want to complete more than this because the quality of the drill would suffer.

Administration of Drills

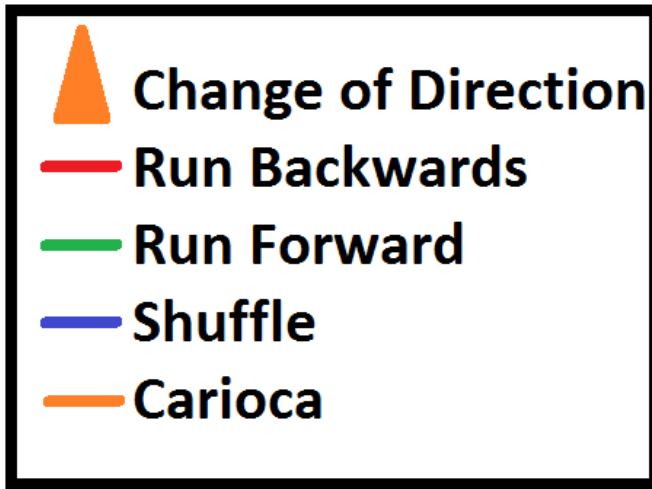
An effective way to set up cone agility drills for a large number of athletes is to pick the desired number of drills that you want to run, make sure you do the same drill to the left and right. Set the desired number of drills up on the field or in a gym. Then have one athlete at each station run the drill when the coach gives start signal, you may have as many as 12 athletes running at once depending on the desired number of drills and amount of space you have. Have the athletes walked to the next station so they get variations of the drills. Signal to let the next group of 12 athletes run the drills.

Coaching points

If you notice the cone agility drills never have athletes coming back through the drill or ending at the starting spot so you can actually run multiple athletes through the drill one after another because they will not cross paths. One of the most effective methods for speed development or conditioning is to set your agility drills up to have two starting lines, one line 3 yards behind the front starting line and have the athletes chase each other through the drills. The only rule is you can't leave your feet and reach across a cone to touch your chase partner; you can only touch the athlete in front of you on straight a ways.

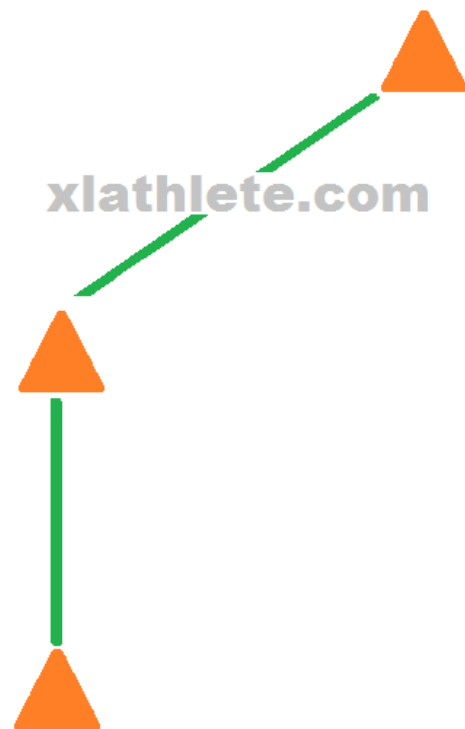
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



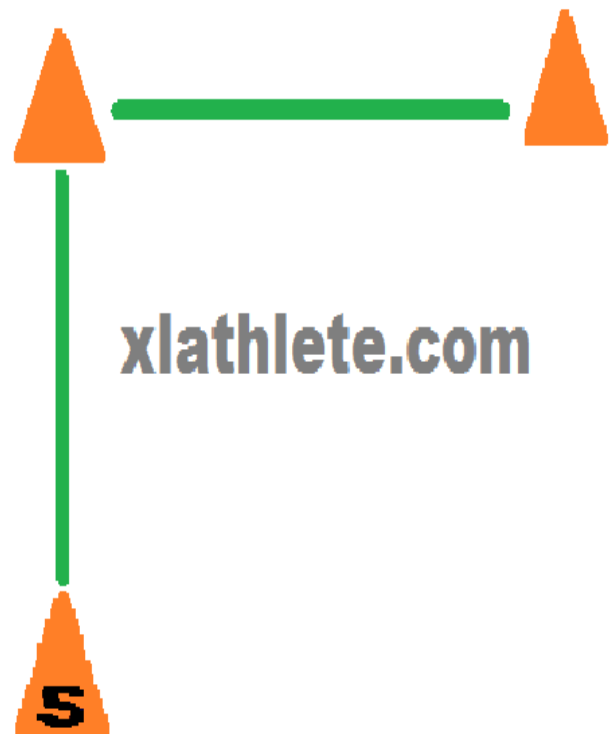
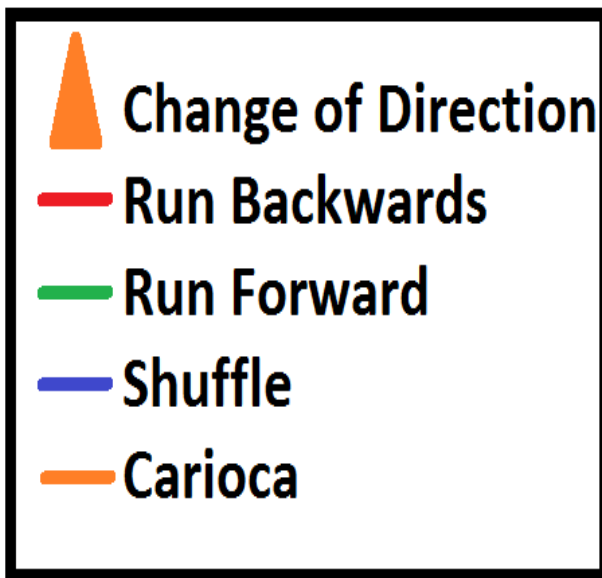
The Duration of This Drill is **10 Seconds.**

The Distance Between Cones is **30 Yards.**



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These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

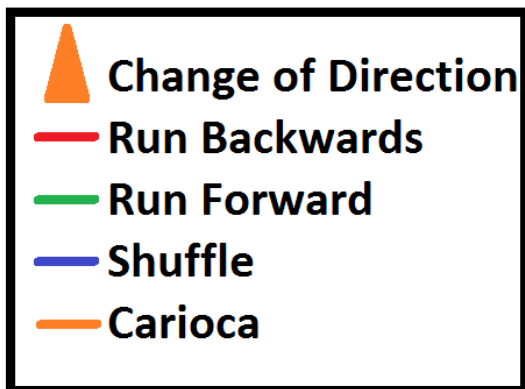


The Duration of This Drill is
10 Seconds.

The Distance Between Cones is
21 Yards.

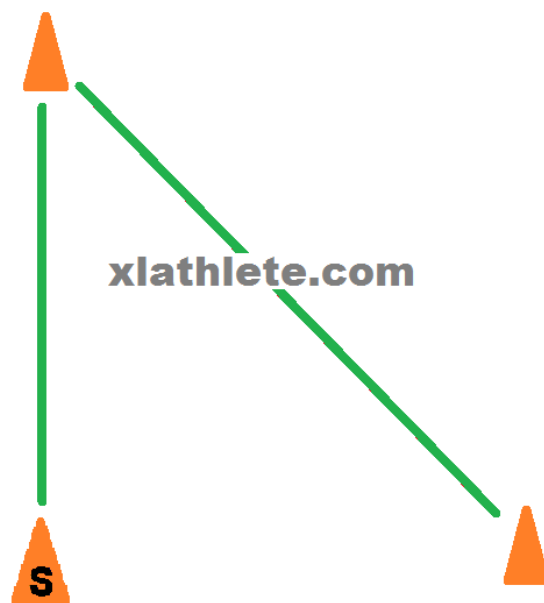
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



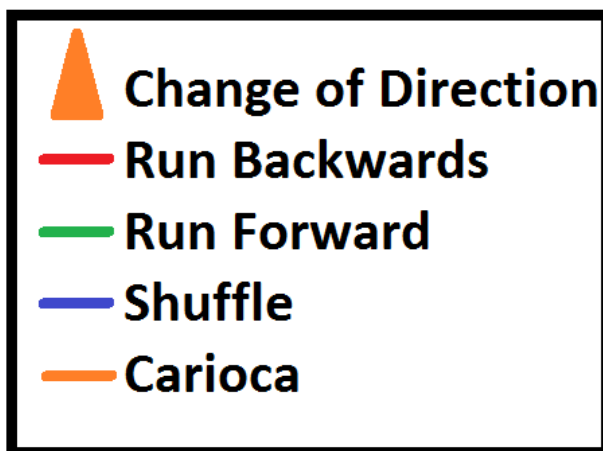
The duration of this drill is 10 seconds.

The distance between cones is 22 yards.



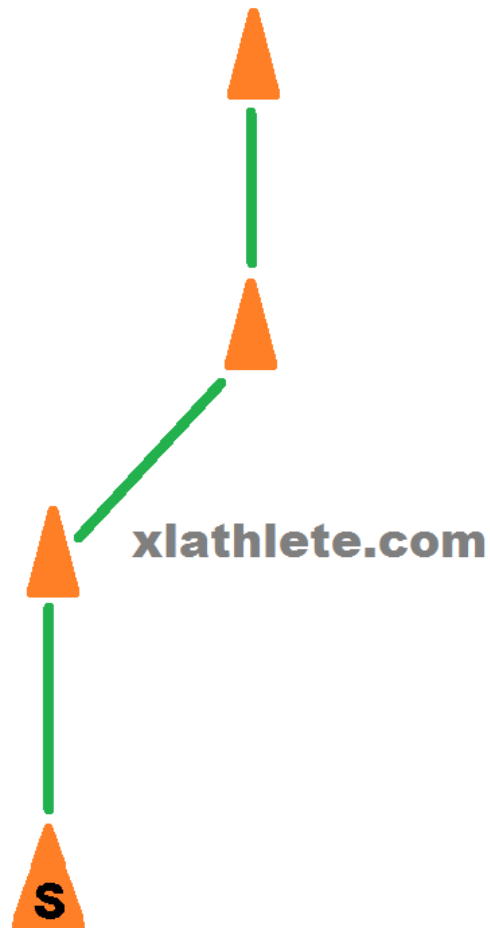
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



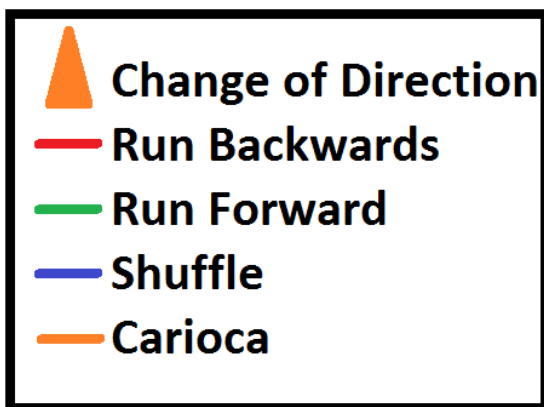
The duration of this drill is 10 seconds.

The distance between cones is 22 yards.



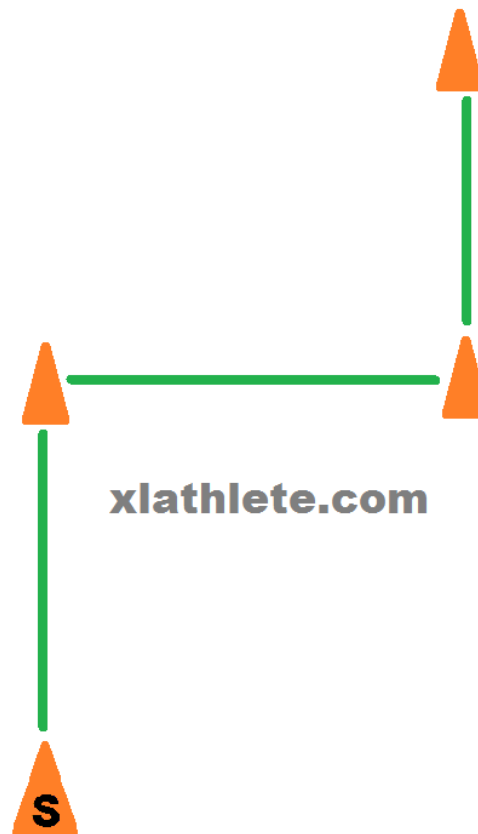
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



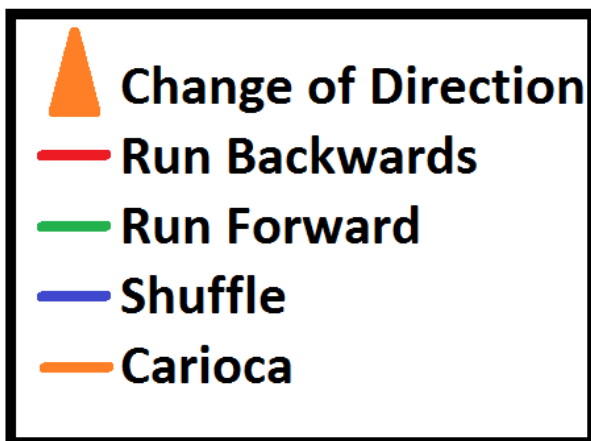
The duration of this drill is **10 seconds**

The distance between cones is **18 yards**



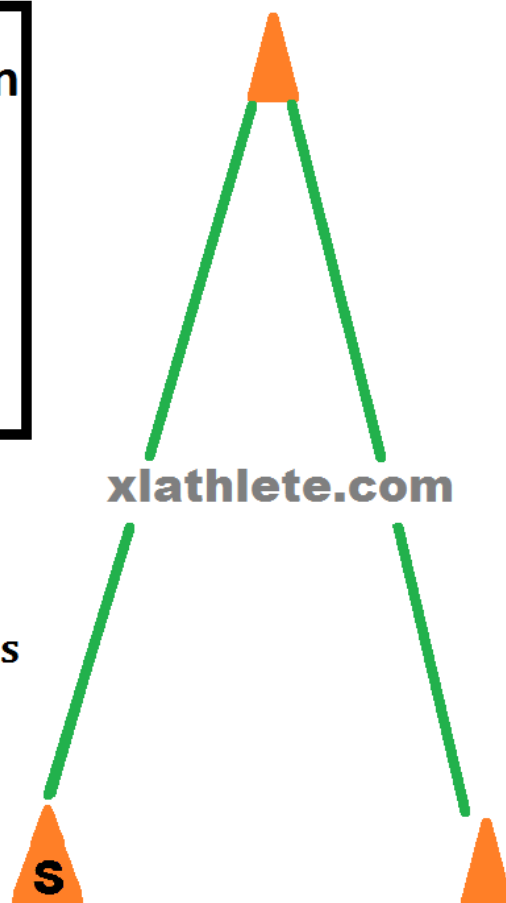
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



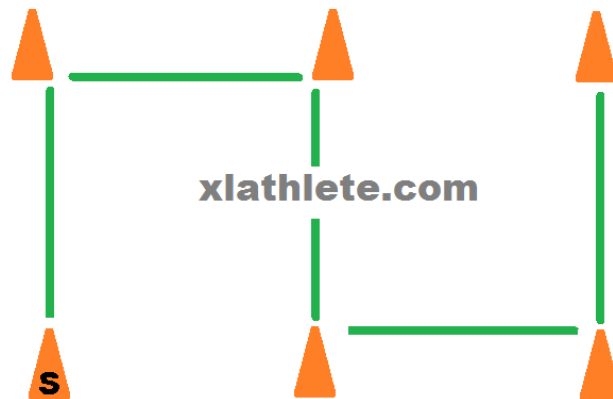
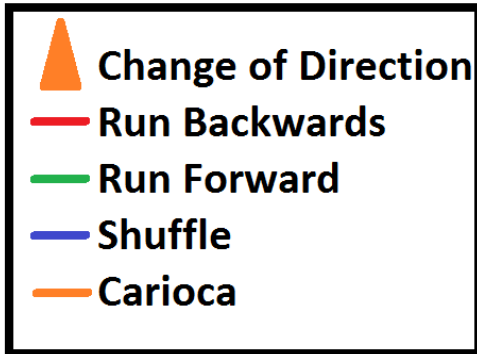
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 22 Yards.



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These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

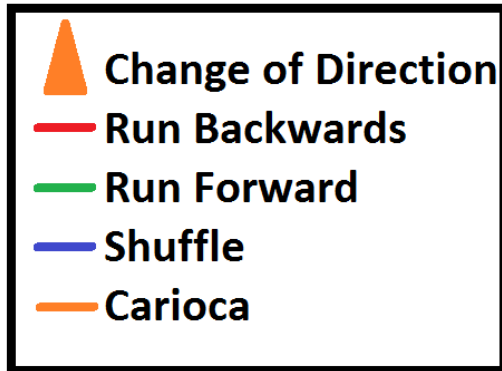


The Duration of This Drill is
10 Seconds.

The Distance Between Cones is
9 yards.

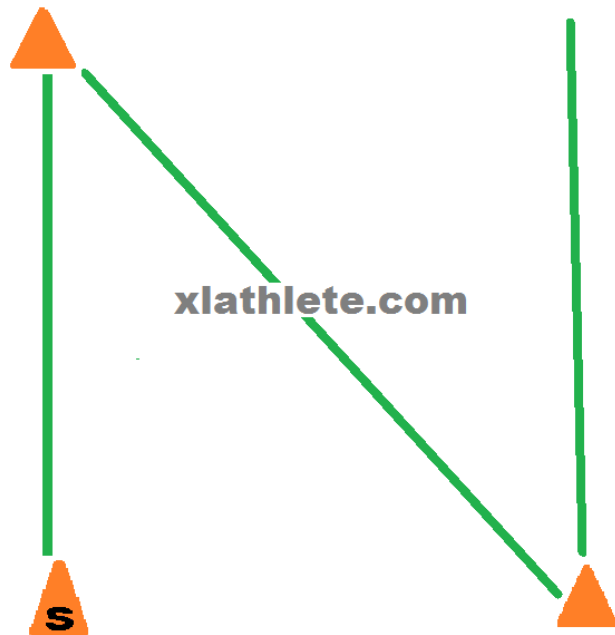
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



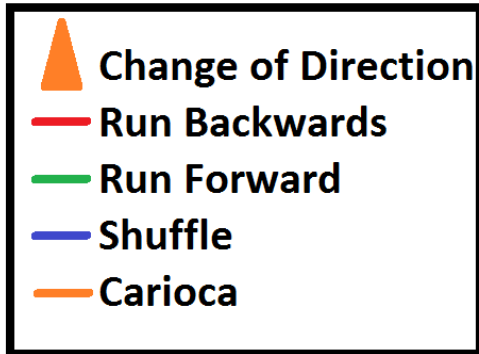
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 22 Yards.



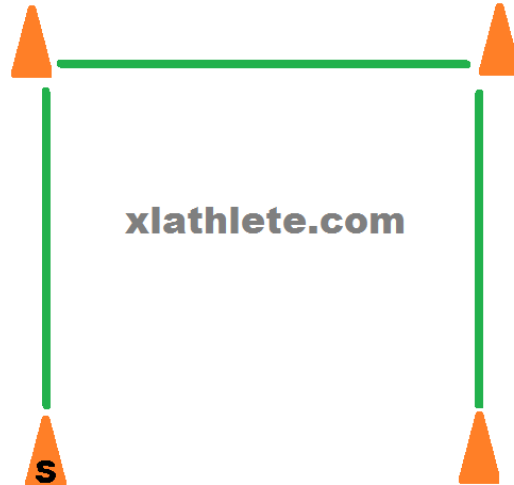
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



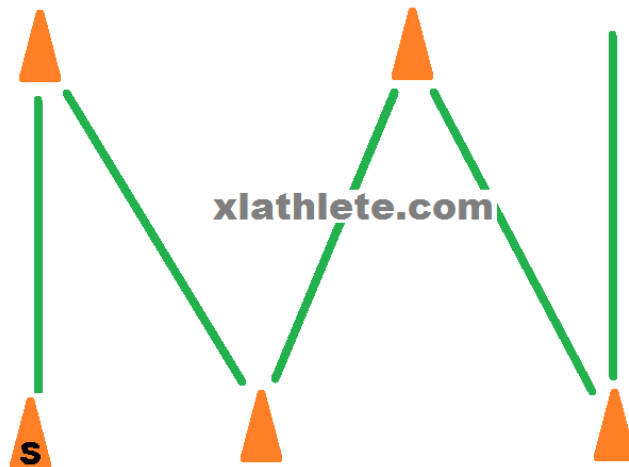
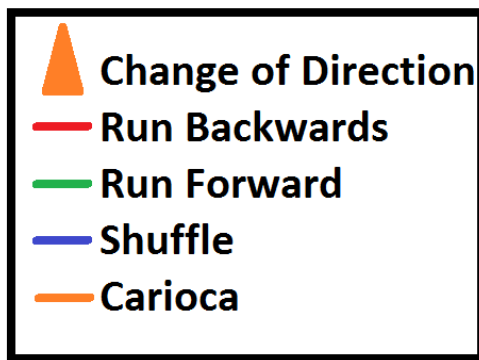
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 22 Yards.



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These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The duration of this drill is
10 Seconds.

The distance between cones is
7 Yards.

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The following are a list of 10 second cone drills that can be used for speed development or conditioning by changing the emphasis placed on work to rest ratios and the cones drills being used so that the coach gets the desired outcome. Stopping, starting and change of direction are of the utmost importance for many sports. Agility drills are one of the most effective methods for developing change of direction abilities, many people believe the agility ladder helps with change of direction, but if you look at the movements used during agility ladder training, you can see that these movements do not mimic what happens in sport. All drills that you see here are turning to the right; keep in mind the coach must have the athlete turn both right and left to develop symmetrical cutting and change of direction ability.

Agility Drills for Speed Development

When your main focus for agility drills is speed development then the most obvious time to complete the drills for speed development would be directly after your warm-up and right before going into the weight room or any other type of workout. At the high school level, I would recommend coaches do cone agility drills everyday they do workouts. The key focus for speed development is running cone agility drills as fast as possible and with that you must get plenty of rest so you can repeat a high-quality effort of maximal speed while doing the cone agility drills.

Rest Time for Speed Development -The suggested rest time for the 10 seconds cone agility drills for speed development and quickness is between 110 to 130 second between each repetition of a 10 second cone drill completed. This will give your athletes plenty of rest and keeps repetitions high-quality.

Number of repetitions for Speed Development - With the 10 second cone drill the amount of repetitions that can be completed is usually between 6 to 8 high-quality repetitions. You would not want to complete more than this because the quality of the drill would suffer.

Agility drills for Conditioning

You want to complete the 10 seconds agility drills for conditioning at the end of your work. This is the only reasonable time to be conditioning because any attempt to do high-quality work will not be very effective.

Rest Time for Conditioning - The suggested rest time for the 10 seconds cone agility drills for conditioning is between 40 and 60 second between each repetition of the 10 second cone drill.

Number repetitions for Conditioning- With the 10 second cone drill the amount of repetitions that can be completed for conditioning is usually 12 to 18 repetitions. It will take this many repetitions to get a conditioning effect.

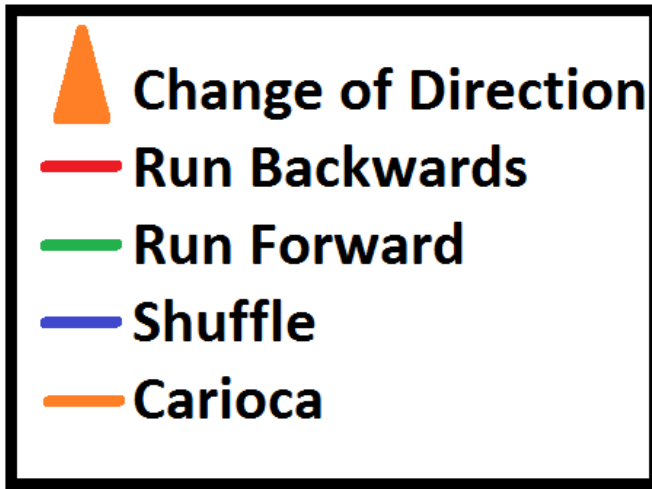
www.xlathlete.com

Administration of drills - An effective way to set up cone agility drills for a large number of athletes is to pick the desired number of drills that you want to run, make sure you do the same drill to the left and right. Set the desired number of drills up on the field or in a gym. Then have one athlete at each station run the drill when the coach gives start signal, you may have as many as 12 athletes running at once depending on the desired number of drills and amount of space you have. Have the athletes walked to the next station so they get variations of the drills. Signal to let the next group of 12 athletes run the drills.

Coaching points - If you notice the cone agility drills never have athletes coming back through the drill or ending at the starting spot so you can actually run multiple athletes through the drill one after another because they will not cross paths. One of the most effective methods for speed development or conditioning is to set your agility drills up to have two starting lines, one line 3 yards behind the front starting line and have the athletes chase each other through the drills. The only rule is you can't leave your feet and reach across a cone to touch your chase partner; you can only touch the athlete in front of you on straight a ways.

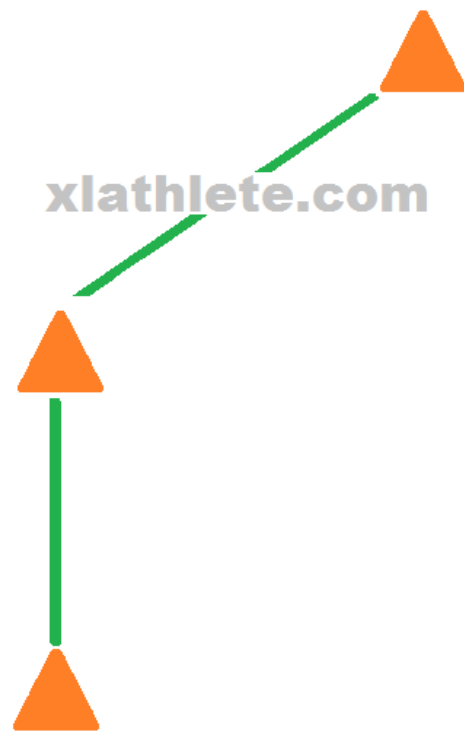
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



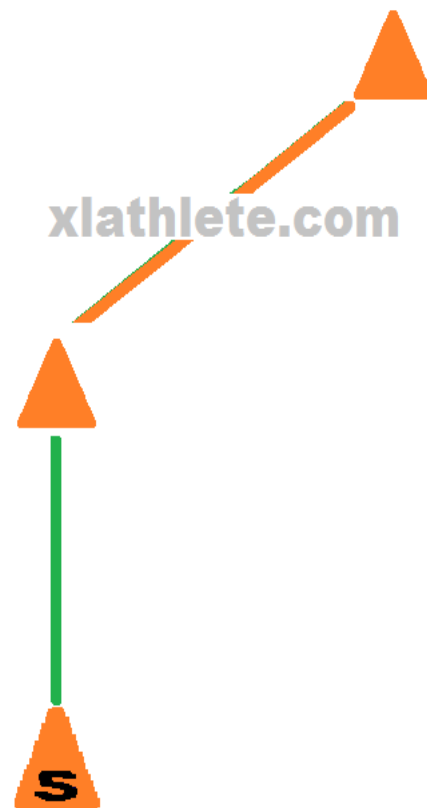
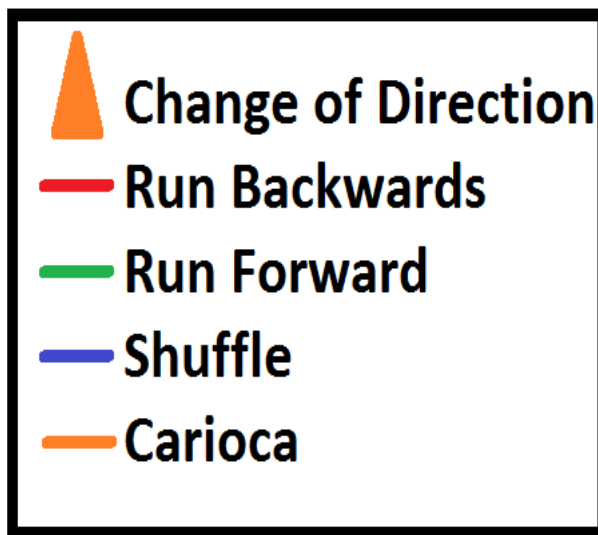
The Duration of This Drill is **10 Seconds.**

The Distance Between Cones is **30 Yards.**



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These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

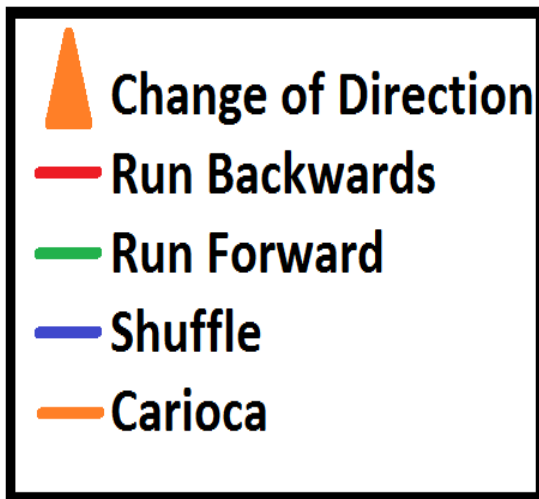


The Duration of This Drill is
10 Seconds.

The Distance Between Cones is
20 Yards.

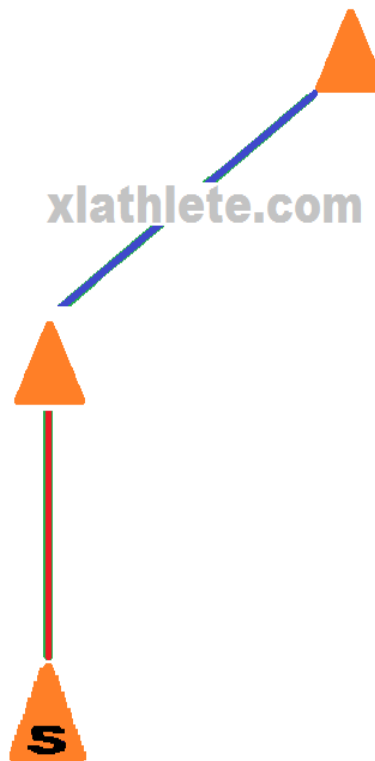
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



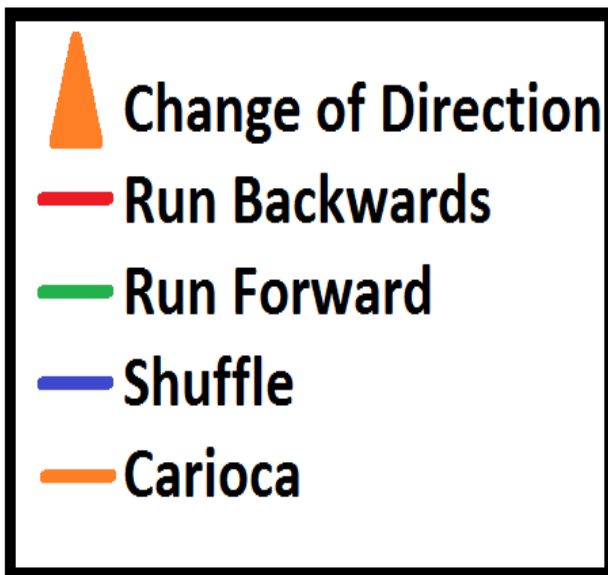
The Duration of This Drill is
10 Seconds.

The Distance Between Cones is
17 Yards.



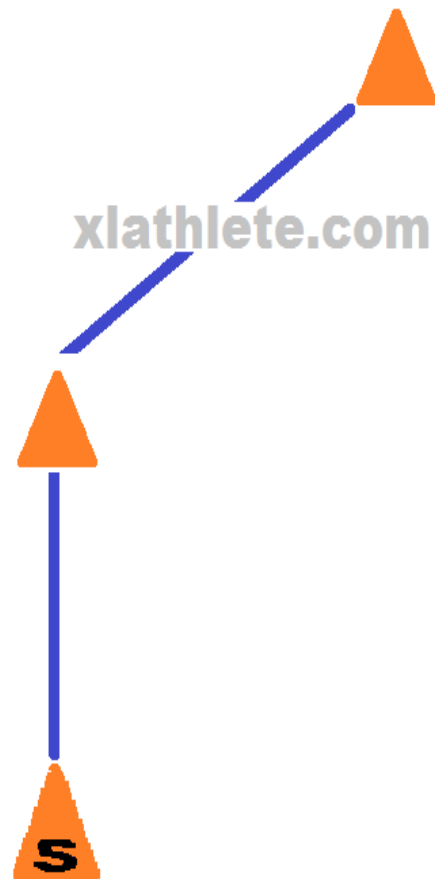
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



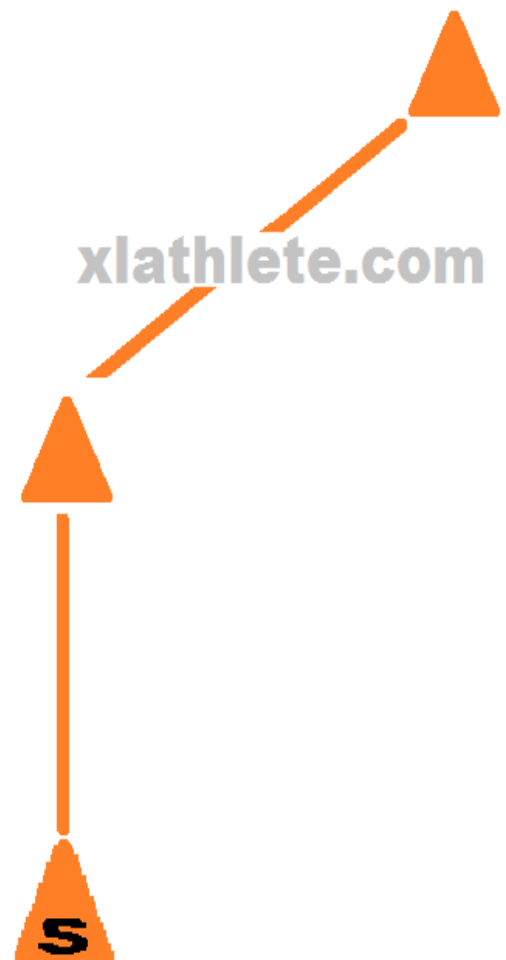
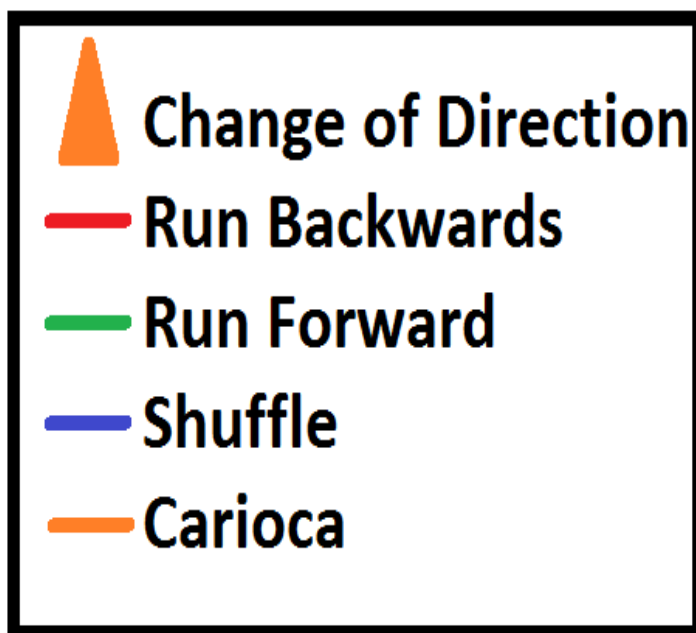
The Duration of This Drill is
10 Seconds.

The Distance Between Cones is
17 Yards.



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These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

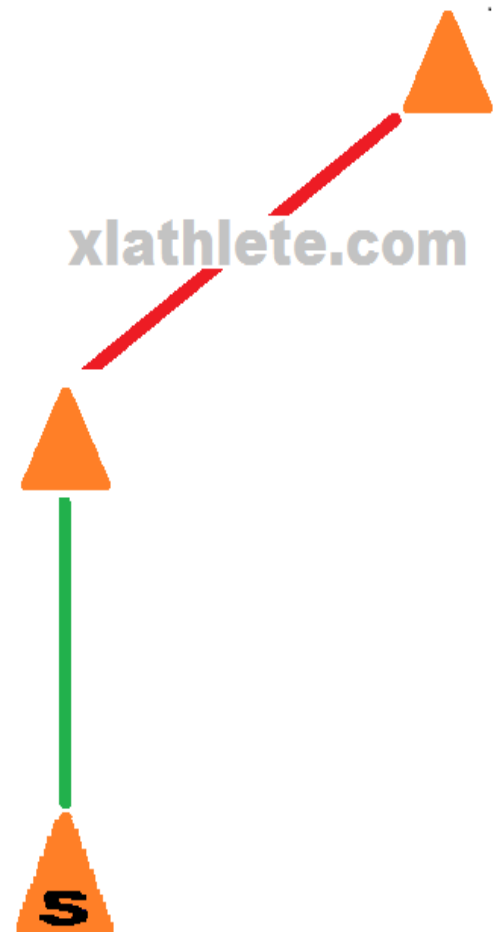
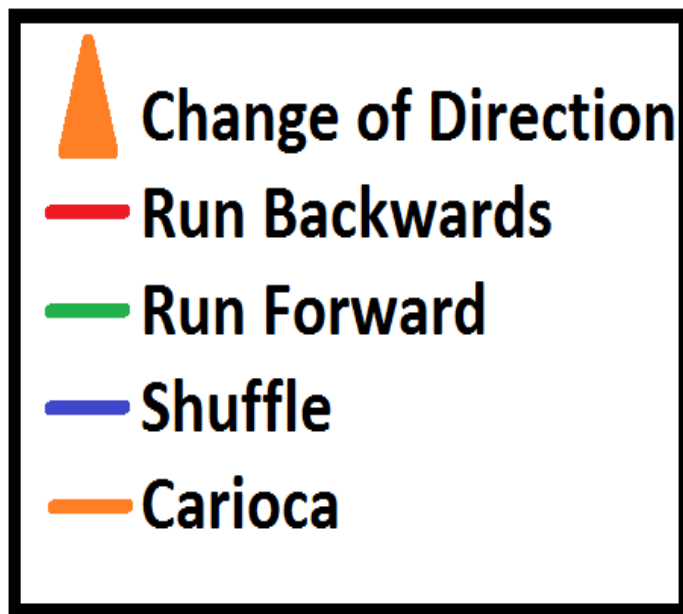


**The Duration of This Drill is
10 Seconds.**

**The Distance Between Cones is
17 Yards.**

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

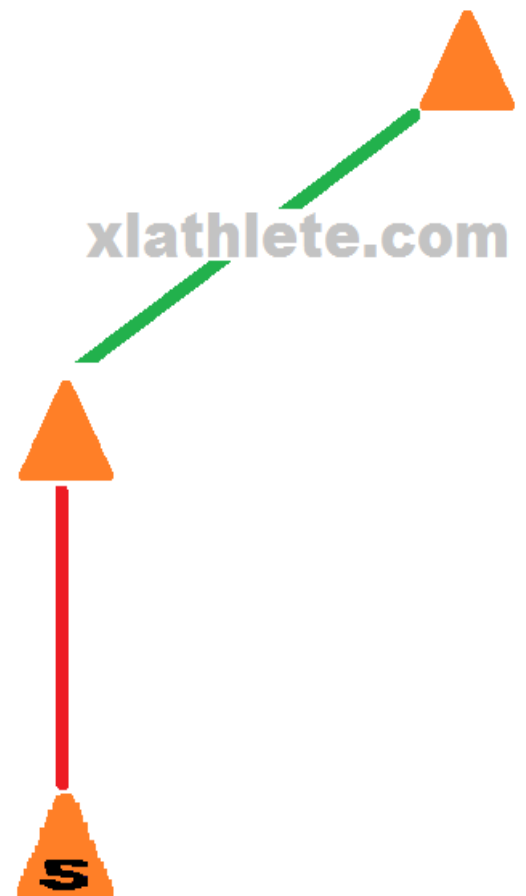
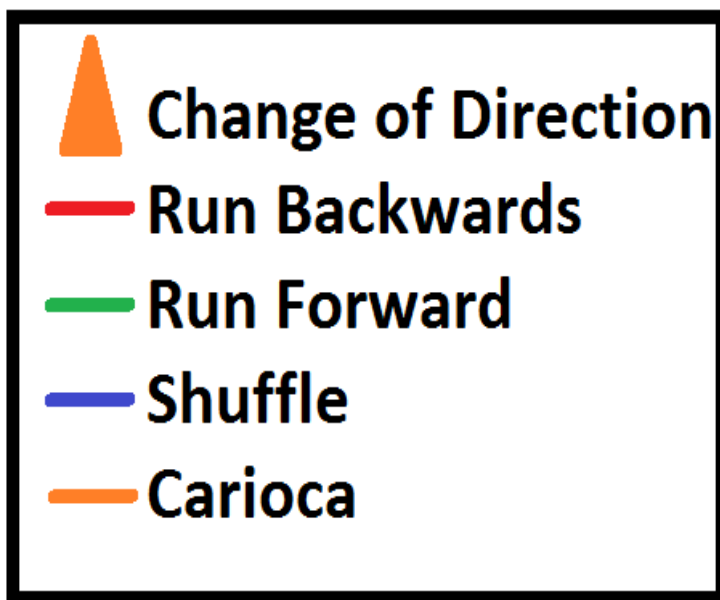


**The Duration of This Drill is
10 Seconds.**

**The Distance Between Cones is
22 Yards.**

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

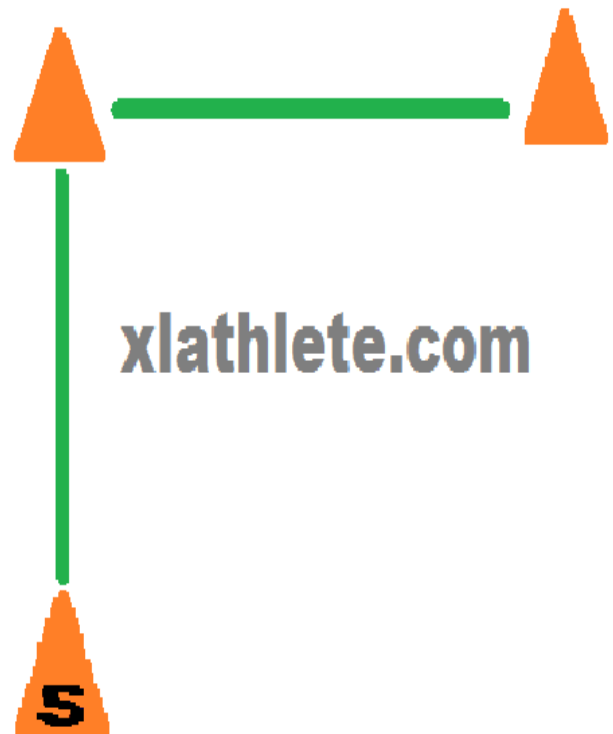
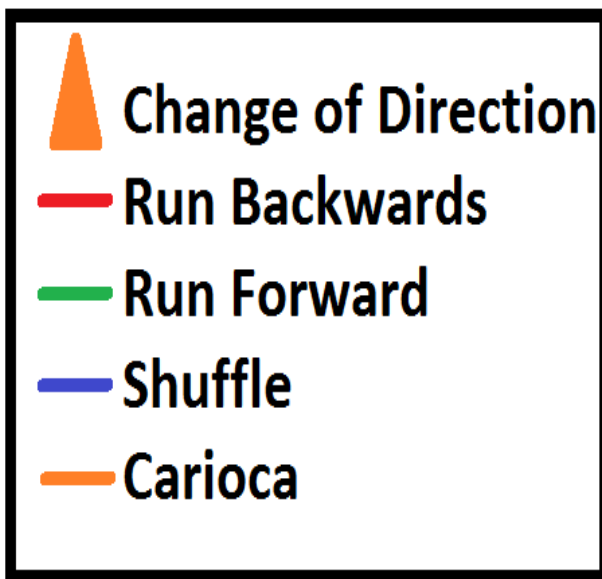


**The Duration of This Drill is
10 Seconds.**

**The Distance Between Cones is
22 Yards.**

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

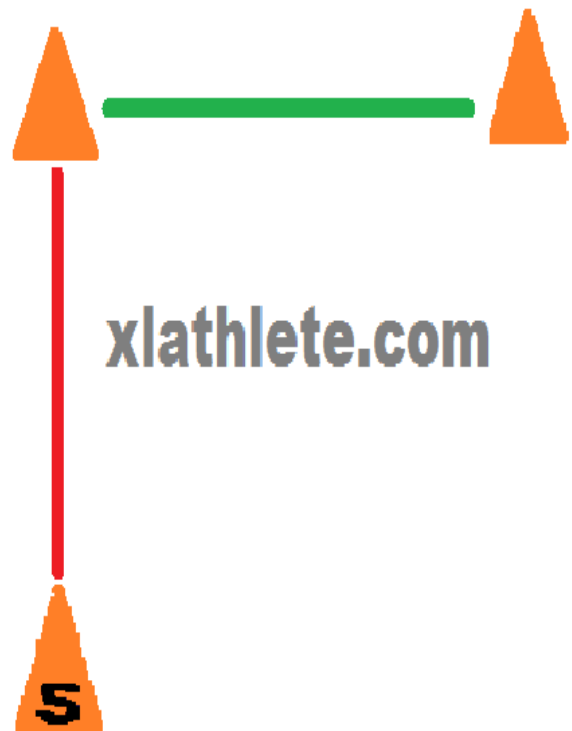
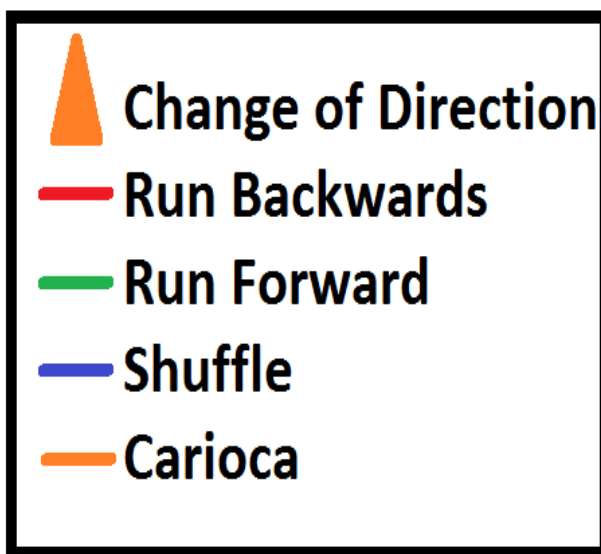


The Duration of This Drill is
10 Seconds.

The Distance Between Cones is
21 Yards.

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

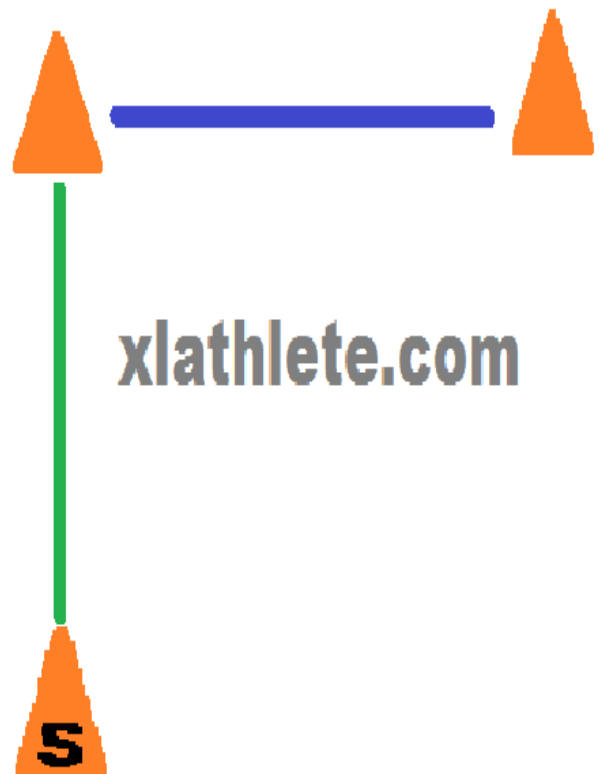
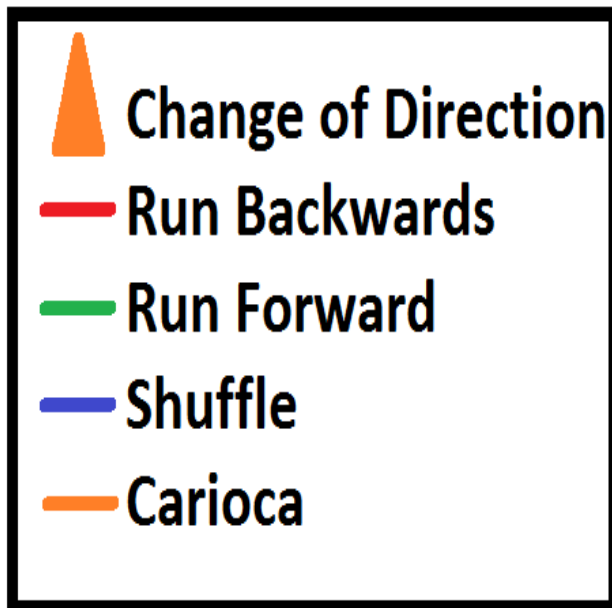


The Duration of This Drill is
10 Seconds.

The Distance Between Cones is
20 Yards.

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

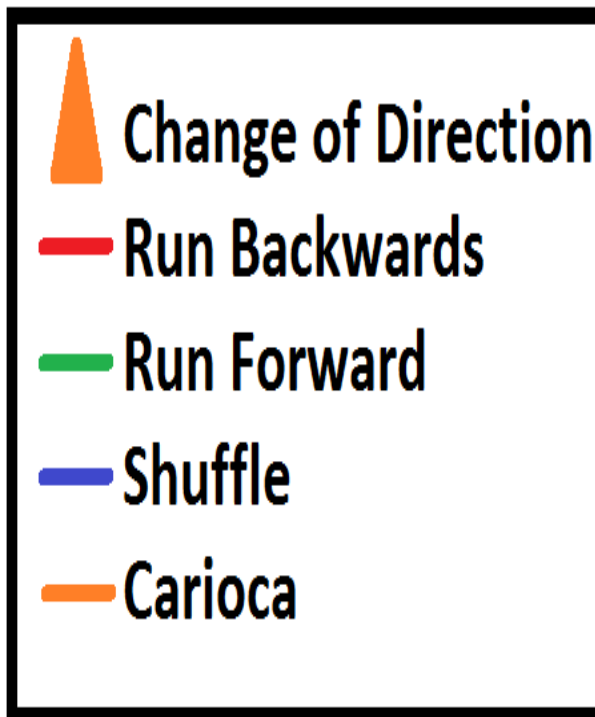


The duration of the drill is 10 seconds.

The distance between cones is 18 yards.

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

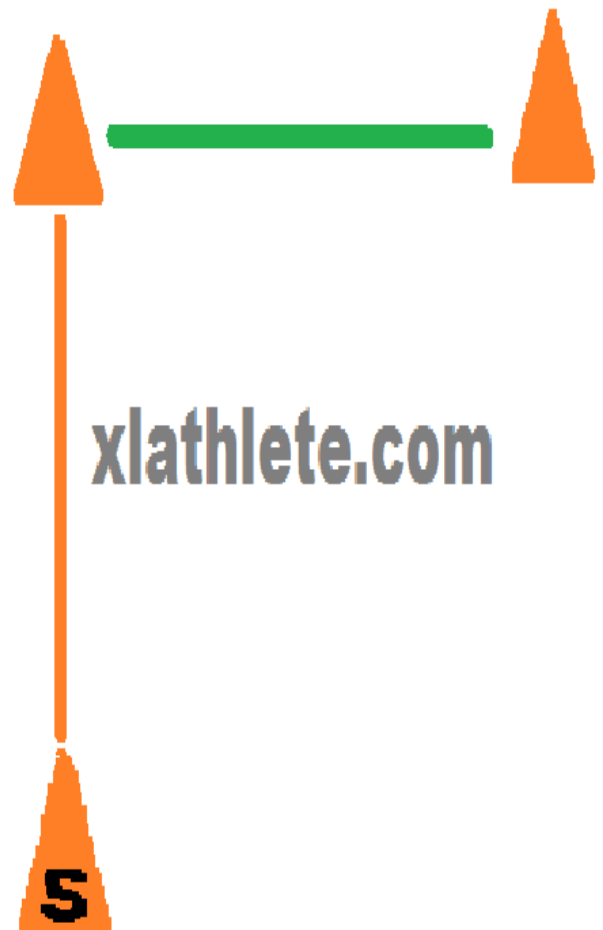
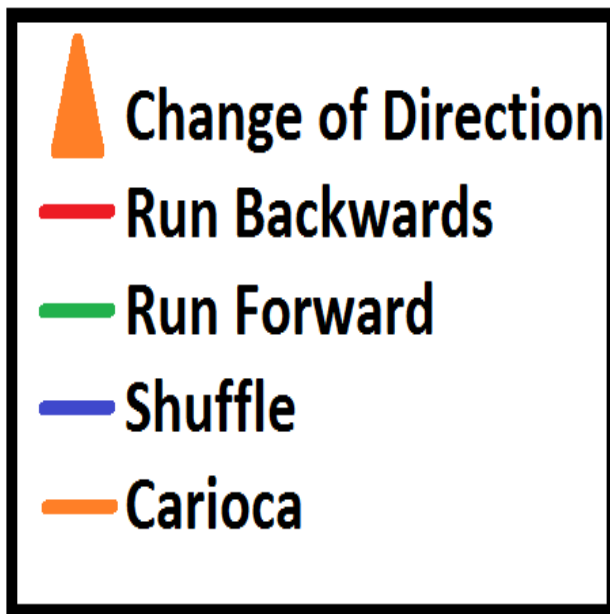


**The Duration of This Drill is 10
Seconds.**

**The Distance Between Cones
is 18 Yards.**

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

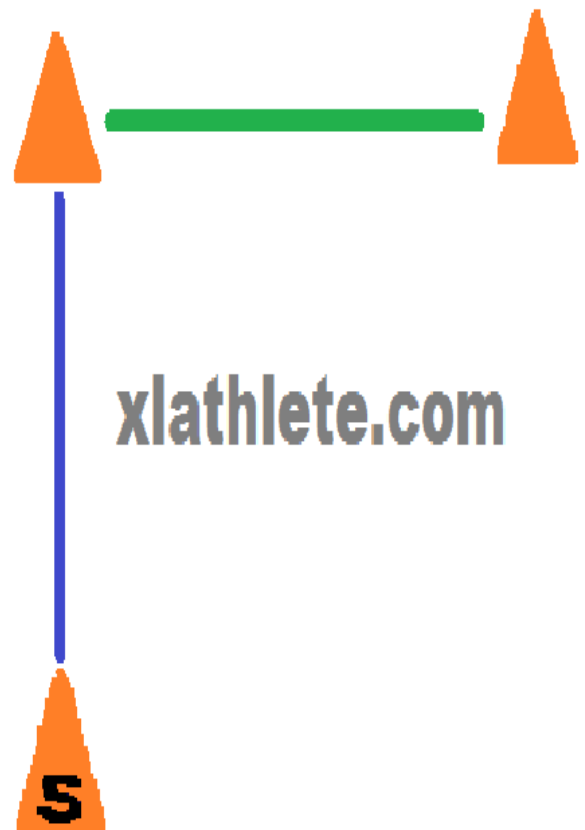
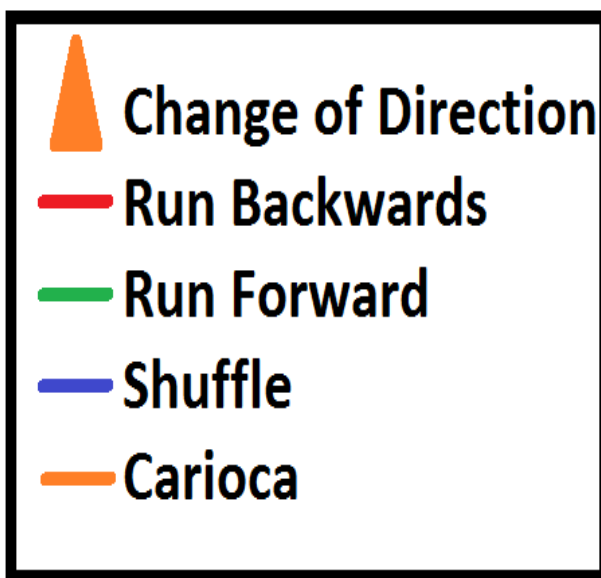


**The Duration of This Drill is 10
Seconds.**

**The Distance Between Cones
is 18 Yards.**

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

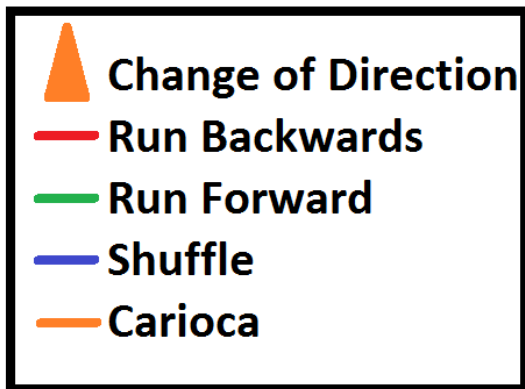


The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 18 Yards.

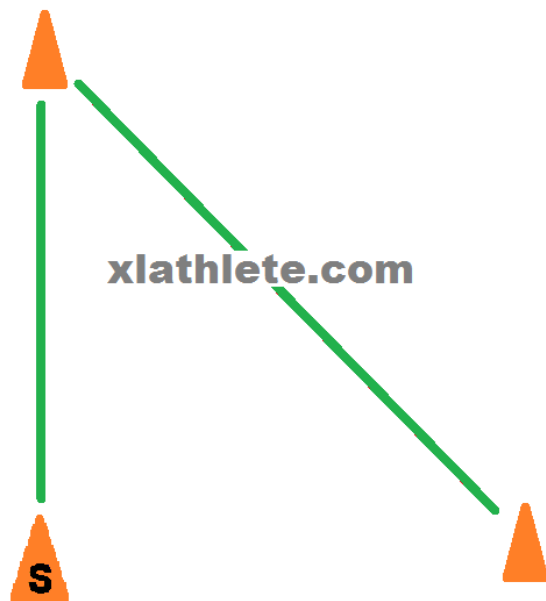
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



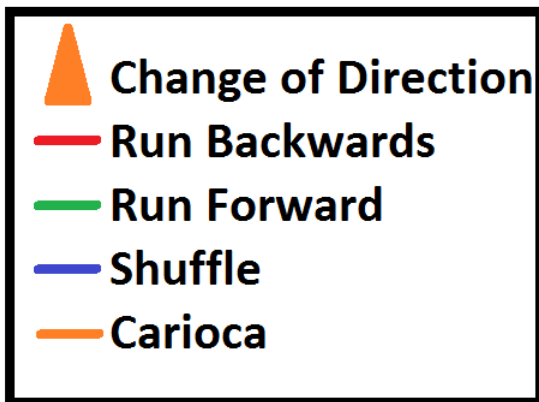
The duration of this drill is 10 seconds.

The distance between cones is 22 yards.



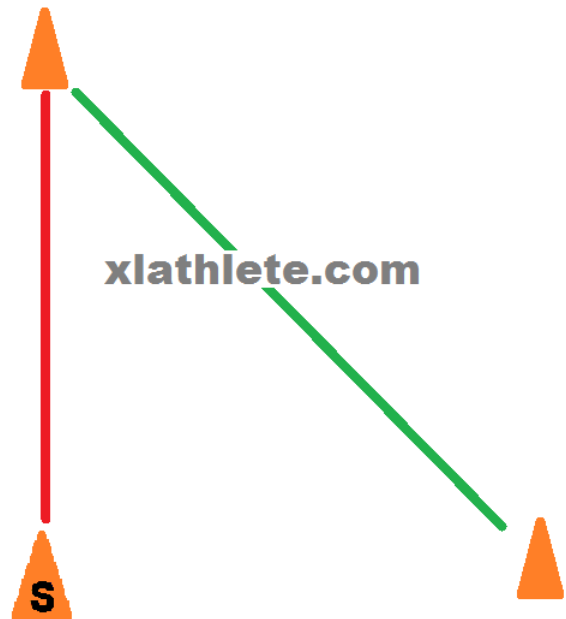
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



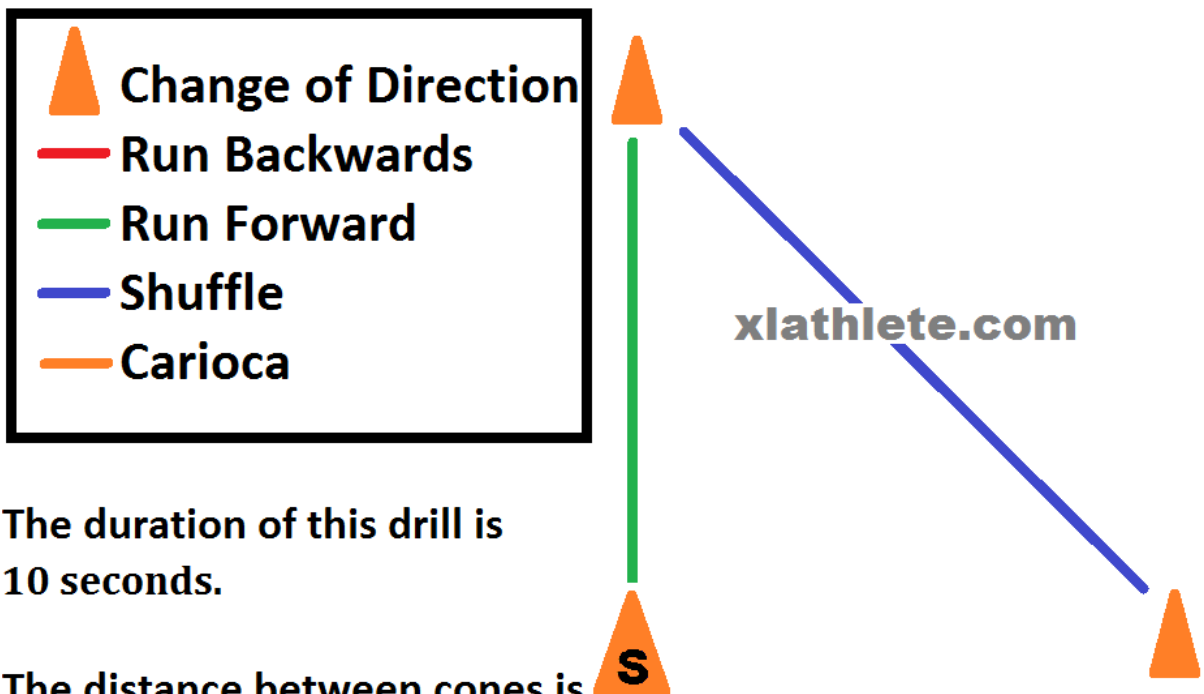
The duration of this drill is 10 seconds.

The distance between cones is 20 yards.



www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

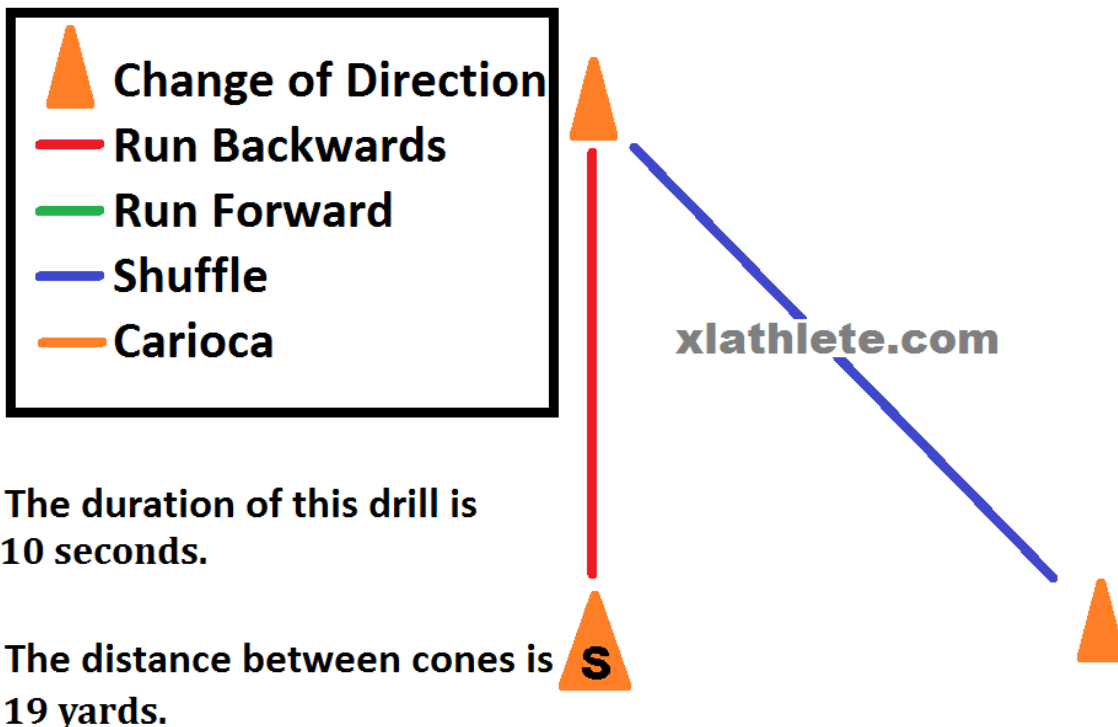


The duration of this drill is 10 seconds.

The distance between cones is 19 yards.

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

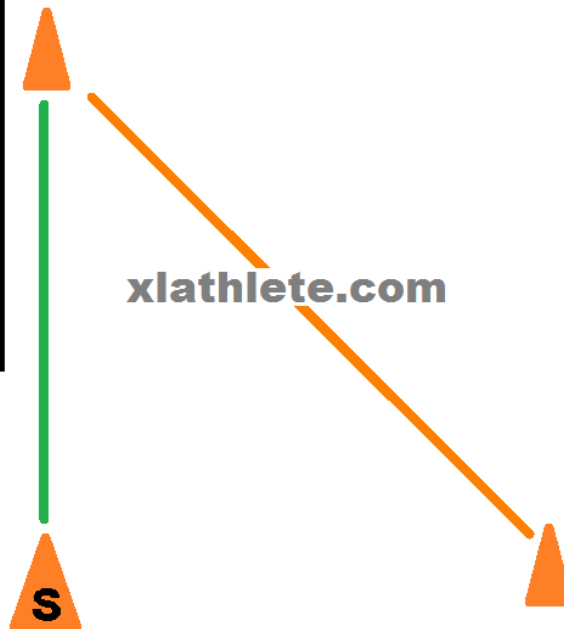
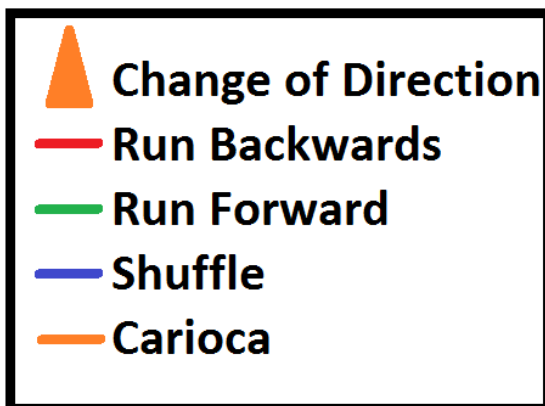


The duration of this drill is 10 seconds.

The distance between cones is 19 yards.

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

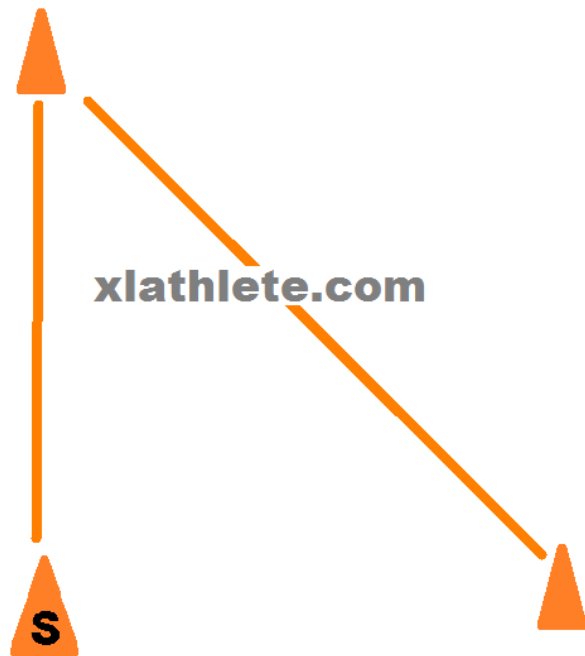
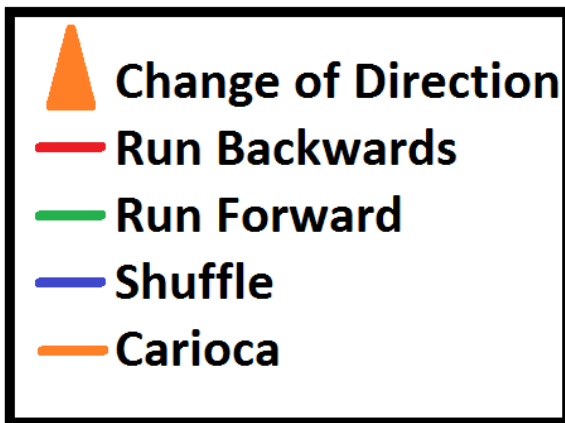


The duration of this drill is 10 seconds.

The distance between cones is 19 yards.

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

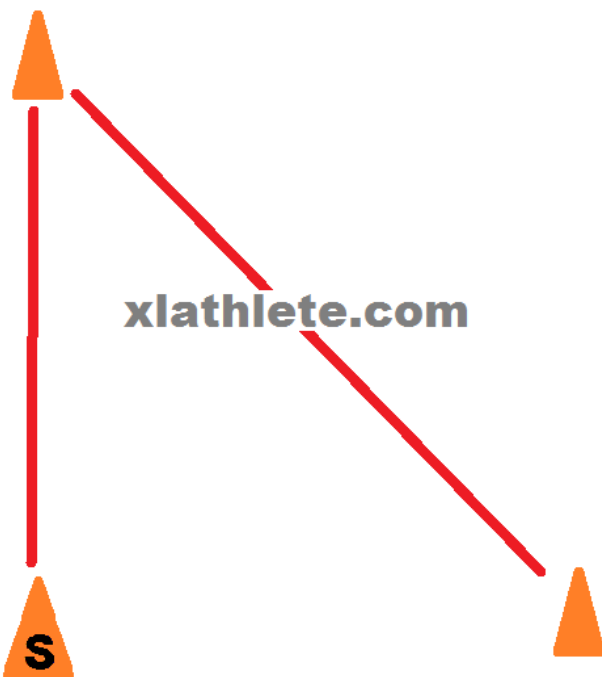
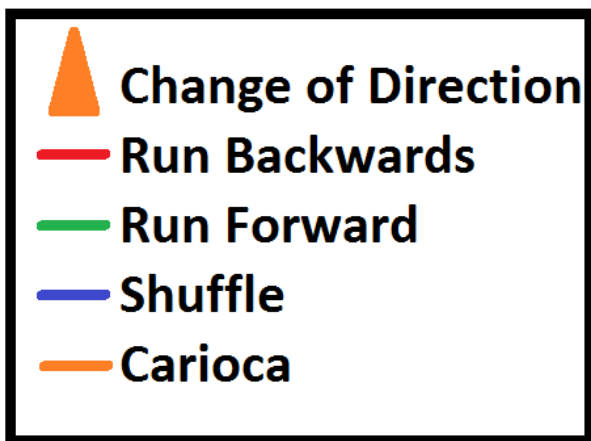


The duration of this drill is 10 seconds.

The distance between cones is 18 yards.

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These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

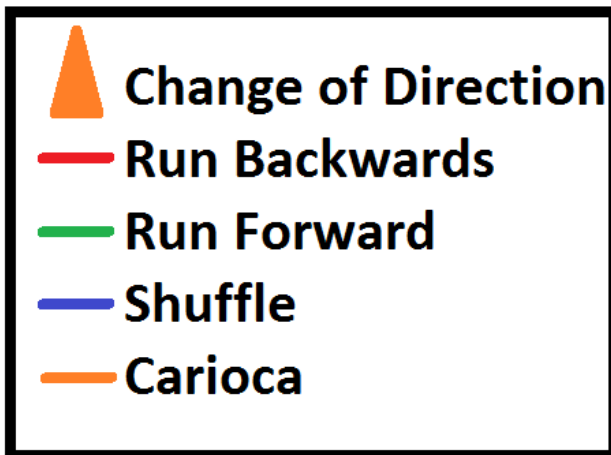


The duration of this drill is 10 seconds.

The distance between cones is 17 yards.

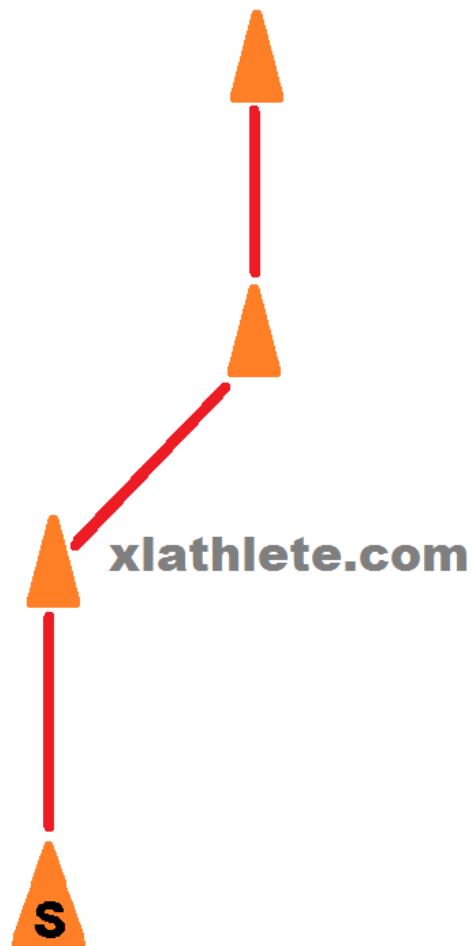
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



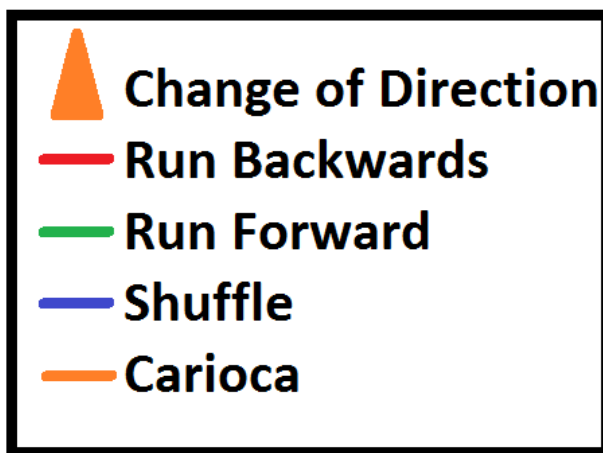
The duration of this drill is 10 seconds.

The distance between cones is 12 yards.



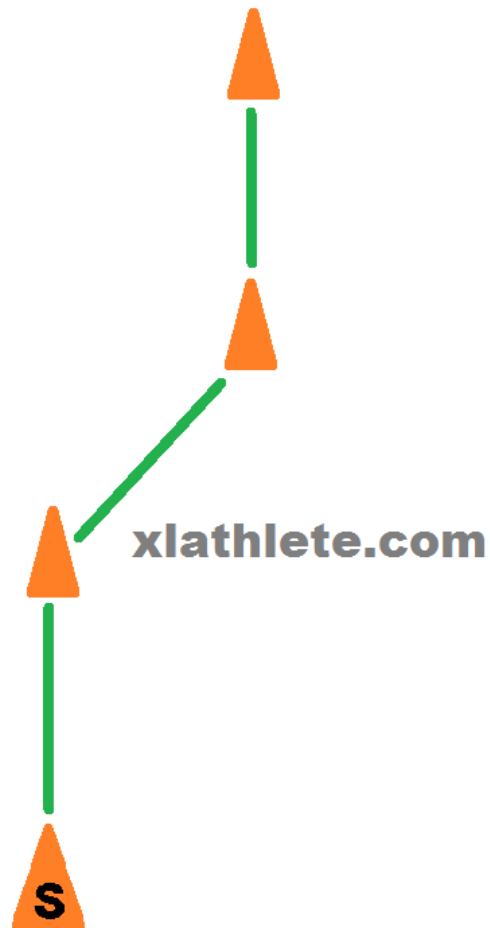
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



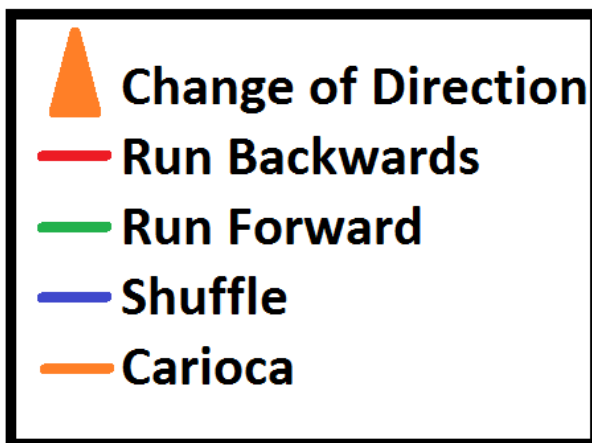
The duration of this drill is 10 seconds.

The distance between cones is 22 yards.



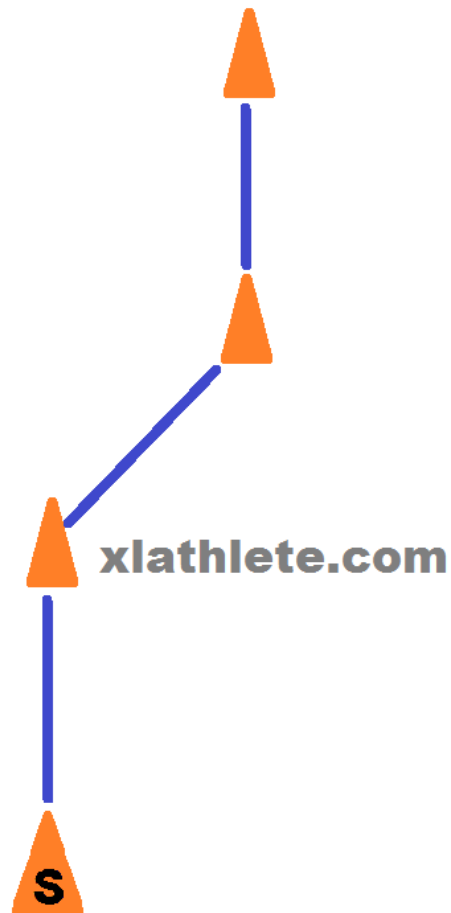
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



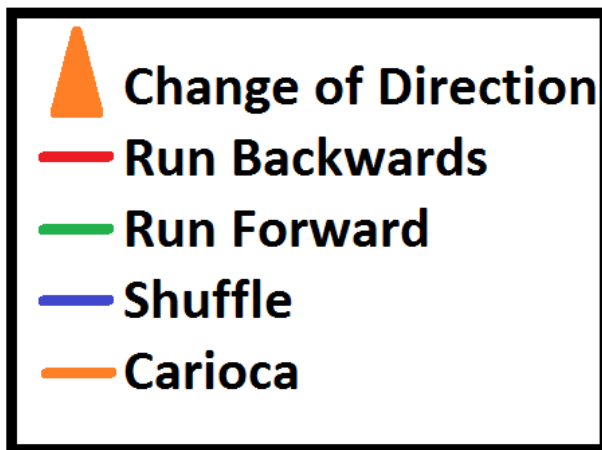
The duration of this drill is 10 seconds.

The distance between cones is 10 yards.



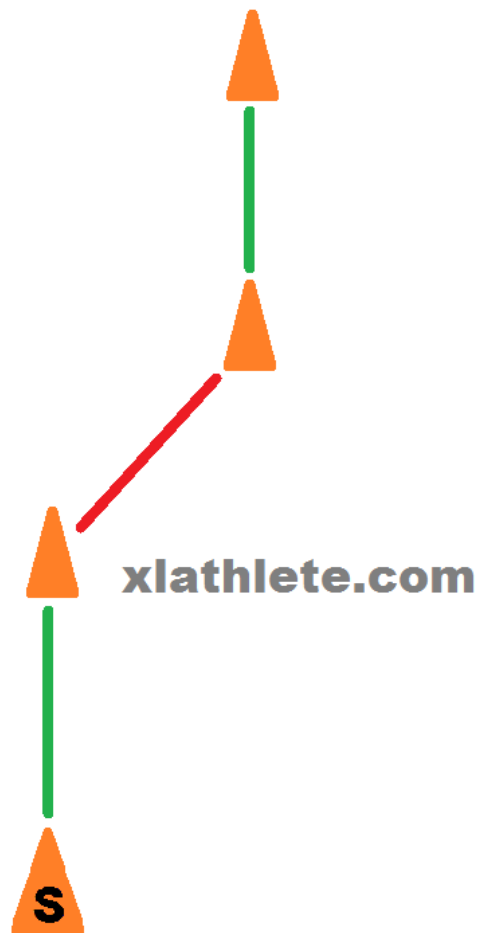
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



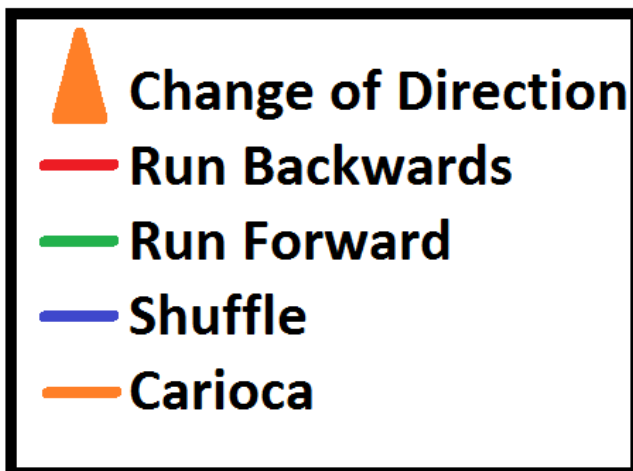
The duration of this drill is 10 seconds

The distance between cones is 16 yards



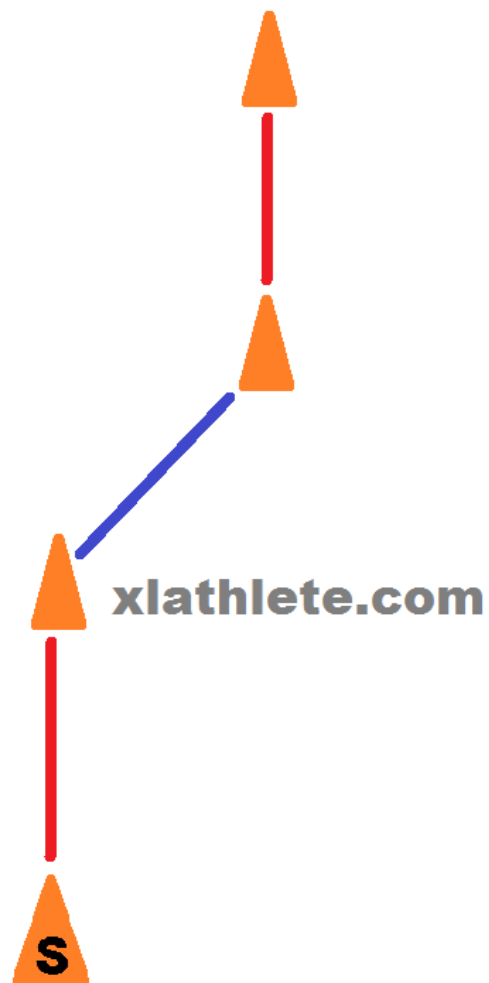
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



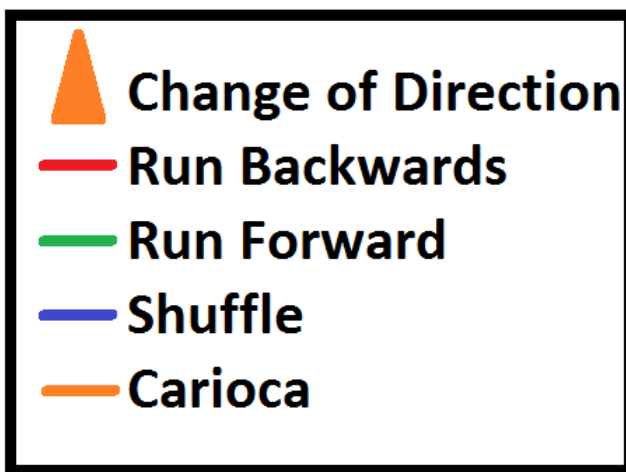
The duration of this drill is 10 seconds

The distance between cones is 11 yards



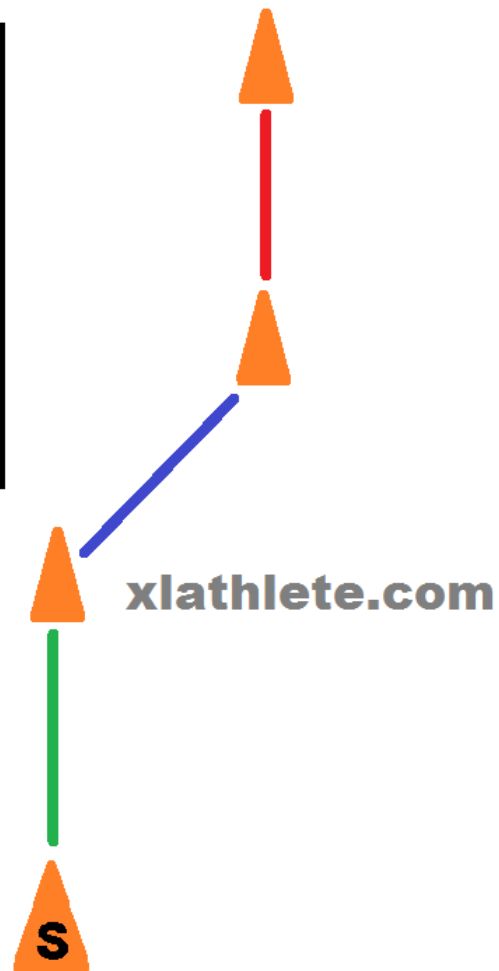
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



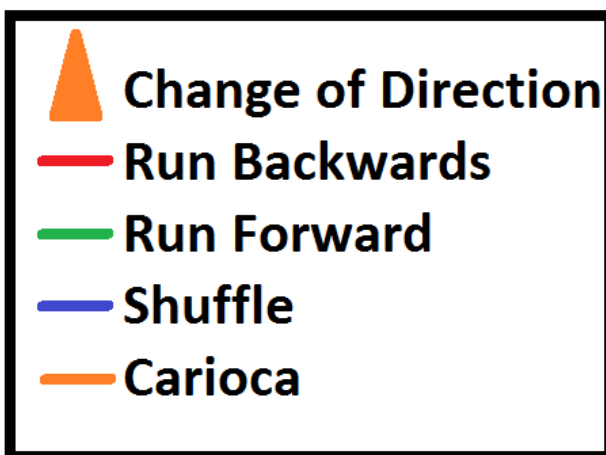
The duration of this drill is 10 seconds

The distance between cones is 15 yards



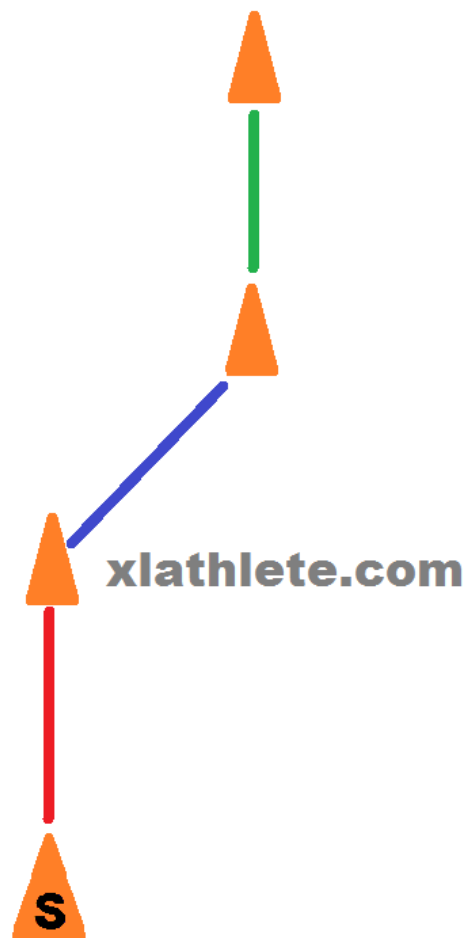
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



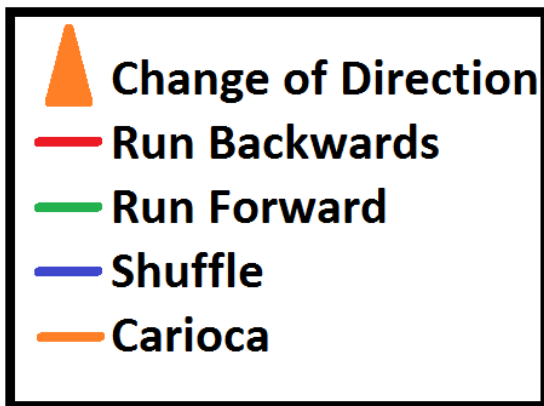
The duration of this drill is 10 seconds

The distance between cones is 15 yards



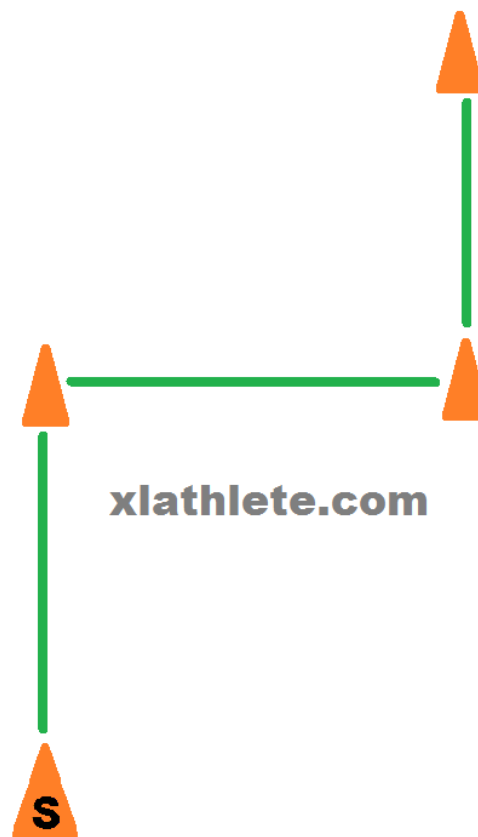
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



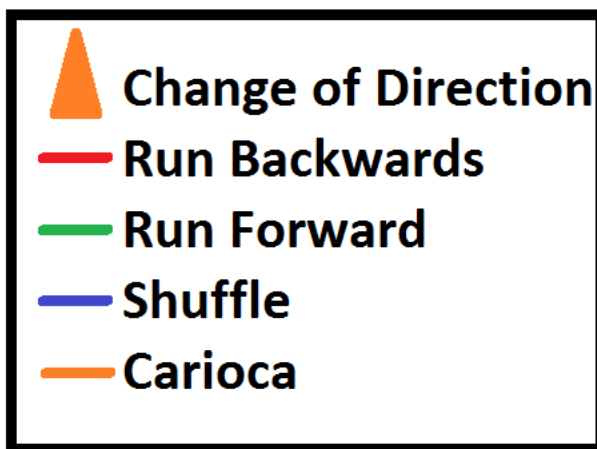
The duration of this drill is **10 seconds**

The distance between cones is **18 yards**



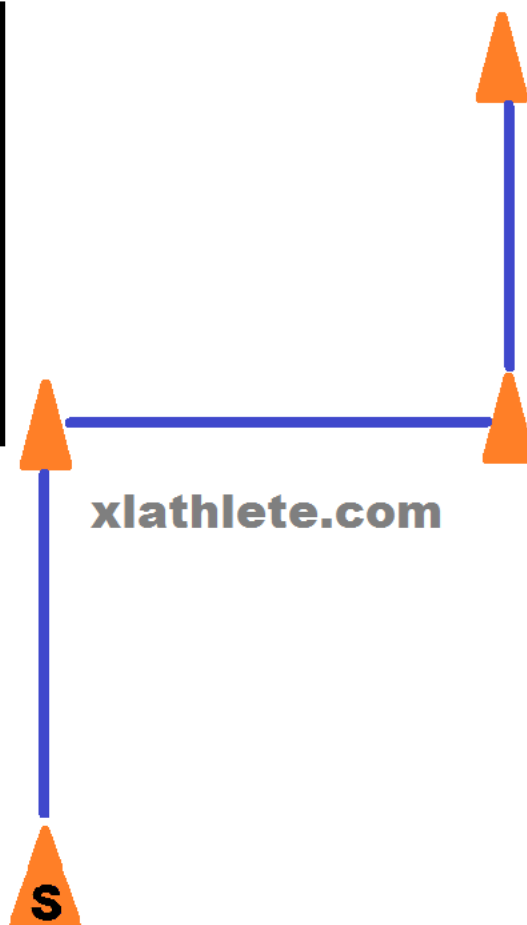
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



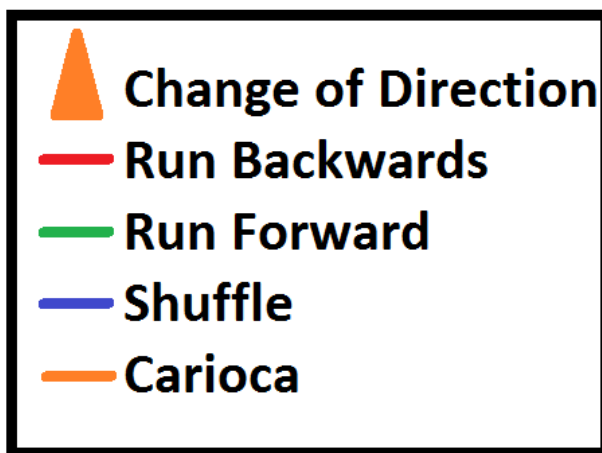
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 15 Yards.



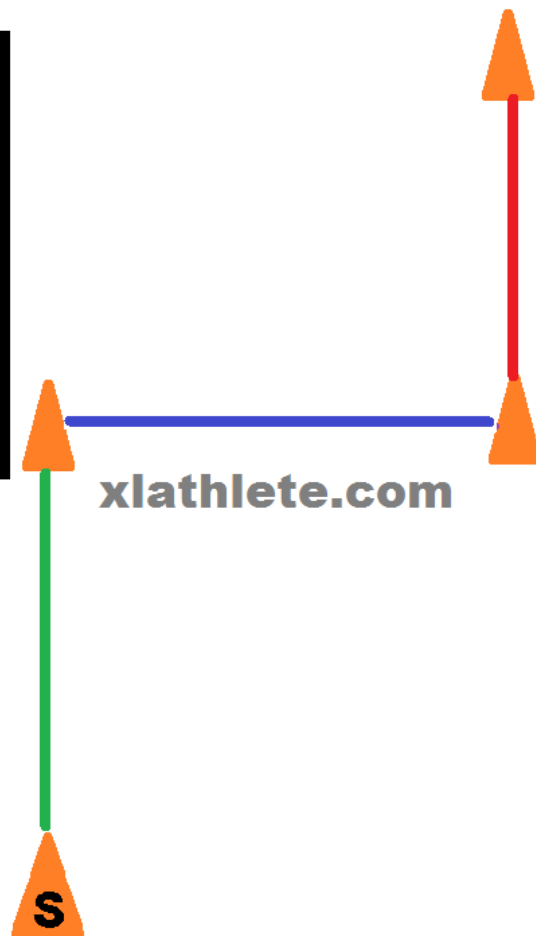
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



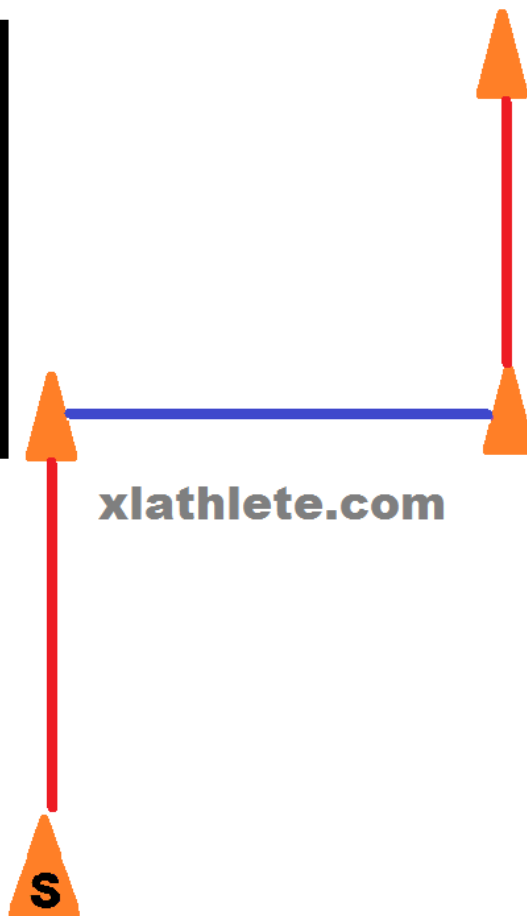
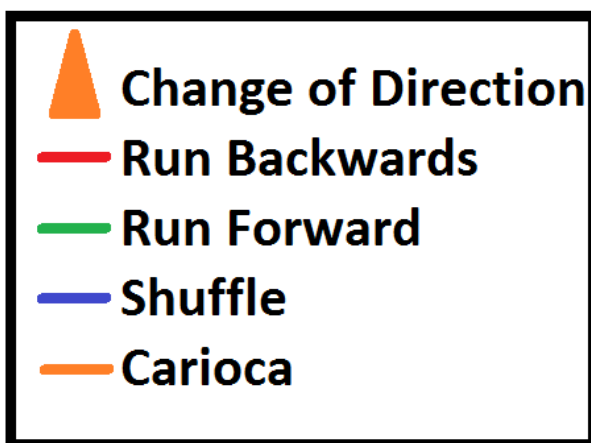
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 16 Yards.



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These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The duration of this drill is

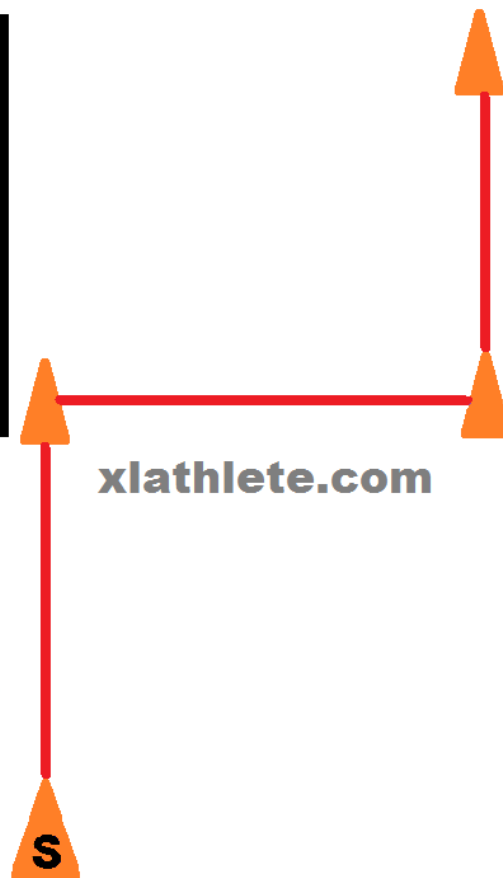
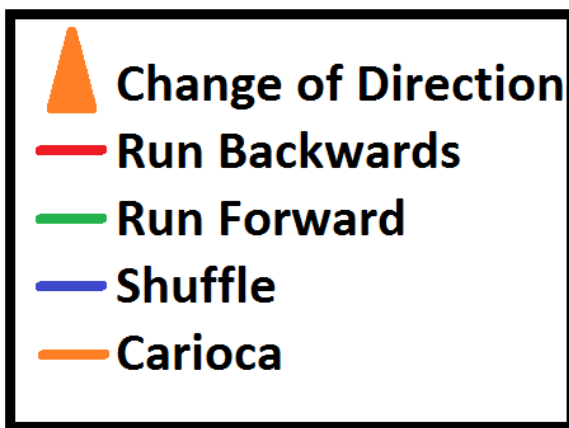
10 seconds

The distance between cones is

15 yards

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

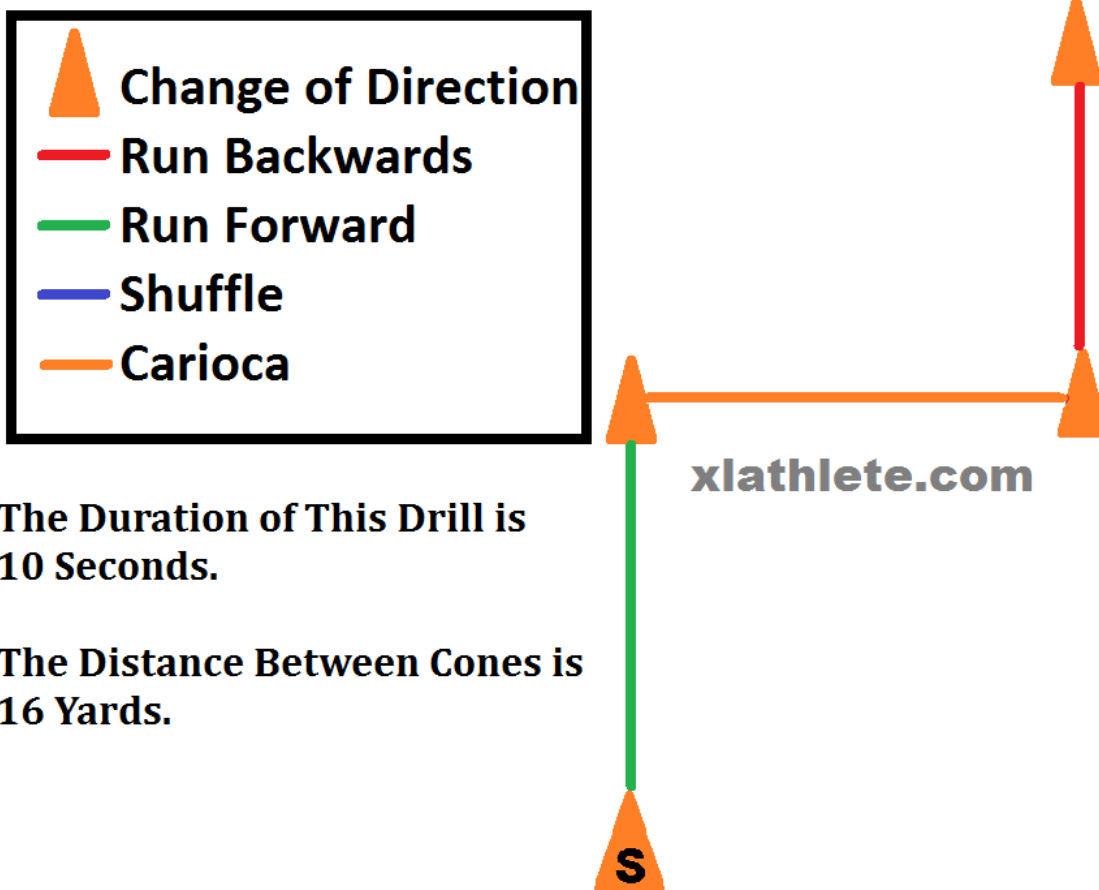


The duration of this drill is
10 seconds

The distance between cones is
15 yds

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

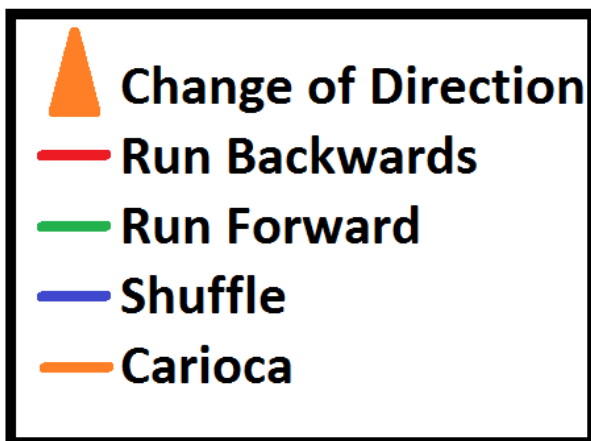


The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 16 Yards.

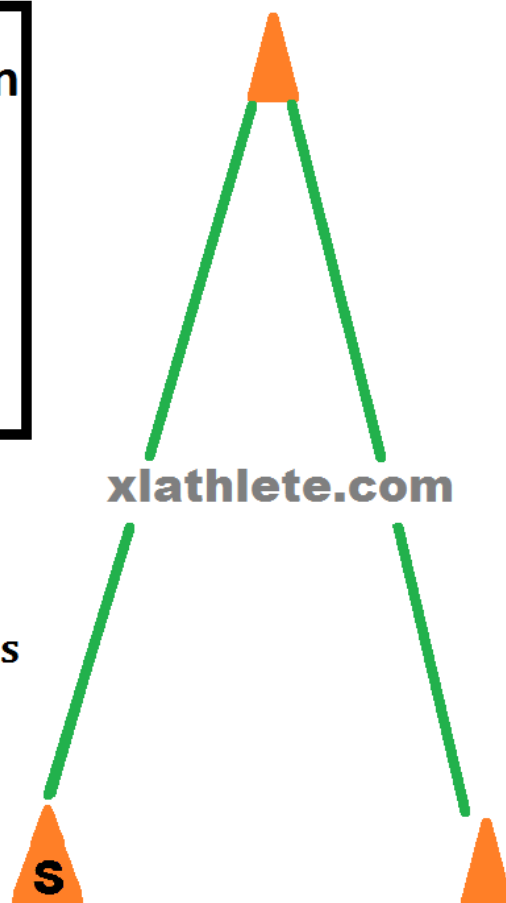
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



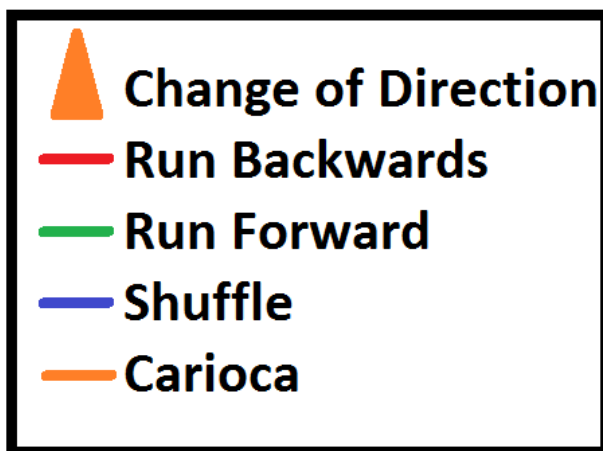
The Duration of This Drill is
10 Seconds.

The Distance Between Cones is
22 Yards.



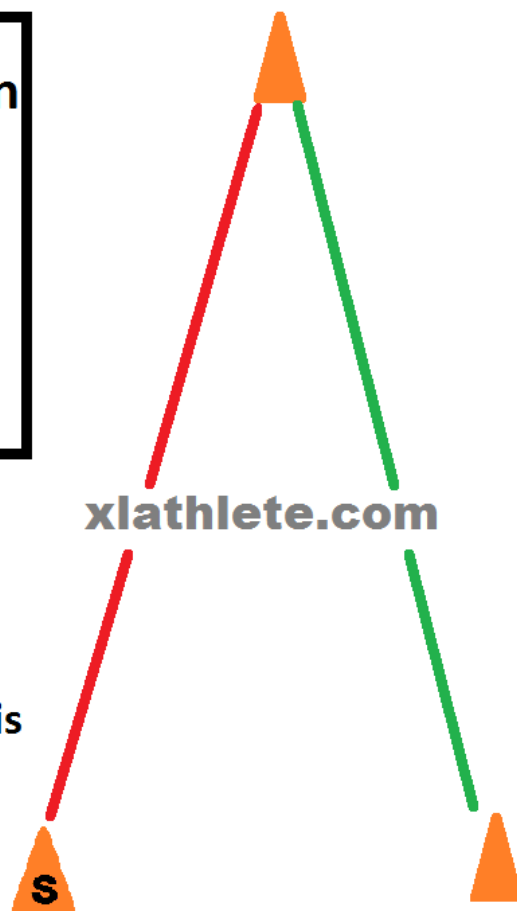
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



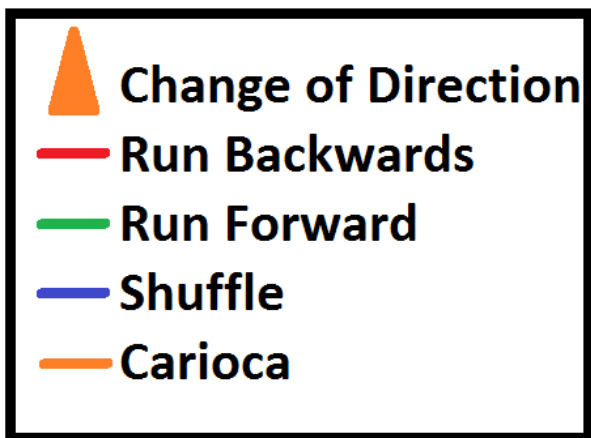
The duration of this drill is
10 seconds

The distance between cones is
20 yds



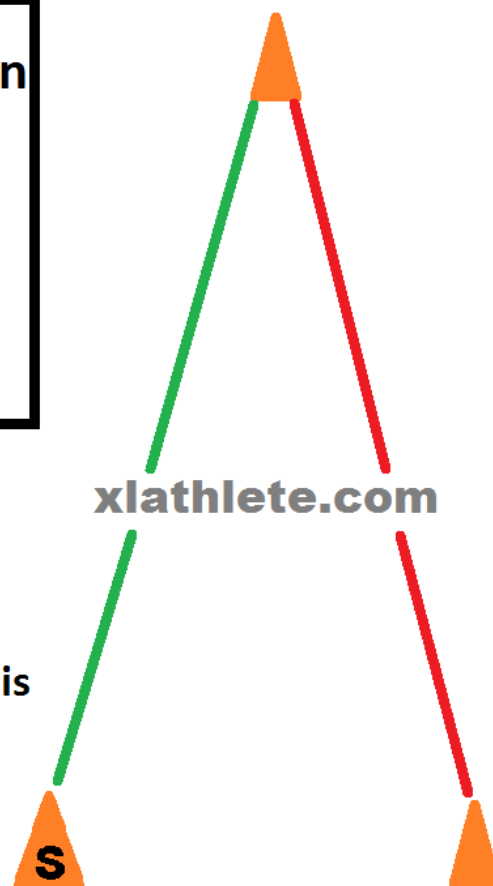
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



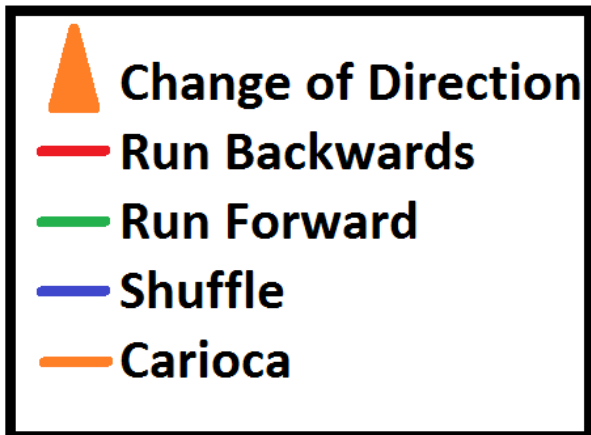
The duration of this drill is
10 sec

The distance between cones is
20 yds



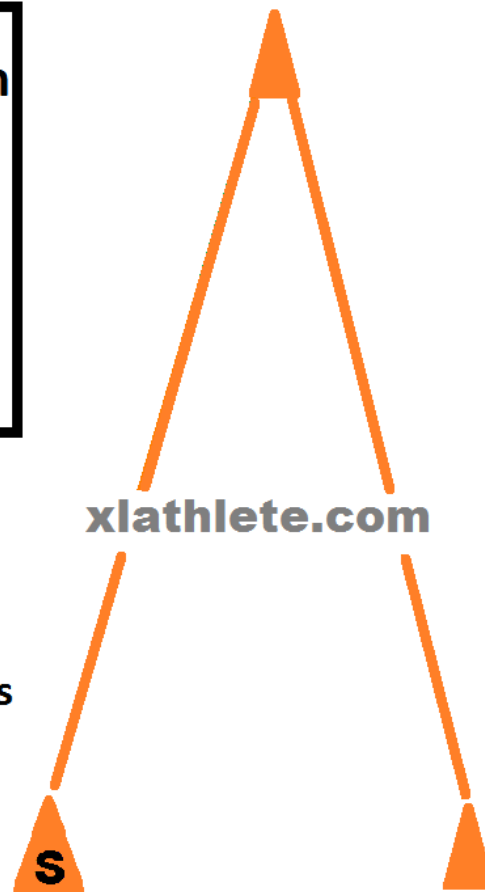
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



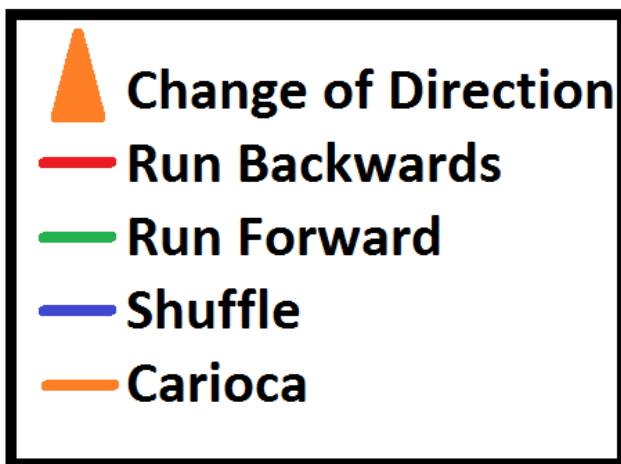
The duration of this drill is
10 sec

The distance between cones is
18 yds



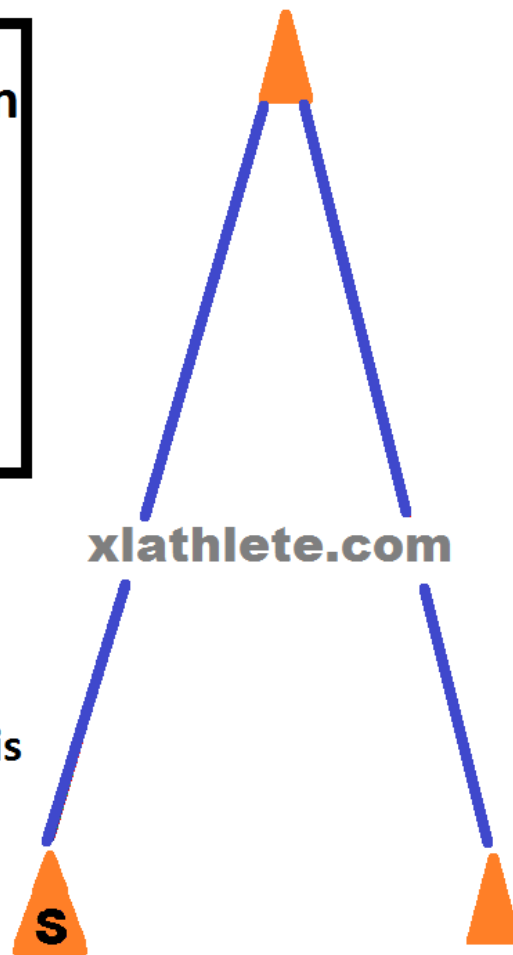
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



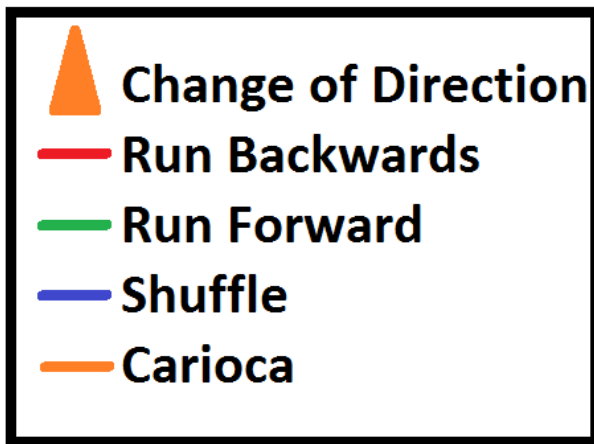
The duration of this drill is
10 sec

The distance between cones is
18 yds



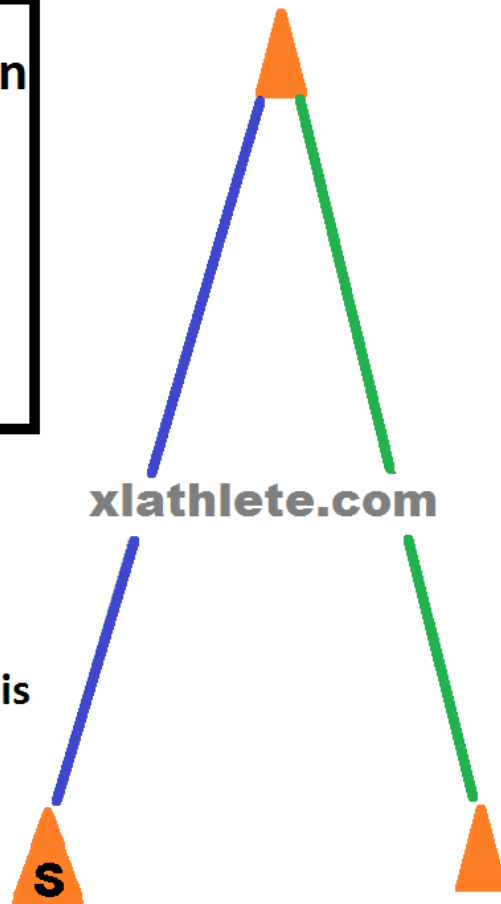
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



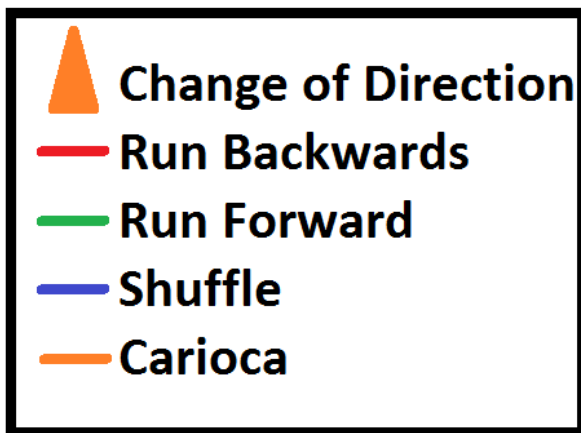
The duration of this drill is
10 sec

The distance between cones is
20 yds



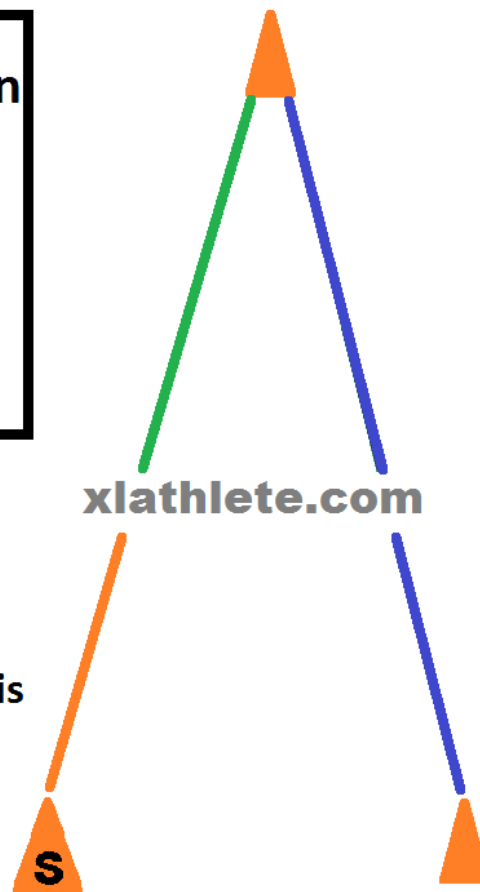
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



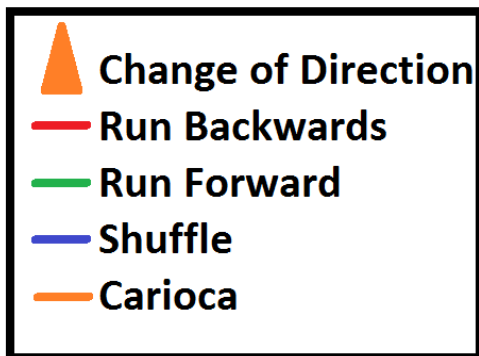
The duration of this drill is
10 sec

The distance between cones is
20 yds



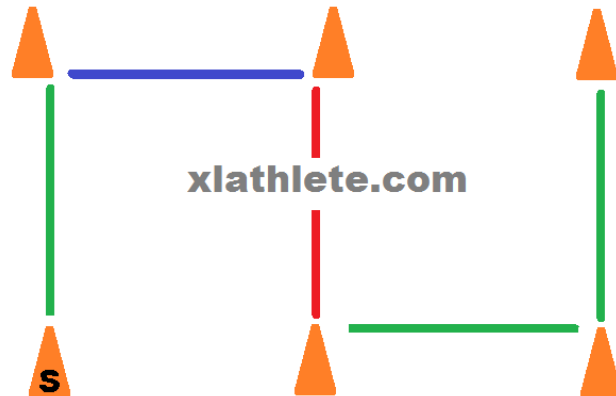
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



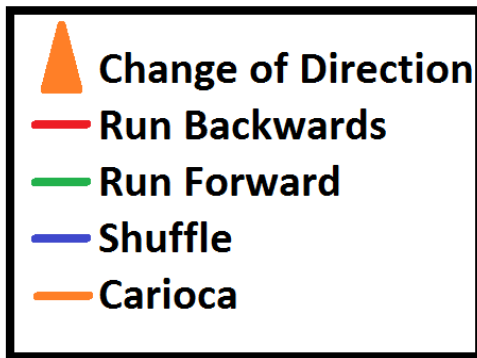
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 8 yards.



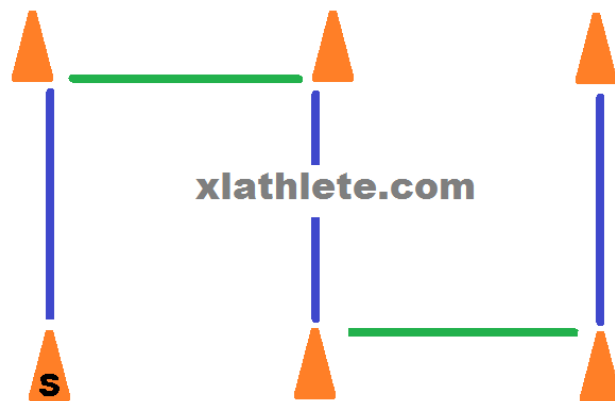
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



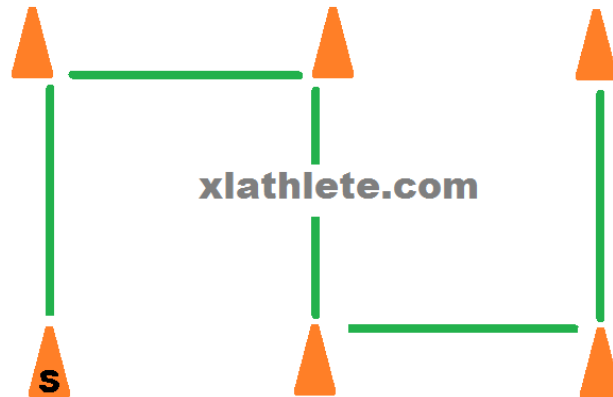
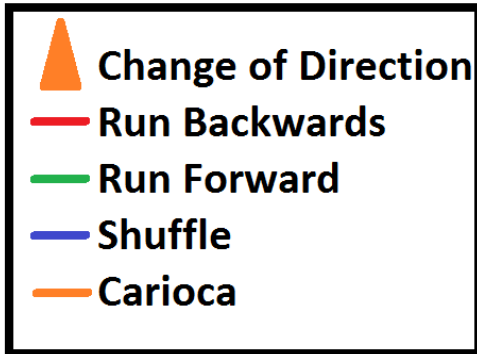
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 7 yards.



www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

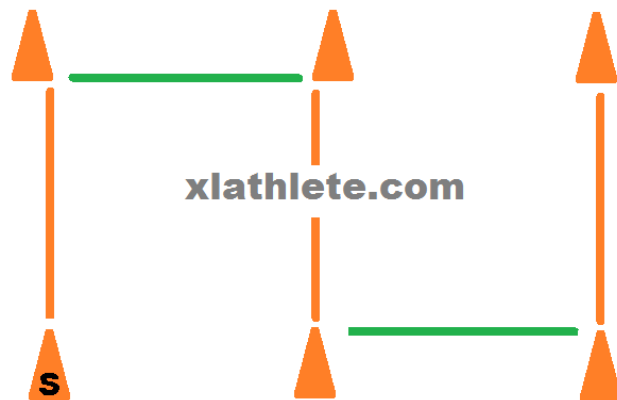
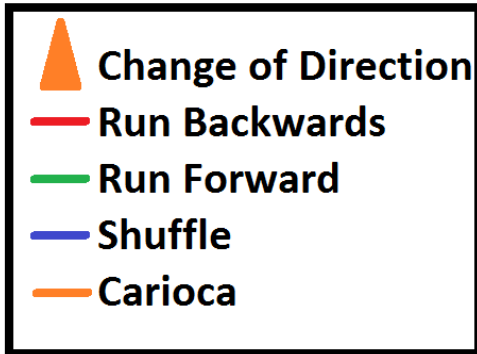


The Duration of This Drill is
10 Seconds.

The Distance Between Cones is
9 yards.

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

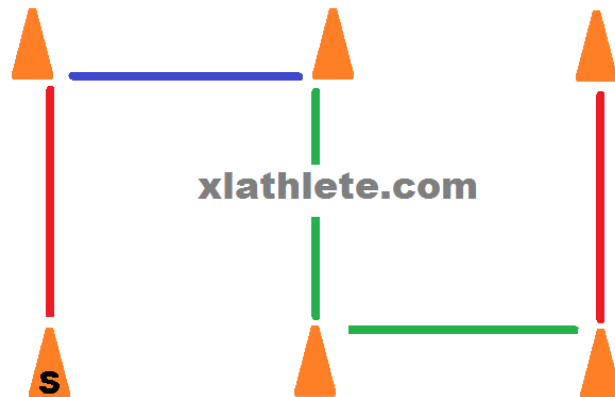
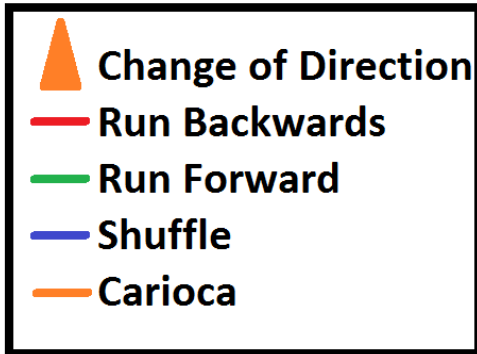


The duration of this drill is 10 seconds.

The distance between cones is 7 yards.

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

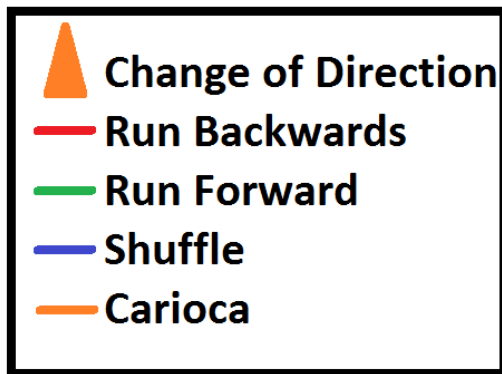


The duration of this drill is 10 seconds.

The distance between cones is 7 yards.

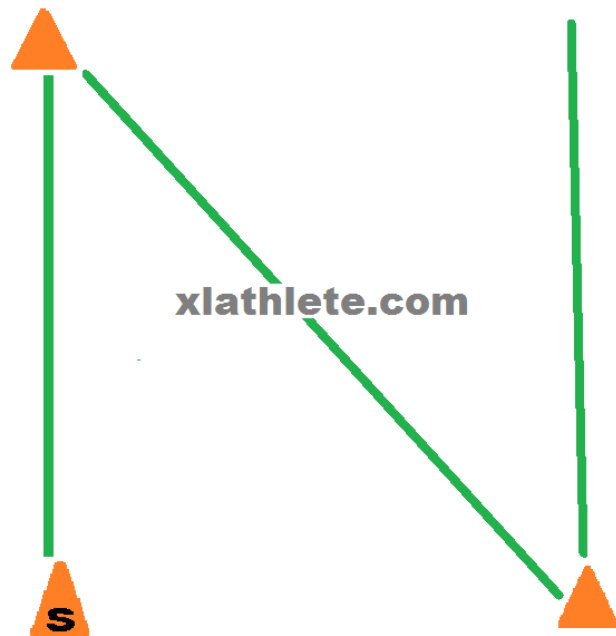
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



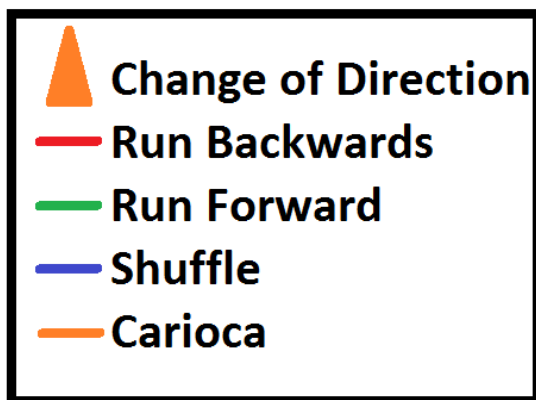
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 22 Yards.



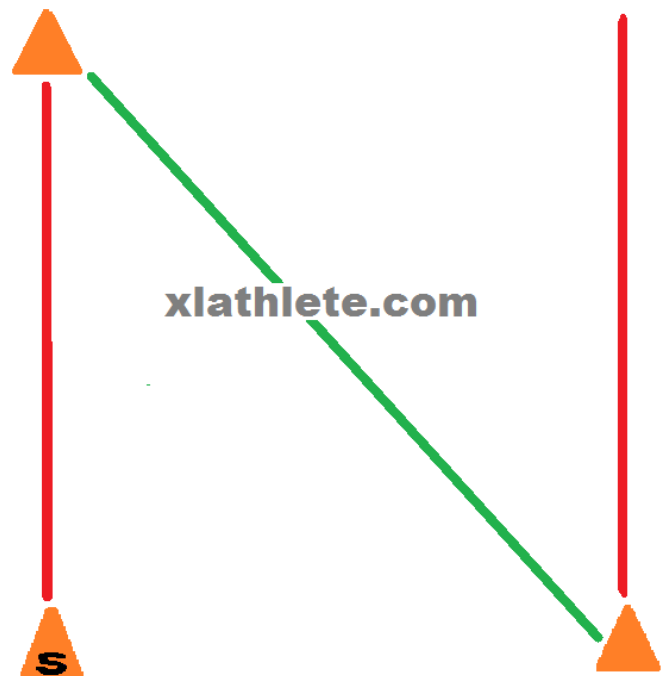
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



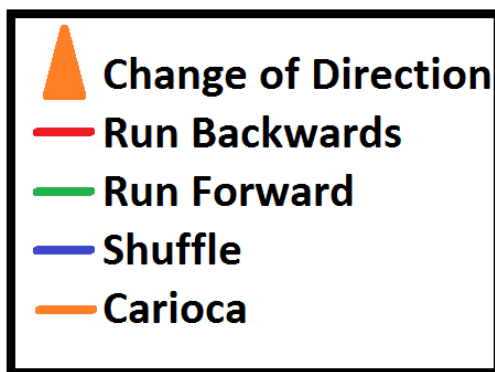
The Duration of This Drill is 5 Seconds.

The Distance Between Cones is 14 Yards.



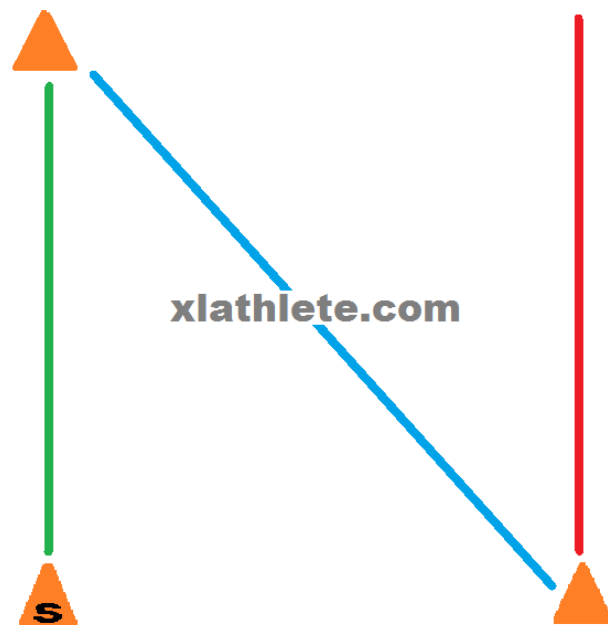
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



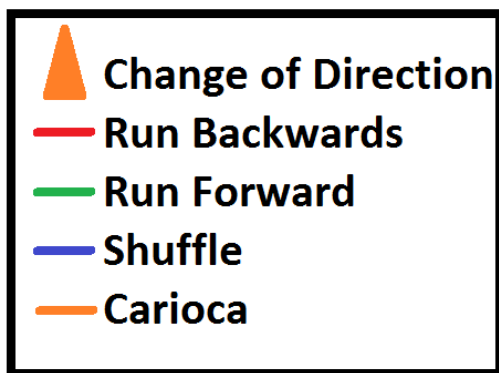
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 16 Yards.



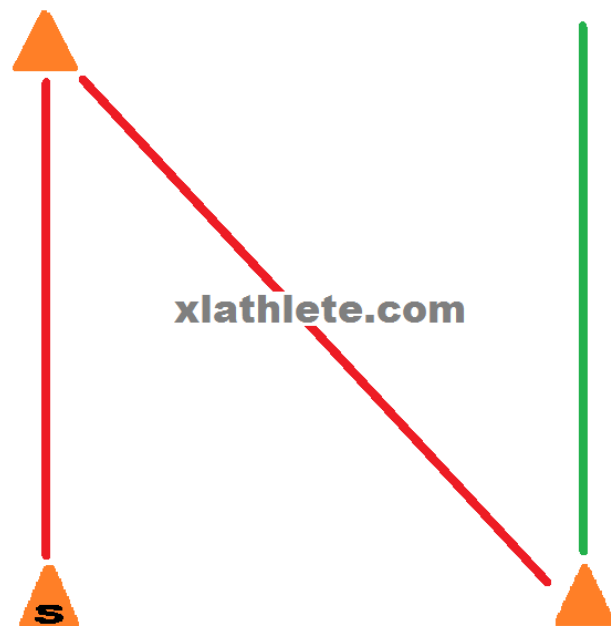
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



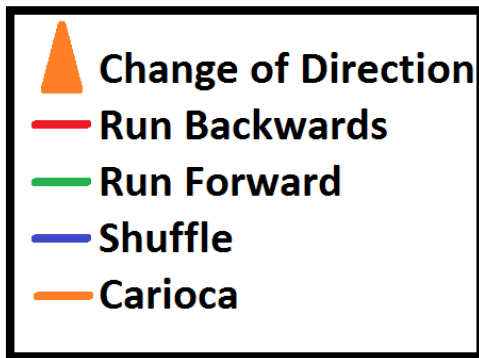
The Duration of This Drill is
10 Seconds

The Distance Between Cones is
12 Yards.



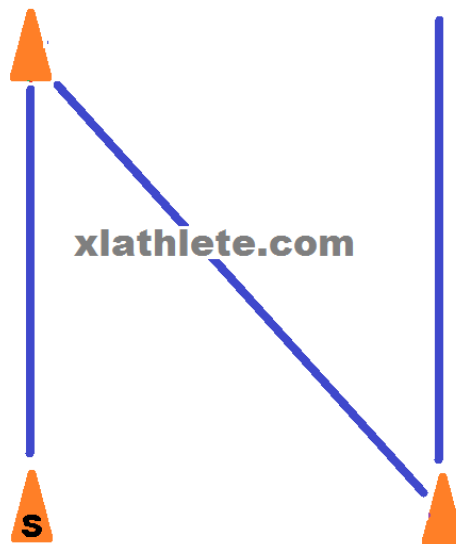
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



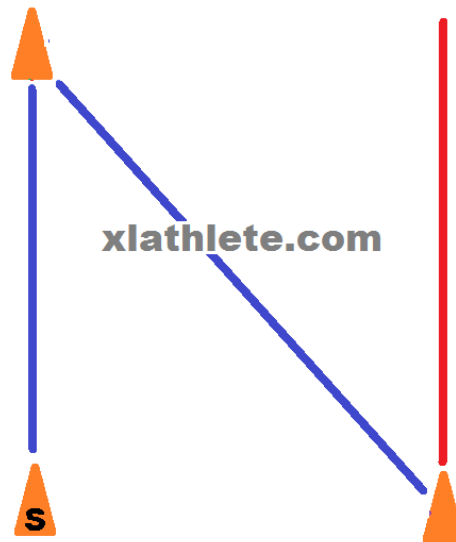
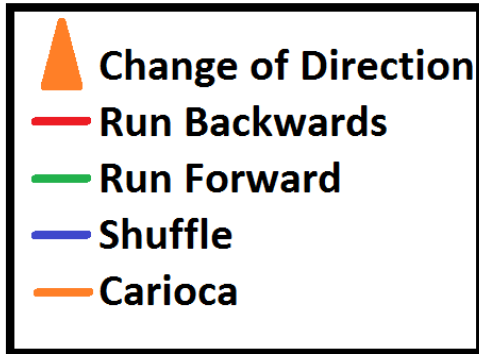
The duration of this drill is
10 Seconds.

The distance between cones is
10 Yards.



www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

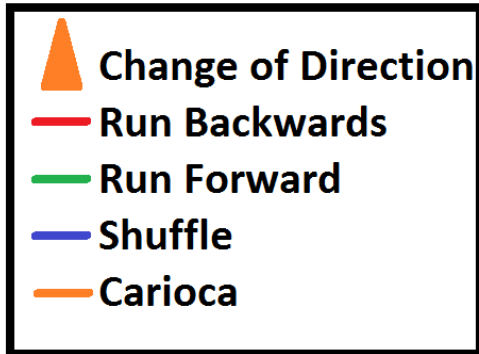


The duration of this drill is
10 Seconds

The distance between cones is
14 Yards.

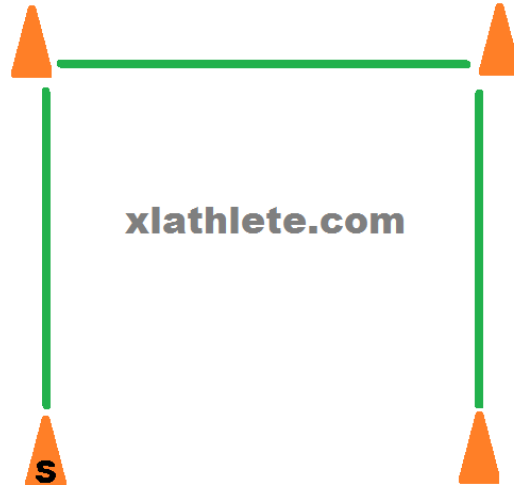
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



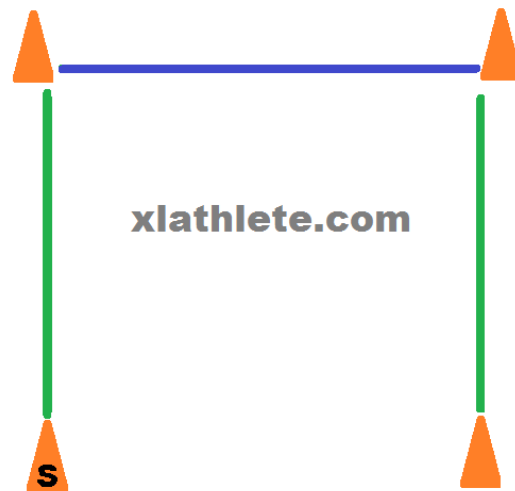
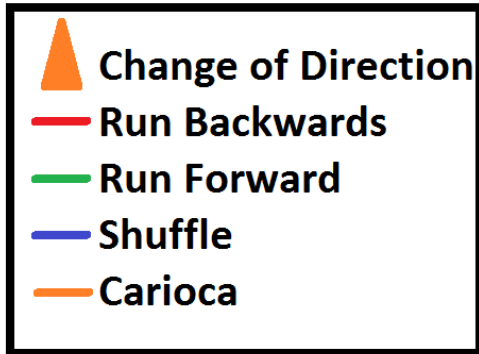
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 22 Yards.



www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

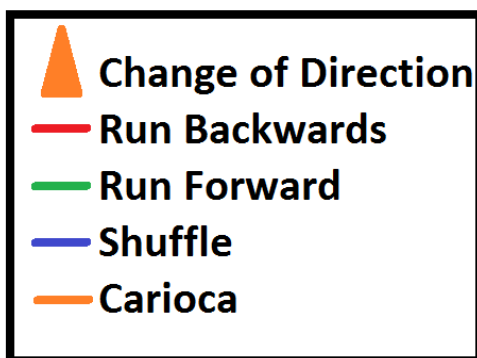


The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 20 Yards.

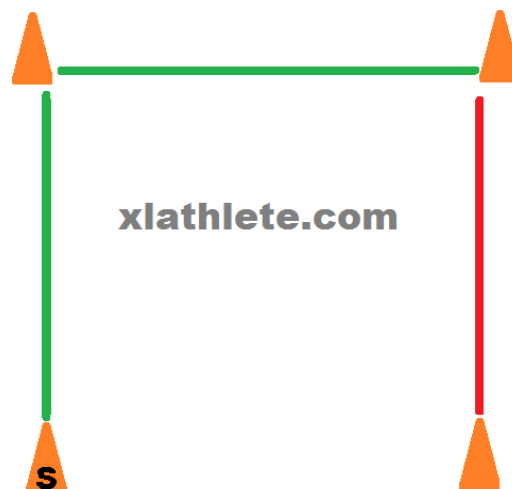
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These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



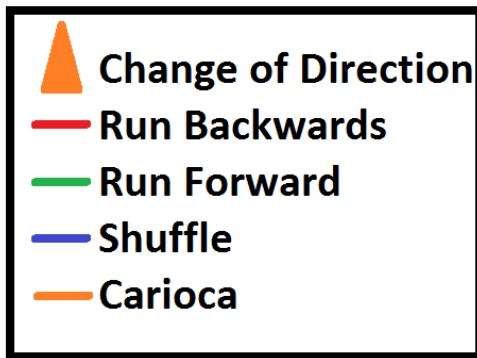
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 21 Yards.



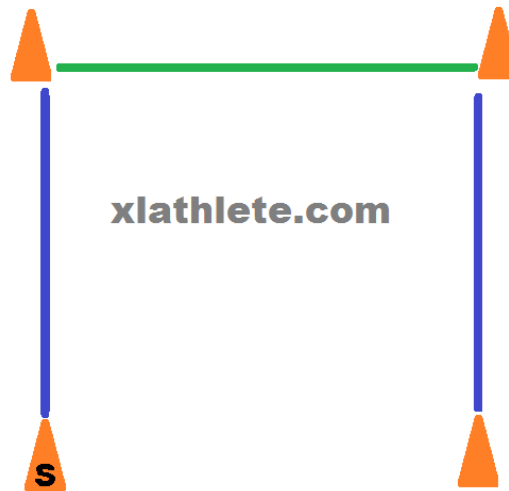
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



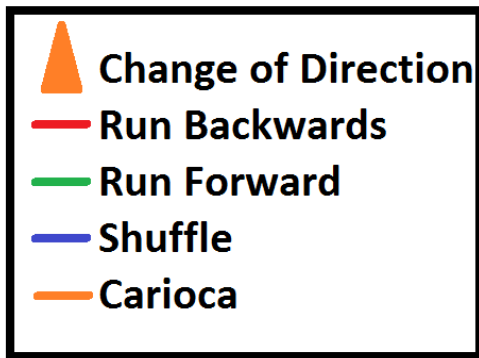
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 16 Yards.



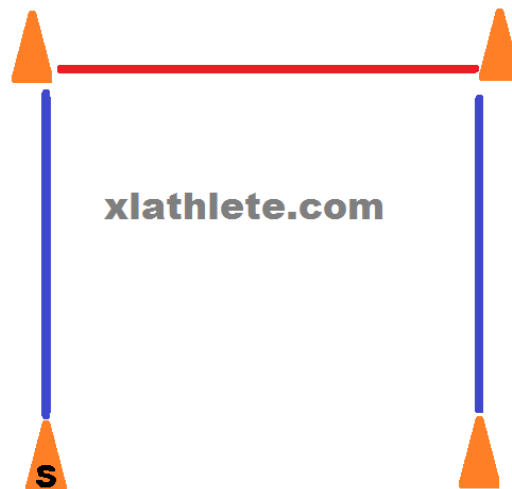
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



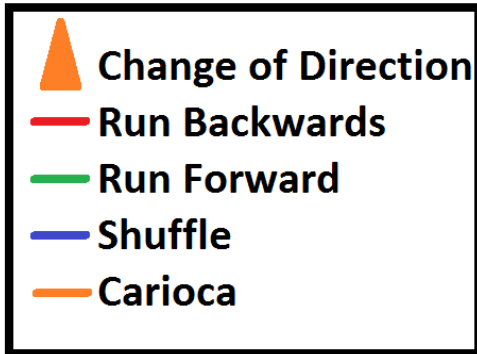
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 16 Yards.



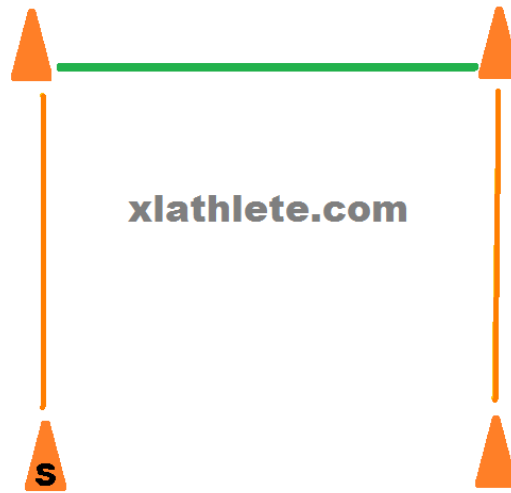
www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



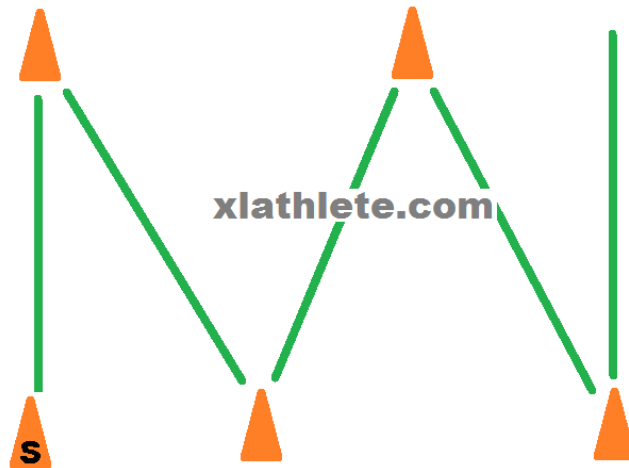
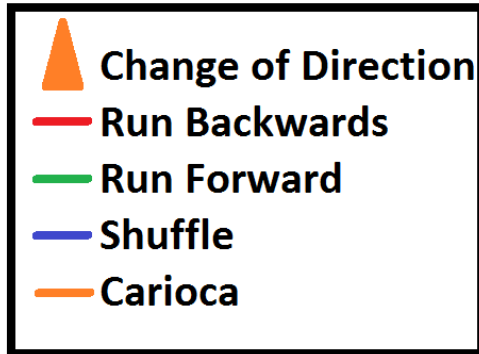
The Duration of This Drill is 10 Seconds.

The Distance Between Cones is 18 Yards.



www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

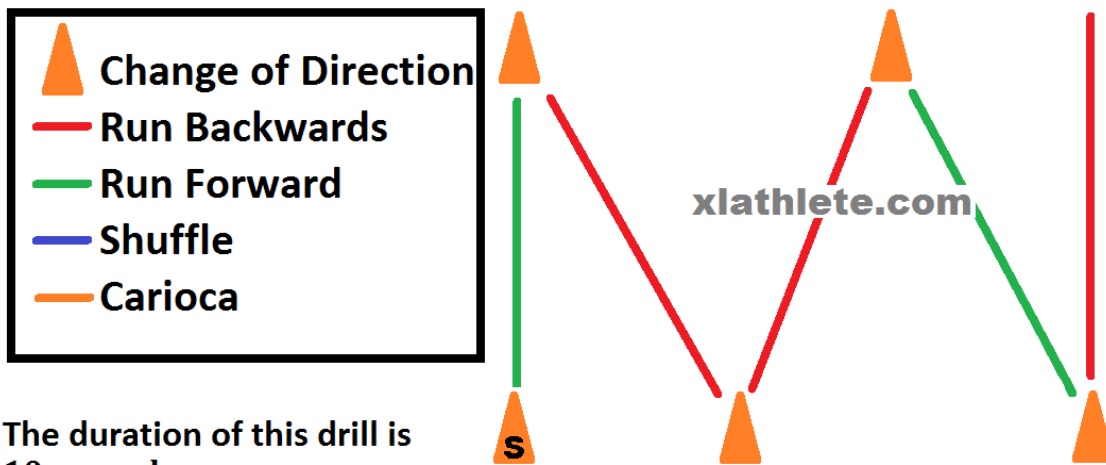


The duration of this drill is
10 Seconds.

The distance between cones is
7 Yards.

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

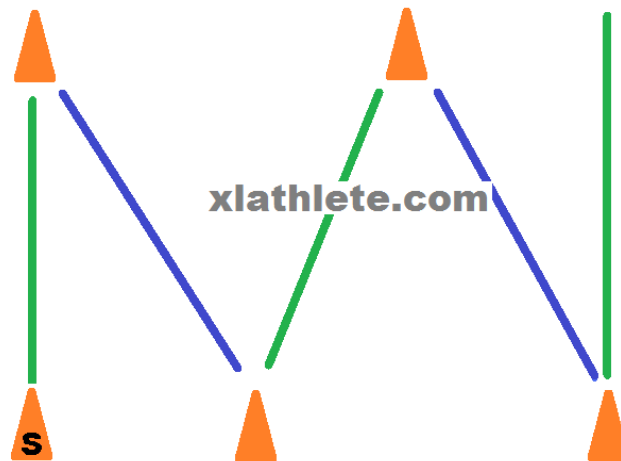
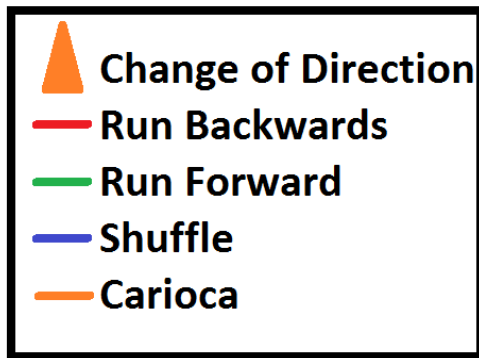


The duration of this drill is 10 seconds.

The distance between cones is 6 yards.

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.

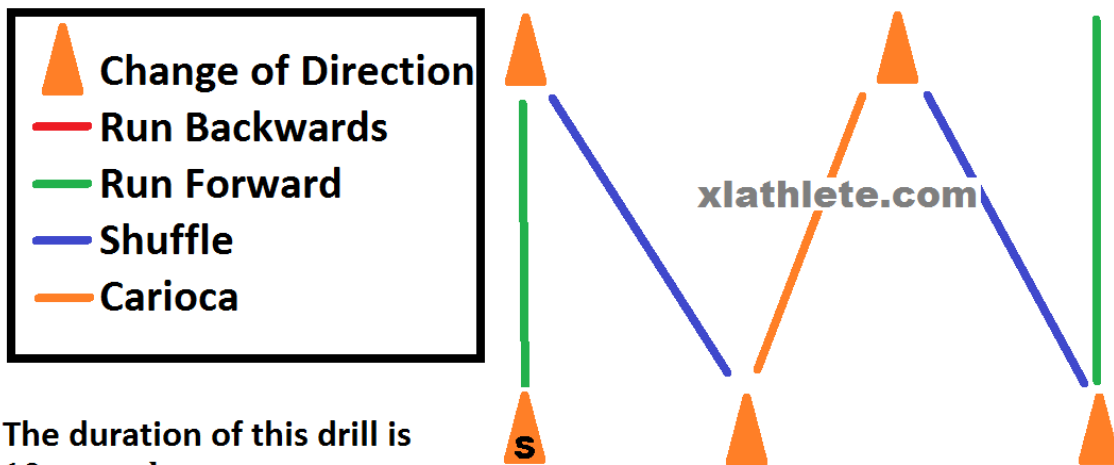


The duration of this drill is 10 seconds.

The distance between cones is 6 yards.

www.xlathlete.com

These drills are designed to last 10 seconds, adjust distance between cones to get desired time, you can also make drills turn in opposite directions.



The duration of this drill is 10 seconds.

The distance between cones is 6 yards.

TRIPHASIC TRAINING

WRITTEN BY CAL DIETZ
AND BEN PETERSON



A SYSTEMATIC APPROACH TO
ELITE SPEED AND EXPLOSIVE
STRENGTH PERFORMANCE

TRIPHASIC TRAINING

A Systematic Approach To Elite Speed And
Explosive Strength Performance

Cal Dietz
&
Ben Peterson

BYE DIETZ SPORT ENTERPRISE
322 Gandydancer Circle
Hudson, WI 54016

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On the eighth day, of the second month, of the twelfth year, of the twenty-first century, I dedicate this book to my family — wife Karyn , children Tatum and Brody, Mother, Father, brother Andy, Grandparents — and friends that helped me in my journey.

- C.D.

To the three men who gave rise to my fascination with human performance and inspired me to pursue my passion — Coach Mac, Coach Lilja, and Coach Nick.

- B.P.

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FOREWORD

Triphasic Training is a game changer! It becomes clear how the University of Minnesota Olympic sport programs have achieved such high levels of success after reading this book. I first began communicating with Coach Dietz in 2008. After watching Coach Dietz teach these principles, I came to the realization that his method was sound because it applied complex scientific principles in a practical manner for people to understand. This combination has established a “blueprint for success” and helped Coach Dietz’s athletes accomplish great feats both at the collegiate and professional level. I integrated the *Triphasic Method* with many collegiate and professional athletes at IMG. The results were outstanding! I will continue to utilize and integrate this very effective method throughout my tenure as a coach in this great profession. I’ve often heard that success leaves clues. After reading this book, you’ll have a blueprint for success and a greater knowledge of the training process. Loren Seagrave always says, “Educate people! Train animals!” This book will help you understand the “Why” and not just the “How”. It’s a “must have” for anyone trying to get better!

— **Jeff Dillman**
Director of Strength and Conditioning
University of Florida

AUTHOR'S NOTE

Co-authoring a book presented a unique challenge that neither of us expected. The book is a compilation of stories, personal experiences, and knowledge of two individuals. As such, a conventional writing style would have us write the book in a manner that distinguishes which author is contributing to a specific story or anecdote. It would require us to preface sentences with, “Cal remembers when...” or “Ben worked with an athlete who...” When we were finished with sections of the book and went back to read what we had written, we found the constant quoting hindered the flow of the book and prevented the reader from making connections between examples that came off as separate story lines.

To solve this perceived flaw to the book, we came up with a simple solution. We wrote the book from the first person view of a third party narrative. Instead of stating which one of us is involved with a story, we say “I remember” or “I worked with.” In essence, we created an imaginary person who is the culmination of both of our life experiences, knowledge, and stories. We beg the readers indulgence with this style choice and say that it is in no way meant to deceive or misguide the reader as to the source of information, but rather to improve the consistency and readability of the book. We feel that this allows for one clear voice to present the information and will maximize the usefulness of the material to the reader.

PREFACE

WHAT THIS BOOK IS NOT

Right off the bat, I want to make a huge confession. I want to tell you what this book is not. This book is not the Holy Grail of training! It isn't the only way to train athletes, nor does it promise to turn every athlete who uses these methods into an All-American. Even with the most advanced training methods, scientific knowledge, and vast array of sports supplements the twenty-first century has to offer, sport coaches, athletic directors, general managers, and parents must realize that in order to win, you must have the best athletes. That means you must recruit the best athletes in college and you must pay for the best athletes in the pros. No method in existence currently used by any strength coach can make up the gap between the genetics of a superior athlete to that of an inferior one.

So what does that mean? Are superior genetics the sole factor in determining success? Without getting into any physiology or neurology, let me explain using a real life example of two hockey players I coached several years ago. We will call them Fred and Walter. Fred and Walter grew up playing hockey together in a small town in northern Minnesota. From the very beginning, they were inseparable. To call them rink rats would have been an understatement. If they weren't at the local rink working on their slap shot or playing pick-up games, they were at the rink that Fred's dad made every year in the backyard working on stick handling and skating. Both households even had the same rule—if you were watching television, you had to work on your stick handling at the same time. (Both boys had small plastic sticks they practiced with on the floor during commercial breaks.)

Based on the amount of practice and work the two boys invested since the age of six, it shouldn't be any surprise that they were All-State selections in hockey and that both accepted scholarships to play for the University of Minnesota Golden Gophers (U of M). I remember when Fred and Walter arrived. They were virtually identical. Both stood six feet tall and weighed 175 lbs. During their four-year careers, they both went through the exact same strength and conditioning

routine every off-season. Their one rep max (1RM) for the bench and squat were within 15 pounds of each other. They ate the same meals at the training table, lived in the same house, and even dated the same girl (though not at the same time). I will add, and personally attest, that both Fred and Walter gave 100 percent to everything they did surrounding Gopher hockey. They attacked every workout and skated every shift like it was their last. For all intents and purposes, Fred and Walter were the exact same athlete, the only difference being their genetic makeup—they had different parents.

Here is where the story takes a drastic turn. During their time at the U of M, Walter continued to excel while Fred seemed to struggle at times on the ice. By their senior season, Walter was a pre-season All-American who would eventually go on to play in the NHL. Fred, meanwhile, was an average third line player. Why? How could two essentially identical athletes end up at such different levels?

The answer was genetics. Genetically speaking, Walter had a higher end sympathetic nervous system (SNS) and superior hormonal profile than Fred. The SNS is part of the electrical wiring grid of the body, relaying instructions from the motor cortex to the muscles of an athlete to perform coordinated muscle movements—hand eye coordination, force production, balance, and reactive ability to name a few. In addition, the SNS stimulates the endocrine system and hormonal response of the body under stress, controlling the release of epinephrine and norepinephrine (commonly known as adrenaline) and the mobilization of energy substrates through glucagon secretion as well as levels of other hormones associated with athletic performance such as testosterone (muscle building), T3 and T4 (metabolism), insulin-like growth factor-1 (muscle building), and insulin (anabolic recovery). In short, the SNS is the “fight or flight response,” the most powerful response of the human body. The better the wiring or the quality of the cable used in that wiring, the faster and more efficiently a signal will travel through the grid. Similarly, an athlete’s hormonal profile dictates his ability to respond to the rigors of competition—stress, performance, and recovery. An athlete who can process and respond to

stimuli more quickly as well as orchestrate the body's hormonal response efficiently will have a decisive advantage over other athletes. In Walter's case, both processes were superior.

Think of Fred and Walter as sports cars. Let's be patriotic and go with Ford Mustang GTs. Both rolled off the assembly line as stock models, but over the years, the cars were overhauled and upgraded. All the hours practicing stick handling and skating were like putting on a better air filter and upgraded exhaust. The hours spent in the weight room squatting and jumping on Russian plyometric boxes were like putting in a new engine block chip that allowed the cars to shift faster and accelerate more quickly. In the end, both cars were far superior to what they had been when they originally rolled off the assembly line over twenty years earlier. The only difference—one that I failed to mention at the start—was that when these cars first rolled off the line, Walter had a V-10 turbo engine while Fred had a V-8. From the very start, Walter had greater potential because his engine could inherently generate more horsepower. As long as both cars received the same upgrades, the V-10 turbo would always be the better, faster car.

Getting back to Fred and Walter, this doesn't mean that a person with a superior nervous system and hormonal profile will automatically be a better athlete. If Walter stayed home watching television and playing his Playstation 3 all day while Fred was off working out and practicing, I guarantee only Fred would have been offered a scholarship to play Division I hockey. Being blessed with the genetic gift of a superior nervous system, a V-10 turbo engine, doesn't guarantee a person athletic greatness. It merely gives him a better chance of reaching greatness if he puts forth the effort.

I don't know if you, as a coach, are lucky enough to have an entire weight room full of turbo V-10 engines or a bunch of V-8s. You might not have Mustangs at all but instead are sitting with a lot of Toyota Corollas. The main thing I want you to understand is that this is not a book about turning a Toyota Corolla into a Mustang GT. That is impossible. Every athlete has limited potential, a ceiling defined by his genetics. At the same time, no athlete is confined to a certain level of performance; every athlete can improve.

WHAT THIS BOOK IS

Every strength and conditioning coach is, to an extent, a mechanic. Not to beat the car metaphor to death, but you have to look at every athlete as a complex engine with thousands of moving parts. And you, the coach, are trying to squeeze every single drop of horsepower you can out of that engine. This book is a method of training that will turn you into a master mechanic, showing you how to improve the horsepower and performance of any make or model car that walks into your weight room. The tri-phasic undulating block model can be applied to any athlete at any time during his training cycle and achieve the same results—improvements in power, rate of force development, and neuromuscular coordination.

At this point, I would guess that some of you are holding up red flags to question that last statement. “How can one training model be applied to such a wide range of sports with the same results?” That is a fair and legitimate question, a question that I will answer in this book. While on the surface sports like hockey and basketball may seem very different, they are identical at their physiologic core. Bear with me a second—the “ah ha!” moment is only minutes away.

First, let’s agree on a couple things:

- ❖ All athletes use muscles. This is self-explanatory. Moving on...
- ❖ Every sport requires dynamic movement of those muscles. Remember, dynamic muscle action refers to the active movement of a muscle through a partial or complete range of motion (swinging a baseball bat, jumping for a rebound, or sprinting up a sideline).

I know that neither of those points are groundbreaking. Coaches often have a very good understanding of the dynamic movements used most frequently in the sports they train. This is where you can cite the importance of specificity of training until the cows come home. Coaches will often tailor their workouts to try and improve those specific neural pathways and muscle actions in their athletes, with the goal of creating more explosive, powerful, efficient athletes at that movement pattern. The problem doesn’t lie with this approach to training at all. In fact,

taking this approach to training is dead on accurate *one-third* of the time. The problem lies with the other two-thirds.

Remember that “ah ha!” moment I promised you? Well, here it is:

ALL DYNAMIC MUSCLE ACTION IS TRIPHASIC!

That one simple sentence is what ties every sport together and allows all athletes to be trained using the same method, yielding the same results. It is what this entire book is about. Understanding the physiologic nature of muscle action taking place during dynamic movements gives you, the coach, a foundational training method that can be applied to every sport. Couple this method with a periodization schedule that can be altered to fit with any training time frame and you have the tri-phasic undulating block method.

In a very brief and basic explanation that will be expanded upon at length in later chapters, the triphasic nature of all dynamic movement can be broken down into three phases:

- 1) **Eccentric phase:** This is the deceleration or lowering portion of the movement. It is associated with muscle lengthening. During this phase, kinetic energy is absorbed and stored in the tendons of the muscle structure to be used during the stretch reflex.
- 2) **Isometric phase:** This is where the mass, or athlete, comes to a complete stop before being reaccelerated in a new direction. (This is actually governed by Sir Isaac Newton’s Laws of Motion. More on that and physics later.)
- 3) **Concentric phase:** This is the acceleration of an athlete or mass. It is associated with muscle shortening.

As the adage goes, a chain is only as strong as its weakest link. If your training program consists solely of methods that train the concentric portion of dynamic muscle action, your athletes are heading into the season with a chain consisting of one strong link and two weak links. This book is designed to show you how to develop the other two phases of dynamic human movement

within a periodization model that will make all three links strong and optimize the performance of your athletes. Remember that:

ATHLETIC MOVEMENT = DYNAMIC MOVEMENT = TRI-PHASIC MOVEMENT

WRAP UP

I'm sure by now I have peaked your interest and forced you to rethink, in part, the training model you currently use with your athletes. When you are done reading this book, you'll not only be able to write programs that produce explosive, powerful athletes, but you'll also be able to spot flaws in the various movement patterns pertinent to their sport. These flaws tend to develop over time, especially during yearly training phases or macro-cycles. Keep in mind, these issues can develop even with the use of the best training methods. Any time an athlete develops a specific aspect of his performance (strength, speed, or power), it likely causes a deficit in a separate but related performance quality. For example, let's say you make an athlete faster with concentric only focused training. Great! The problem, however, is that you neglected to train the athlete's eccentric decelerator in tangent to be able to absorb the higher levels of force now placed on him by the athlete's improved speed. When the athlete decelerates to make a cut or jump on the field/court, he can't change direction as quickly due to a undertrained eccentric phase—the inability to absorb the increased force. This book will give coaches and/or trainers an understanding of how to address those qualities and fix and spot these issues to help your athletes reach a new level.

Now that you have a better idea of what this book *is* and *is not*, it is time to get to work. At this point, you've read the course outline. Now, it's time to get into the nitty gritty details and learn the tools that you, the master mechanic, will take back to your garage, the weight room, to start tuning up your athletes.

SECTION 1

**BASIC PRINCIPLES & THEIR
APPLICATION TO TRAINING**

1.1: BASIC PRINCIPLES

The program outlined in this book and the methods used to execute it work. Period. After over twenty years in the field of strength and conditioning, I've been able to test, refine, and implement a training methodology that gets results (28 Big Ten/WCHA titles, seven national championships, and over 375 All-Americans in numerous different sports). Now, don't get me wrong—I'm not saying that I'm responsible for or that my training methods are responsible for all those accolades. The accolades are due to two things—great recruitment efforts on the coaches' part and great work ethic on the athletes' part. I've been lucky to work with groups of very athletically gifted, dedicated young men and women. Conversely, because I've been fortunate to consistently work with such high caliber athletes year after year, it has allowed me to formulate, implement, tweak, and refine a system of training that gets results.

This system, and its success, is based on a set of three principles that I've adopted and stick with when writing programs for my athletes. These are 1) stress the human body, 2) stress it often, and 3) stress it differently each time. To accomplish all three, you have to be a little creative. The ultimate purpose of this book is to teach you how and when to apply different methods of stress with your athletes to not only improve performance but engage the athletes and get them excited about training.

1.2: STRESS, STRESS, STRESS!

If the athlete isn't being physically stressed, you're wasting your time. I honestly believe that. This philosophy—one of constantly applying stress to the human body—is the single most important component of any training program. Let me say it again—you must *constantly* be stressing the athlete. I was lucky because early in my own playing career as a wrestler and football player at Findlay College in Ohio, I was exposed to literature and training methods that showed me the value of stress and its initial negative, though eventually positive, effects on performance (more on that in a minute). Since my playing days, I've continued to learn everything I can about programming and training the human body to perform at its highest levels. I've looked at and dissected every successful training program I could get my hands on (and by “successful,” I mean world record setting), and they've all had one common theme—high levels of stress.

Taking those early lessons about stress that I learned at Findlay and combining them with what I've learned since through research and experimentation, I'm convinced that stress is the essential factor that must be a constant in athletes' training in order for them to maximize their athletic potential. That said, this isn't a book about stress. It's a book about how a coach should apply stress to the athlete to maximize performance. Yes, I'll discuss triphasic muscle action, undulation, the block system, and a host of other things, but you have to realize that these are all different methods of applying stress to the human body. Before a coach can effectively apply these methods to elicit performance benefits for an athletic population, a coach needs to have a firm grasp on the foundations on which those methods are built. Specifically, in this case, a coach must understand stress—its cause and effect relationship on the human body and how that relationship influences adaptations that improve sport performance.

Stress and the human body's mechanisms to cope with it are amazing things. Stress is caused by anything and everything the human body encounters. From the bumps you feel while driving to work in your car to the apprehension you feel on a first date to the sheer terror of stumbling across a grizzly bear in the woods, stress is your body's way of interpreting and cataloging the

world around you. The idea of stress as an all-encompassing stimulus was first presented as the general adaptation syndrome (GAS) by Dr. Hans Selye in the 1950s.¹ Often referred to as the “Grandfather of Stress,” Selye discovered that everyone interprets the world around them through stress.

By definition, GAS is the manifestation of stress in the human body as it builds over time. What this means is that stress isn't a single, isolated event. It must be thought of as a fluid stimulus that the human body must constantly deal with. Think of stress as a wave. When you're in the valley, you're experiencing low levels of stress. When you're at a peak, you're experiencing high levels of stress. The important thing to understand is that regardless of your place on the wave, you're always under stress.

Selye understood the interaction between stress and the body to be a battle to reach homeostasis.

The human body doesn't like change, which is why it doesn't like stress. Stress is the signal to the body that something has to change, something must adapt to reduce the amount of stress exerted by that stressor on the body if it were to come across it a second time. If the stressor is large enough, it triggers adaptation. The brain will then signal the body, through hormonal response, to adapt to that stressor. The body's thinking is that while it doesn't want to change, it is better off adapting to the stress so that if encountered a second time, it will be dealt with by the new mechanisms put in place for its facilitation and not have any negative effects on the body.

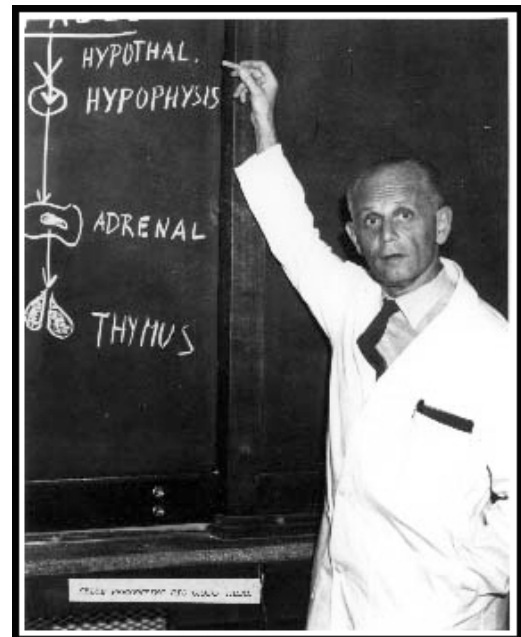


IMAGE 1.1 - HANS SELYE

¹ Image 1: Used with permission from Steve Berczi and the *Hans Selye Institute*.

Think about this in terms of running because it is both the easiest and most relatable example. Imagine you haven't been out for a run for several months. Maybe you live in Minnesota like I do and outdoor running is difficult from January through March. Anyway, you go out for a run. The next morning you roll out of bed and almost fall over. Your feet are killing you, your quads are on fire, and your lower back feels like you slept on a concrete floor. After a brief analysis of the situation, you conclude that you're getting old and incredibly out of shape, but you're pretty sure that it won't kill you if you go run again. This process continues for a week or so. Each time you wake up, you're a little less sore than the previous day even though the number of miles you ran each subsequent time increased. Why? The simple and clear answer might seem to be that you're in better shape, but that isn't the real reason "why." The real reason is because your body has adapted to a new stressor—running. During the first run, your body was screaming at you, "What the \$@!*% are you doing?!?!?" Your body had adapted to a state of homeostasis that didn't involve running. It was happy. By throwing in a new stressor, it forced the body to adapt, to change, so that the next time you went running, it said, "Oh, this again? I knew this was coming. It's easy." The human body is lazy and wants to be kept in the nice warm blanket of homeostasis as much as possible. As a strength coach, you need to rip that blanket off and dump a bucket of ice water over it to stimulate adaptation!

Entire volumes of books have been written on GAS and its implications since Selye first published his work over a half century ago, none of which I will go into here. For the purposes of strength and conditioning, as well as understanding the undulating model, you only need to understand how it pertains to athletic performance. Selye broke down GAS into three stages—alarm reaction, resistance, and exhaustion. Let's take a moment to examine each stage more closely as it pertains to an athlete.

1) **Alarm reaction** (workout): This is the athlete's "fight or flight" response. A strong training stimuli, elicited by workloads of high stress, mobilizes the athlete's energy resources in amounts that far exceed the metabolic level necessary for homeostatic response. It can also be thought of as an immediate, or acute, training effect that leads to the degradation of muscle

tissue and energy substrates. These increased demands trigger profound endocrine responses (i.e. the secretion of stress hormones such as cortisol, epinephrine, and norepinephrine, as well as human growth hormone (HGH)). This is a catabolic response.

- 2) **Resistance** (recovery): This stage begins after the workout and is the body's attempt to return to homeostasis, repairing the damage from the workout through an insulin response (repairing muscle damage and refilling glycogen stores). This is the anabolic stage. Stress hormone levels will return to normal but only if given sufficient time to dissipate. If another stressor returns before the athlete has completely recovered, the athlete will experience another alarm stage response, pushing him deeper into a catabolic state.
- 3) **Exhaustion** (severe overtraining): This stage is defined by very high levels of stress for the athlete. Other terms used to express this stage are overload, burnout, or adrenal fatigue. In this state, an athlete's endocrine system begins to shut down, as it is no longer able to keep up with the high stress loads placed on it. An athlete in this state will often have a deficient thyroid (low metabolism or constantly tired), severely impaired immune system, elevated cortisol levels, disturbed sleep patterns, and an inhibited insulin response. This stage is associated with decreased sport performance.

When you put the three GAS phases together along with an understanding of the physiological response they stimulate, you'll find that there are three possible results from training.

- 1) Low-grade stress that produces a mild alarm reaction response. This doesn't result in any positive adaptation because the training stimuli or workloads weren't stressful enough to upset the athlete's homeostatic balance by triggering a resistance stage response. These workouts are pointless and waste valuable training time.

GENERAL ADAPTATION SYNDROME (UNDERTRAINED ATHLETE)

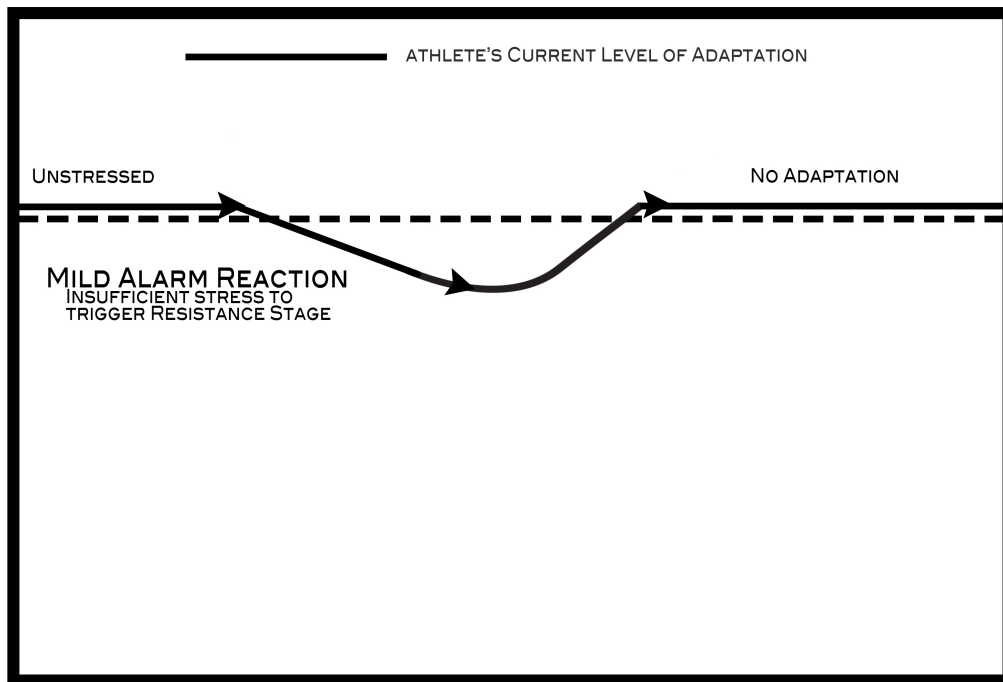


Figure 1.1: Undertrained athlete—workout doesn't provide sufficient stress to trigger a resistance stage (anabolic) response. Doesn't result in any positive adaptation.

2) Long bouts of high-grade stress usually applied over a period of months or even years. Here the stress of numerous workouts compounds itself. Before the athlete's body can begin to build itself back up through the resistance stage, another stressor is applied that pushes the body into a deeper catabolic state. The athlete's body isn't given sufficient time to recover to its previous level of adaptation before another stressor is applied. If more and more stress is applied without adequate time given for recovery, the athlete falls further and further down the proverbial cliff, eventually reaching the bottom of the canyon. Classified as severe overtraining, this consists of extreme exhaustion as well as mental, neural, and adrenal fatigue. If an athlete is allowed to reach this point, it can take months, or even years, to climb back out.

GENERAL ADAPTATION SYNDROME (OVERTRAINED ATHLETE)

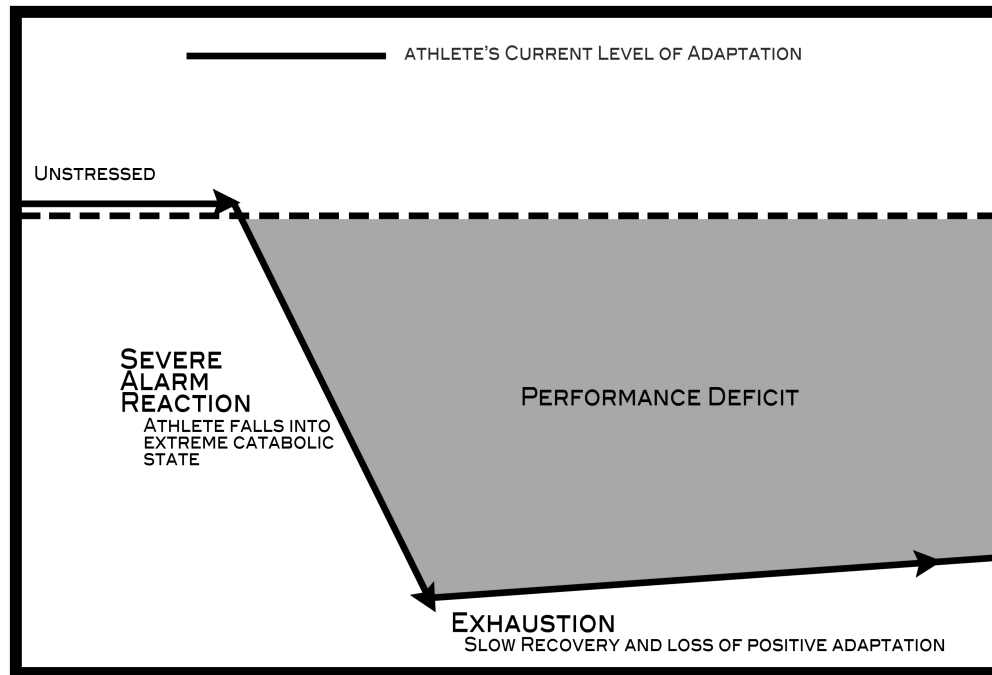


Figure 1.2: Overtrained athlete—excessive stress with little to no recovery time pushes the athlete into an extreme catabolic state or exhaustion. Also known as overtraining, this type of stress pattern produces a performance deficit and can take months, or years, to recover from.

- 3) Short bouts of exposure to high-grade stress usually applied over a period of weeks or months produces an alarm reaction response, signaling a massive, catabolic hormonal release. This, in turn, forces the body into the resistance stage, where it begins to rebuild the damaged tissue and refill metabolic stores. The result of these workouts is a *supercompensation* by the athlete's body, improving subsequent performance. Here, the athlete isn't allowed to fall all the way to the bottom of the canyon. Halfway down, additional stress (workouts) is stopped, and the athlete's physiological system begins to climb back up and recover.

GENERAL ADAPTATION SYNDROME (SUPER COMPENSATED ATHLETE)

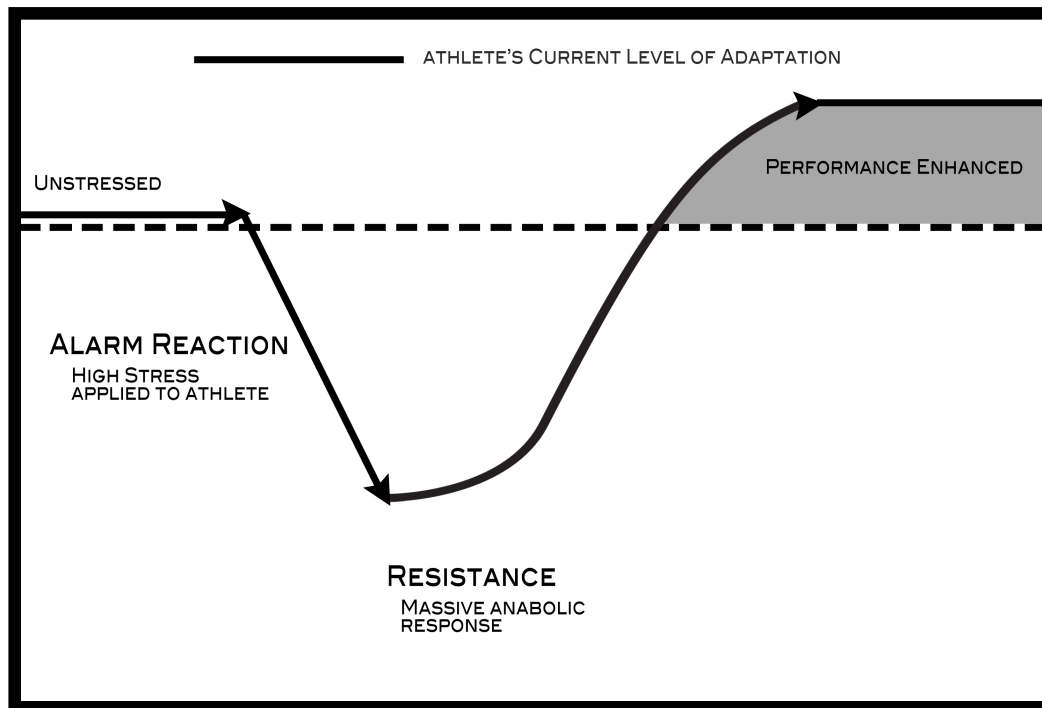


Figure 1.3: Supercompensated athlete—proper application of high-grade stress causes a severe alarm reaction and hormonal release within the athlete. This, in turn, signals a massive resistance stage response, turning the athlete anabolic and leading to positive adaptation.

Where most coaches fail their athletes is in their fear of overtraining them. When coaches think of overtraining, they often think of it only in its most severe form, as outlined by stage three of Seley's GAS—exhaustion. They are so afraid of producing results like the one in option two (see graph) that they never stress their athletes hard enough to see a full supercompensation response. While severely overtraining an athlete will have extremely negative effects on an athlete's performance, a more mild dose of overtraining, known as overreaching, will yield drastic improvements.

Overreaching is characterized by training to a point of fatigue that begins to show performance decrements and overtraining symptoms within the athlete. These symptoms can last anywhere from a few days to several weeks. Exposure to high bouts of stress, when given adequate time to recover, can lead to a delayed training effect, resulting in resynthesis of the damaged muscle

tissue and depleted energy substrates to a level above and beyond their previous state. This phenomenon is known as supercompensation.

Overreaching will force the athlete's body to adapt to higher levels of stress than normally obtained by less stressful alarm/reaction cycles. In this case, the athlete's body interprets the extreme stress load as a life-threatening stimulus. The body literally believes it could endure severe injury or even death if it encountered that same level of stress a second time. As a result, the body and its physiological mechanisms go into overdrive to rebuild bigger and stronger than before and make sure that when it meets that level of stress again, it won't just survive but will thrive!

*“Only when standing at the brink of destruction does
man truly realize his potential.”*

— ANCIENT SAMURAI MAXIM

Clearly, you must not *severely* overtrain your athletes. However, as I just pointed out, you must overreach them to maximize their performance gains. How does a coach know how far and how hard to push an athlete? That is where the art of coaching and a solid understanding of stress and its application come into play. As a coach, you must not severely overtrain your athletes, throwing them over the proverbial cliff. They will never be able to climb back out. Instead, you need to tie a rope around their waist and throw them over, only letting them fall halfway down. Great coaches are the ones who know how far they can let an athlete fall and still have enough strength to climb back out. Be careful though—once you get good at this, you might not recognize the athletes as they climb back over the lip of the cliff. The athletes you threw over the edge won't be the same ones that climb back out. They will be bigger, stronger, and more powerful than before.

In a sense, there should never be anything fun about a workout, at least not from a physiological perspective. Sure, workouts can be fun in nature—competitive, rowdy, and energized. However, each workout should make your body think that you're trying to kill it. To progress, an athlete's body must constantly be introduced to new, more intense stressors.

A strength coach is a stress manager. In looking at the three possible outcomes stress can cause in an athlete, there is a fine line between spurring positive adaptation and overtraining an athlete to the point of severe physiological damage and performance deficit. Stress is a double-edged sword. It can build an athlete into a dominating force or it can cut him down to an inferior shell of his former self. The strength coach's most important job is learning how to wield that sword to constantly spur positive adaptation. The subsequent sections of this chapter not only show you how to stress the athlete on a daily basis—explaining the volumes, loads, and intensities that should be used—but also how an athlete must be stressed on a weekly (undulating) and monthly (block system) scale.

1.3: FIVE FACTORS FOR SUCCESS

Understanding that stress is *the* critical component, the question then becomes, “How much stress does an athlete need to maximize performance?” Where is that magic tipping point between undertraining and overtraining an athlete? As I said before, I’ve researched every world-class caliber program I could find. After much searching, referencing, and translating (some of the programs I obtained were in Russian and French!), I found the answer—a lot! Coaches too often are afraid of severely overtraining athletes. They never stress them hard enough or push them long enough to truly realize their potential. Whether it was cross country, Olympic weightlifting, swimming, powerlifting, throwing, sprinting, or any other sport for that matter, the programs that produced the best results applied the most stress. In looking at these programs and the world-class athletes they produced, I realized that there were five key factors in every program:

- 1) **High volume:** The total weight lifted per session or workout
- 2) **High intensity:** The percentage of an athlete’s maximum lift during a workout
- 3) **High frequency:** The number of times the athlete trains per week
- 4) **High expectations:** The expectations of the athlete (missed workouts, skipped sets, or failed reps are unacceptable)
- 5) **Overreaching:** The point the athlete is pushed to but not past (adrenal fatigue)

This isn’t to say that all five factors were present all the time in every workout. That would be suicidal! These guys were just crazy. Each program blended and combined two or three of these five qualities, cycling them throughout the training year or macro-cycle. When one form of stress began to lose its novelty on the athlete’s system (the athlete’s body begins to interpret what was formerly a high level of stress as the new level of homeostasis), the coach cycled in a new high-level stressor to spur further positive adaptation.

Let me give you an example of one such program. The Bulgarian National Olympic Weightlifting team was a dynasty during the 1970s. In the 1972 Olympics, the Bulgarian team dominated the competition by taking three gold and three silver medals, leaving the world and favored Soviet Union scratching their heads as to the reason for Bulgaria's success. To put this in perspective for you, the Soviet Union, at the time considered the world's best in this event, covered an area roughly two and a half times the size of the United States and had a population of over 200 million people. Bulgaria, on the other hand, was a country half the size of the state of Minnesota, with a population of about 3.5 million people. It was David versus Goliath, and David dominated.

Going into the games, the Soviet Union was expected to sweep the medal board in the Olympic weightlifting events. Meanwhile, the Bulgarians were relative unknowns on the world stage. The embarrassing loss to the Bulgarians forced the Soviets to rethink their entire methodology of training their athletes. In studying the Bulgarian method of training, the Soviets came to the following conclusion, noted in an issue of the *Soviet Sports Review* in 1974:

*“The main reason for the better results is the substantial increase in the training load volume to a degree never used in international lifting practice to this time. Indeed, Bulgarian trainers draw on Soviet experience. For example, their means and methods of training are the same that we have in our country. But, Bulgarian athletes have substantially increased their training load in recent years.”*²

There are two important points to take from the above excerpt. First, the Bulgarians weren't doing anything revolutionary. They didn't have a super secret training protocol or new methods that enabled them to surpass the Soviets. Everyone was doing the same thing. Second, the Soviets concluded that Bulgaria's success was “substantial increases in training load and volume to a degree never used in international lifting competition.” The truth was the Bulgarians were outworking everyone else. They were stressing the human body to a level higher than anyone thought possible.

² Roman RA (1974). The training of Bulgarian weightlifters. *Soviet Sports Review* 1:41–42.

Table 1 summarizes the comparison of the two teams and their training protocol going into the 1972 Olympics.³ As you can see, the Bulgarians lifted higher volumes, heavier percentage loads, and more often than the Soviet athletes.

TABLE 1.1: SOVIET UNION VS. BULGARIAN WEIGHTLIFTING PROGRAM (BASED ON 106KG LIFTER)		
	SOVIET UNION	BULGARIA
VOLUME (LIFTS/MONTH)	1,000	1,500
LOAD (TONS/MONTH)	106	135
WORKOUTS (PER WEEK)	4	15

When the Soviet analysis was completed in early 1974, they instantly changed their training protocol to resemble that of the Bulgarians. What were the results? In the 1976 Olympic games, only two years after making the modifications to the program, the Soviets were back on top as a world power in Olympic weightlifting (winning seven gold medals), an event they would continue to dominate until the fall of the Soviet Union in 1991.

Interestingly, the Soviets decided to make similar modifications to the training protocols for many of their other Olympic sports teams including swimming, track and field, wrestling, and hockey. In the 1980 Summer Olympics, the Soviet Union won a record setting eighty gold medals. The next closest country was East Germany with forty-seven. In 1984, the Soviet Union boycotted the Olympic Games in Los Angeles, deciding instead to host their own Friendship Games in Moscow for all the Eastern Bloc Countries. Of the eighty-three gold medals won by the United States at the Los Angeles Olympics, over half of them would have been silver or bronze performances if they had competed against the Soviet athletes. Meanwhile, the Soviets did fairly well at their Friendship Games, winning 126 gold medals. The adaption of the

³ Roman, R.A.; (1974). The training of bulgarian weightlifters. *Soviet Sports Review*, 1:41-42.

Bulgarian training method of high stress, high volume, and high intensity lifting turned the Soviet Union into a superpower until the dissolution of the Soviet Union in 1991, which divided up the team and resulted in severe budget cuts that made it impossible to continue such a rigorous training schedule for its athletes.

GOLD MEDAL COUNT - SOVIET UNION

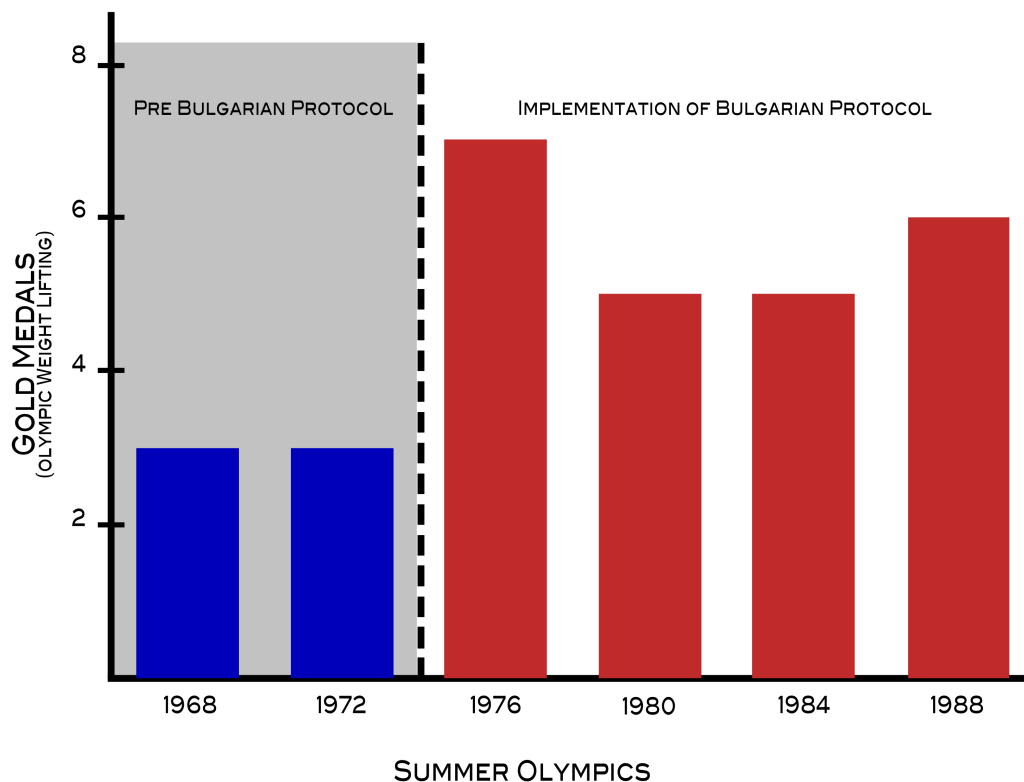


Figure 1.4: Graph depicting the number of gold medals won by the Soviet Union during the Summer Olympic Games before (blue bars) and after (red bars) implementation of Bulgarian lifting protocols.

Now, I'm not advocating the use of this specific type of training for high school or college athletes. A training protocol like the one used by the Bulgarian National Team is definitely outside the realm of NCAA regulations. I'm giving you an extreme example of the amazing capacities of the human body and how far it can be pushed with extreme levels of stress. While I don't think the same type of training should be used with most populations, I believe one hundred percent that the methods behind their approach are essential and will result in positive sport performance improvements in any population who chooses to adopt and apply them.

Just to give you a visual, at the end of this section you will find an example program that would have been followed by a Bulgarian Olympic lifter leading up to competition. If your jaw drops as you go over it, that's normal. I did the same thing when I first saw it. The workout consists of nine training sessions per day, four days a week, for a total of thirty-six weekly sessions. You heard me right. The lifter performs nine separate training sessions on Monday, Wednesday, Friday, and Saturday. Each session was to be completed by the lifter in under forty-five minutes without any more than ninety minutes to recover between each session. There is absolutely nothing fancy about this workout at all. There aren't any bands, chains, or fancy tempos. Just high volumes, high loads, and high frequency—high stress!

As a strength coach, you must learn to apply stress in a manner that elicits a supercompensation effect by overreaching if you want to maximize the performance of your athletes. Both high school and collegiate settings are ideal to implement these factors into a training program that can push an athlete to the brink. Due to the training time restrictions placed on teams imposed by the school calendar, it gives a strength coach specific mandatory blocks of time when the athletes must rest. During the school year, there are times when you don't have access to athletes (finals week, Christmas vacation, etc.). The goal of many of my training cycles is to overreach my athletes before they leave for break. That way, during training, I put their body through a maximal stress load, using the five factors to stress them before giving their bodies time to completely recover. As an example, my goal every May is to have as many of my hockey players sick with a cold or the flu going into finals week. I know that sounds terrible, but a sick athlete is an early warning sign of an overtrained athlete. When athletes are severely stressed and overtrained, their immune system is compromised and they get sick. During finals, there is a ten-day period when I'm not allowed to train the hockey players at all. Therefore, I overreach them going into finals (they are tired, sick, and miserable). Coming out of finals, however, when they get back to training ten days later, it isn't uncommon to see twenty- to thirty-pound increases in most of their major lifts as well as faster sprint times.

TABLE 1.2: BULGARIAN NATIONAL OLYMPIC TEAM TRAINING PROGRAM

SESSION 1	SESSION 2	SESSION 3	SESSION 4	SESSION 5	SESSION 6	SESSION 7	SESSION 8	SESSION 9
SET 1 30% X 2 SET 2 38% X 2 SET 3 42% X 1 SET 4 54% X 1 SET 5 63% X 1 SET 6 70% X 1 SET 7 88% X 1 SET 8 96% X 2 SET 9 98% X 1 SET 10 96% X 1 SET 11 96% X 1 SET 12 92% X 2 SET 13 92% X 2	SET 1 30% X 2 SET 2 38% X 2 SET 3 50% X 2 SET 4 56% X 1 SET 5 69% X 1 SET 6 75% X 1 SET 7 81% X 1 SET 8 91% X 1 SET 9 86% X 1 SET 10 91% X 1 SET 11 81% X 2 SET 12 81% X 2 SET 13 92% X 1	SET 1 36% X 2 SET 2 46% X 2 SET 3 56% X 2 SET 4 67% X 1 SET 5 77% X 1 SET 6 87% X 1 SET 7 92% X 1 SET 8 97% X 1 SET 9 95% X 1 SET 10 97% X 1 SET 11 95% X 1 SET 12 97% X 1 SET 13 92% X 1	SET 1 30% X 2 SET 2 38% X 2 SET 3 42% X 1 SET 4 54% X 1 SET 5 63% X 1 SET 6 70% X 1 SET 7 88% X 1 SET 8 96% X 2 SET 9 98% X 1 SET 10 96% X 1 SET 11 81% X 2 SET 12 81% X 2 SET 13 92% X 1	SET 1 30% X 2 SET 2 38% X 2 SET 3 42% X 1 SET 4 54% X 1 SET 5 63% X 1 SET 6 70% X 1 SET 7 88% X 1 SET 8 96% X 2 SET 9 98% X 1 SET 10 96% X 1 SET 11 81% X 2 SET 12 81% X 2 SET 13 92% X 1	SET 1 38% X 1 SET 2 38% X 1 SET 3 44% X 1 SET 4 44% X 1 SET 5 50% X 1 SET 6 56% X 1 SET 7 69% X 1 SET 8 75% X 1 SET 9 81% X 1 SET 10 86% X 1 SET 11 91% X 1 SET 12 94% X 1 SET 13 97% X 1 SET 14 94% X 1 SET 15 97% X 1 SET 16 94% X 1 SET 17 88% X 2 SET 18 88% X 2	SET 1 44% X 2 SET 2 50% X 2 SET 3 56% X 1 SET 4 69% X 1 SET 5 75% X 1 SET 6 81% X 1 SET 7 88% X 1 SET 8 91% X 1 SET 9 94% X 1 SET 10 91% X 1 SET 11 94% X 1 SET 12 88% X 1 SET 13 88% X 1	SET 1 36% X 1 SET 2 36% X 1 SET 3 46% X 1 SET 4 46% X 1 SET 5 56% X 1 SET 6 67% X 1 SET 7 77% X 1 SET 8 82% X 1 SET 9 87% X 1 SET 10 92% X 1 SET 11 97% X 1 SET 12 100% X 1 SET 13 95% X 1 SET 14 100% X 1 SET 15 97% X 1 SET 16 95% X 1 SET 17 95% X 1	SET 1 36% X 2 SET 2 46% X 1 SET 3 56% X 1 SET 4 67% X 1 SET 5 77% X 1 SET 6 82% X 1 SET 7 87% X 1 SET 8 92% X 1 SET 9 95% X 1 SET 10 97% X 1 SET 11 95% X 1 SET 12 97% X 1 SET 13 95% X 1 SET 14 92% X 1 SET 15 92% X 1
8:30-9:00AM BACK SQUAT	9:15-10:00AM SNATCH	10:30-11:15AM CLEAN & JERK	11:45-12:30PM SNATCH	2:00-2:45PM FRONT SQUAT	3:30-4:15PM SNATCH	4:45-5:30PM CLEAN & JERK	7:00-7:45PM SNATCH	8:15-9:00PM SNATCH

1.4: RESULTS SPEAK LOUDER THAN WORDS

I base all my theories and methodologies in this book on things that are measurable. By comparing the methods employed in the weight room to the results in competition, it will become instantly apparent whether or not a specific training method or protocol has resulted in improved sport performance. You *must* measure and evaluate everything that you do as a strength and conditioning coach. Sports like track and field, swimming, and weightlifting allow you to consistently measure performance-based results so that you can evaluate the methods you applied, see their transferability (how efficiently the athlete's gains in an exercise transferred to his improvement during competition), and then implement those methods to other sports.

Throughout my coaching career, I've been very fortunate to have coached at a school with a track and field team. Some coaches may view this as more of a curse than a blessing because track usually has dozens of athletes all competing in different events with unique needs. Add in the fact that the track season seems to run twelve months a year with athletes needing to peak every other meet, and it can turn into a program writing nightmare! If you can get past all that, however, you will find that a track and field team is the single best place to develop and test training methods and programs that can then be applied to a much wider athletic base.

The great thing about track and field events is that they are all one hundred percent performance based. Everything in track and field is measurable—how far the discus flies or how fast the sprinter runs. From one competition to the next, the extent of each event stay the same (except for weather conditions in outdoor competitions). There is very little variability within the track model compared to skill-based anaerobic sports such as hockey or basketball where no two games are ever the same. Variability in these sports is very high and thus any direct training effect is lost. I'm not saying that you can't see improvement in an athlete's performance from a training program. What I'm saying is that there isn't any way to show, definitively, that those improvements can be attributed to training.

If a basketball team has a horrible regular season but goes on to win their conference tournament, beating two ranked teams and gaining an automatic bid to the NCAA tournament, a strength coach could pat himself on the back and attribute it to having peaked his athletes at the right time. I will concede that is a possibility, but what if I told you that the team was young and it took them the majority of the season to learn to play as a team? Or that two of the wins in the conference tournament came off half-court buzzer beaters? These are examples of the two biggest reasons why a strength coach can't evaluate the validity of a program from team-based anaerobic sports—teamwork and luck (printed in bold in the table 1.3). When you add those two variables into the equation, it completely discredits any correlations that could be drawn from your training methods. A thrower never gets lucky on a good throw. A high jumper doesn't rely on a teammate to give him a push off going over the bar. Both are the result of perfect technique gained through thousands of hours of practice and proper strength training methods.

TABLE 1.3: THE VARIABILITY OF SPORT			
	TRACK AND FIELD	HOCKEY	BASKETBALL
OUTCOME MEASURE	DISTANCE	WIN/LOSE	WIN/LOSE
CONTROL VARIABLES	STRENGTH POWER NERVOUS SYSTEM	STRENGTH POWER NERVOUS SYSTEM	STRENGTH POWER NERVOUS SYSTEM
RANDOM VARIABLES	TECHNIQUE WEATHER	TECHNIQUE ICE CONDITIONS AWARENESS GOALTENDING EXECUTION DEFENSE OFFENSE COACHING STRATEGY SHIFT STRENGTH LINE MATCHING SKILL OF COMPETITION TEAMWORK LUCK	TECHNIQUE PASSING DRIBBLING DEFENSE OFFENSE CLOCK MANAGEMENT COACHING STRATEGY INBOUNDING AWARENESS SKILL OF COMPETITION TEAMWORK LUCK

Table 1.3 shows all the variables that go into factoring the outcome measure of different sports. Notice that team sports, such as hockey and basketball have exceedingly more random variables (variability) in their outcome measure. This increased variability makes it hard to find correlation between training and performance.

By using the training methods outlined in this book, you're getting a leg up on the competition because the methods have been tried and measured at the highest levels of competition and proven to be reliable in delivering sport performance gains. While you, as a strength coach, will never be able to stand up and take credit for a conference championship or national title, you can take pride in knowing that the methods you used with your athletes undoubtedly aided in their success.

1.5: VARIATION IS KEY

Finally, a quick word about variation. A program that doesn't change is an ineffective program. It is imperative that the five factors discussed previously are constantly rotated through the training cycle. Again, the factors are:

- 1) **High volume**
- 2) **High intensity**
- 3) **High frequency**
- 4) **High expectations**
- 5) **Overreaching**

The first three factors (volume, intensity, and frequency) can all be adjusted by altering the loading parameters (changing exercises, the weight on the bar, the method of movement being applied, or the number of training sessions per week). Below in table 1.4 is one example using horizontal pressing that shows the large spectrum coaches have to pick from when choosing how to stress an athlete. This is not a complete list, and only shows some of the possible loading parameters for a horizontal pressing exercise, the combination of which make a lifting method.

TABLE 1.4: LOADING FOR HORIZONTAL PRESSING VARIATIONS			
EXERCISE	LOAD ON BAR	METHOD OF MOVEMENT	FREQUENCY
SUPINE BENCH PRESS	55%	ECCENTRIC	1 DAY/WEEK
INCLINE BENCH PRESS	60%	ISOMETRIC	2 DAY/WEEK
CLOSED GRIP BENCH PRESS	65%	CONCENTRIC	3 DAY/WEEK
DB BENCH PRESS	70%	REACTIVE	4 DAY/WEEK
INCLINE DB BENCH PRESS	75%	CHAINS	5 DAY/WEEK
DIPS	80%	BANDS	6 DAY/WEEK
	85%	WEIGHT	
	90%	RELEASERS	

Again, if the athletes aren't constantly being forced to adapt to stress, you're wasting their time. This isn't to be mistaken for simply returning to the previous stimuli. You must come up with novel ways to stimulate and stress your athletes to spur change and see performance improvements. This serves a dual purpose—it keeps the athletes interested and engaged in the training and continually pushes their bodies to adapt. No one likes to go to work every day and do the same old routine over and over.

Keep in mind that new or increased levels of stress must be given to the athlete all the time to see continued increases in training effect. When I speak about training effect, I'm referring to results from continued training such as an increase in the key performance measures needed to benefit the demands of an athlete's sport. An example for a football player would be an increase in the ten-yard dash or vertical jump.

1.6: SUMMARY AND REVIEW

At first, this may seem like a lot to keep track of. Stress is a very complicated task, especially when you realize that its application, modification, and implementation can have either beneficial effects or detrimental effects on athletic performance. Just look back at the horizontal pressing table with just six exercise variations per lift, eight different percentages that can be used to load them, and seven different methods with which the load can be moved (not counting the dozens of variations and ways these can be manipulated). That's over 330 ways you can perform one single compound exercise. And that's just choosing the exercise! We haven't even considered how heavy the load should be on the bar, the volume or total reps that should be lifted, or the frequency of times the athlete should perform that pressing movement per week. Are you concerned yet? You should be. It's a daunting task.

That, right there, is why I decided I needed to write this book—to create a format that would simplify the application of stress and the tri-phasic undulating block system. Remember—as a coach, you must be a stress manager. You not only need to know what tools are out there (bands, chains, eccentric loading, high volume), but you must also know how to use them to elicit the greatest possible training effect for your athletes.

You know the old proverb, “Give a man a fish, he eats for a day. Teach a man to fish, he eats for a lifetime.” I didn't want to just write a programming book for coaches to take and simply rip out programs and throw at their athletes. I want coaches to be able to understand and apply sound, knowledge-based training principles in the sincere effort to improve the performance of the men and women they train.

The undulated block system will allow you to implement the *Five Factors of Success*. However, to truly learn how to “fish,” there is one more idea that you must grasp before we dive into the actual programs that will help develop explosive, powerful athletes. It is the one, single variable of training that ties all sport together, an integral piece to the puzzle that if missed or neglected will sabotage the potential gains of even the most gifted athlete. That variable is the triphasic nature of all muscle action.