

VIKING SPEED

1. Speed is a skill and can be learned and improved like any other athletic skill.
2. Relentless “Deep Practice” of speed mechanics will improve speed over time.
3. Fast twitch muscle fibers can be recruited by doing short high intensity speed drills and doing explosive lifts (i.e. Power Cleans and Hang Cleans).
4. Improving your total body strength (Bench, Squat, & Power Clean) compared to your body weight will allow you to run and cut faster and more efficient.

Remember... in order to change years of bad running mechanics...an equal or greater amount of time must be spent on correcting those habits.

Upper Body Speed Technique:

FIX: Maintain a 90 degree elbow angle.

Purpose: Makes the arms swing fast and efficient.

SQUEEZE: Keep the arms close to the torso.

Purpose: Keeps the body moving in a straight line.

ROTATE: Swing the arms from the shoulder joint. (keep 90 degree angle)

Purpose: Makes the arms swing fast and efficient.

DRIVE: Drive the elbows back until the hands drive past the hips.

Purpose: A full and powerful arm swing will improve stride frequency and length.

Summary: The upper body controls how the lower body moves.

If you want your legs to move fast...move your arms quick

If you want to lengthen your stride...lengthen your arm swing.

If you want your legs powerful...swing your arms powerful.

Lower Body Speed Technique:

PUNCH: Drive your knee out toward the direction you want to go.

Purpose: pushes the hips to cover more ground = long strides.

ATTACK: Attack foot down and back under the hips.

Purpose: Prevents negative foot speed (breaking action) and creates a powerful ground contact.

DRIVE: Upon ground contact drive off the power pads (balls of the feet).

Purpose: Hitting on the balls of the feet instead of the toes eliminates ground contact time and creates a stretch reflex.

LIFT: After running 10 yards in a forward lean begin to slowly lift and run tall.

Wolverine Speed Stance:

CROUCH: Set hands and feet

SET: Raise the hips until the hamstrings are stretched and ½ the bodyweight is on the hand.

EXPLODE: Push with BOTH feet and explode out in a forward lean.

LEAN: For 10 yards drive out in a forward lean (body in a 45 degree angle).

How To Run A 40 Yard Dash

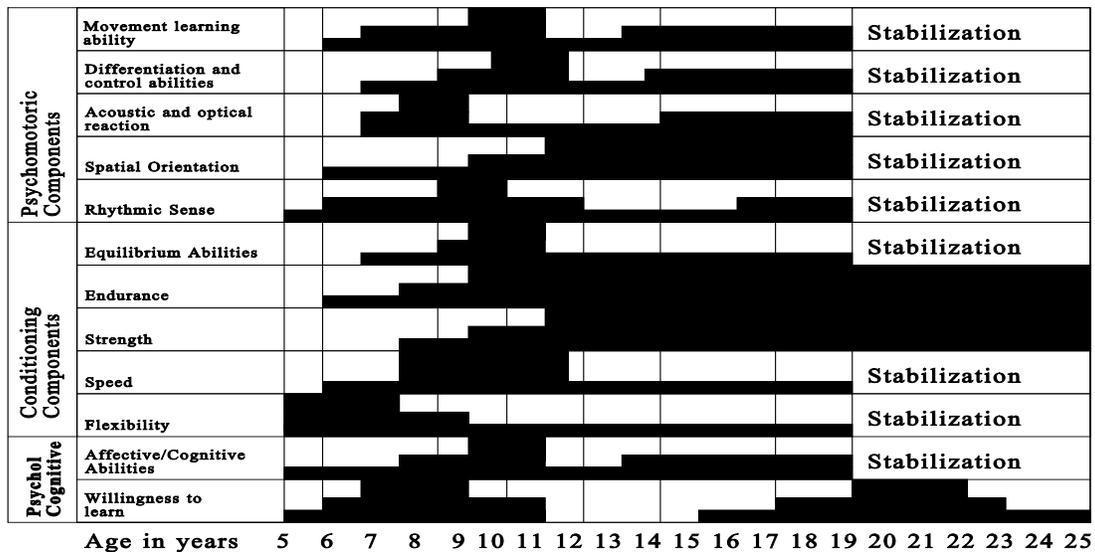
<p><u>Stance</u></p> <p><u>And</u></p> <p><u>Starts</u></p>	<ul style="list-style-type: none"> ▪ <u>Crowd line:</u> Toes of front foot on the start line ▪ <u>Heel Toe:</u> Toes of back foot lined up evenly with heel of front foot (Feet are hip width apart) ▪ <u>Load Hip:</u> Raise hips until ½ of body weight in on the front hand ▪ <u>Cock hand:</u> Raise the free hand (opposite of front foot) to hip pocket ▪ <u>Explode:</u> Push with both feet and explode out in forward lean ▪ <u>Drive:</u> Drive hips forward with each powerful step 	
<p><u>10 Yards</u></p> <p><u>Sprints</u></p>	<ul style="list-style-type: none"> ▪ <u>Lean:</u> Drive out of your speed stance in a forward lean ▪ <u>Punch:</u> Drive knees toward destination. ▪ <u>Drive Step:</u> Drive hips forward by exploding off the balls of feet with each step. ▪ <u>Accelerate:</u> Make sure you do not “Reach” to accelerate but drive hips forward 	
<p><u>20 Yard</u></p> <p><u>Sprints</u></p>	<ul style="list-style-type: none"> ▪ The purpose of the 20 yard sprint is to work on transitioning from your explosive start into full acceleration. ▪ Maintain everything from the 10 yard sprint. ▪ As your drive steps begin to end you should work on slowly driving your way up to an upright position. ▪ You should not be upright until you get 20 yards. 	
<p><u>40 Yard</u></p> <p><u>Sprints</u></p>	<ul style="list-style-type: none"> ▪ Around the 20 Yard mark You should run Tall ▪ The purpose of the 40 yard sprint is to work on your transition from an explosive start into full speed acceleration. ▪ Keep a relaxed and comfortable form. ▪ Do not allow the face, jaw, or shoulders to tighten up. ▪ Imagine running 50 yards sprint and don't stop at the line. 	

The Spartanburg Way of Improving 40 Times:

We use a scientific and systematic approach to improving speed. Speed is a biomotor skill that can be improved like any other motor skill. The optimal age for improving speed is between the ages of 8-12 while the neuromuscular system is pliable and developing. It is our goal to decrease 40 times by teaching you to:

1. **Produce more Force:** Explosive Weight Training and Plyometric Training.
2. **Produce more Force in less time:** Correct/ Efficient Running Technique.
3. **Produce more Force in Proper Direction:** Body Position and angles to leverage a mechanical advantage when applying force.
4. **Produce the Force Through Optimal Range of Motion (ROM):** Technique, Flexibility, and Mobility.

Model of Sensitive Phases for Trainability -Former GDR



Model in Anlehnung an Lehrbrief 23 TA -Modified from presentation Norbert Hatzack, 1993

We use Speed Improvement Drills (SID) to teach you how to run correctly and efficiently, and how to recruit fast twitch muscles. It is our goal to train you to:

- Decrease Foot Ground Contact time by .01 of second.
- Decrease Foot Air time by .01 of second.
- This equals .02 of a second off each step while running.
- If you run 20 steps in your forty yard dash that will equal a .40 of sec improvement on your time.

We have had athletes improve 40 times by a full second over the course of 3-4 years of training. The key is consistent daily improvement in the weight room and Speed Improvement Drills.

Speed Improvement Drills (SID)

Fundamentals of Running Technique: During each drill practice habits that will allow you to run fast. Use the following fundamentals to make running fast muscle memory:

1. **Deep Practice:** Deep practice must be used to improve the skill of running. Intense focus and determination on improving the technique of running will allow the neuromuscular system to operate (Faster, Stronger and more efficient) through the myelination of fast twitch nerves.
2. **Relaxation:** Keep face, neck, jaw and hands relaxed. Speed is about turning the right muscles on and the right muscles off at the correct times in coordinated fashion.
3. **Body Position:** Keep head level and eyes focused straight ahead. Stand with hips and shoulders tall. Your stomach should be tight and your back flat.
4. **Arm Action:** Elbows should be at 90 degree angles with all movement rotating from shoulders joint. Arms should not cross midline of body. Focus on punching elbows back to allow the stretch reflex to drive arms forward.
5. **Keep Ankles Dorsiflexed:** When foot comes off the ground cock the ankle so that it is loaded to fire upon ground contact. It should be like a hammer on a gun... ready to fire.
6. **Knee lift.** Lift knee up, toe up and heel up when running. Step over opposite knee.
7. **Snap foot Down:** Apply force into the ground as quick as possible



You don't become excellent in anything until you spend 10 years or 10,000 hours working at that skill.

Fast Leg Series

These drills are used to teach correct and efficient running technique and to recruit fast twitch muscle fibers. Therefore, each drill should be done with deep concentration and focus on changing and correcting body position. Since fast twitch muscles have an extremely high threshold for recruitment, each rep should be done with high intensity and effort with plenty of rest and recovery between sets. Start drills slow until you develop rhythm and correct technique and then add speed to the rhythm. Remember, speed follows rhythm and correcting years of bad habits take time and effort. Be mind full on every drill... Not Mindless! DEEP FOCUS.

1. Slow Skip Right

- On whistle shoot feet and raise up on balls of feet
- Straight skip left leg and form skip with right leg
- Repeat in a rhythmic patterns for 10 yards
- Get 18 reps in 10 yards

2. Slow Skip Left

- Same as above but left legs form skips

3. Slow Skip Alt.

- Do slow skip but alternate right leg to left leg every two skips

4. Super Fast Right

- Straight leg bound in place (keep ankles cocked and dorsiflexed)
- On second whistle keep left leg bounding and snap right knee up and down as fast as possible with forms skip technique.
- Right foot touches ground and snap back fast
- Keep left leg bounding while right fast leg knee drives.
- Get 9-10 in five yards

5. Super Fast Left

- Same as above but left leg snaps up.

6. Hammer Skip Right:

- Perform a slow skip but focus on accelerating the right leg into the ground
- Keep ankle dorsiflexed/cocked and loaded
- Upon ground contact drive through power pads of feet through the toes
- Allow the ground to drive body upward

7. Hammer Skip Left:

- Same as above but with left leg

8. Right Leg Butt Kicks

- 1st whistle straight leg bound in place
- 2nd whistle begin to butt kick with right leg while left leg straight leg bounds
- Snap heel to butt and back down in rhythmic pattern
- Keep ankle dorsiflexed (Cocked)

9. Left Leg Butt Kicks

- Same as above with left leg butt kicking

10. Circle Drill Right

- 1st whistle straight leg bound in place
- 2nd whistle butt kick with right leg
- Then step over knee and snap foot down under hips in a smooth rhythmic fashion
- Keep both ankles dorsiflexed (cocked)

11. Circle Drill Left

- Same as above with left leg circling

12. Circle Drill Alt.

- Alternate from circle drill right and circle drill left every 2 skips

Speed is the essence of war. Take advantage of the enemy's unpreparedness; travel by unexpected routes and strike him where he has taken no precautions.- Sun Tzu

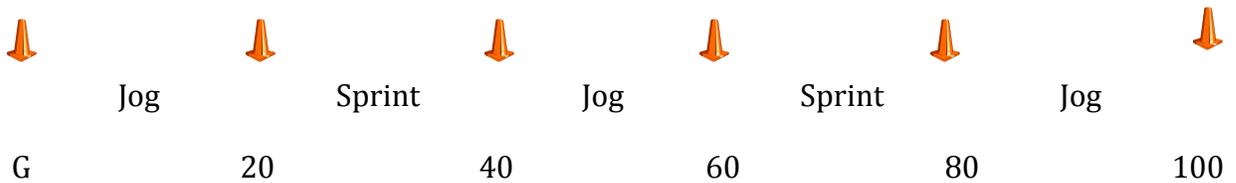


Break Away Speed

1. **In and outs.** Purpose is to develop transition speed that is seen on the field. Athletes jog 20 yards before transitioning to a full speed sprint. Upon 20 yard mark the athletes begins to increase arm swing and run full speed.

Focus on:

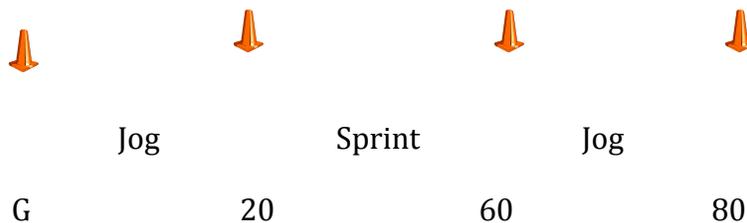
- Use jog section to practice running pretty
- Increase arm swing at each sprint stage
- Run Tall, Fast, and Relax.
- Envision yourself reading the play during the jog, making the play, and pulling away from your opponent and scoring during the sprint.



2. **Rolling 40 and 60s:** Purpose to develop breakaway speed. Athletes jog 20 yards and focus on running pretty. At 20 yard mark athlete accelerates to full speed and try to full away from the group.

Focus on:

- Use jog section to practice running pretty
- Run Tall, Fast, and Relax.
- Envision yourself making the play, pulling away from your opponent and scoring during the sprint stage.



Speed Resistance Drills

Purpose of sprinting with resistance is to develop leg drive power to help improve acceleration ability. The following drills are used to help you run more explosively by putting more force in the ground.

1. **Speed Sled:** Sled should not be so heavy that the athlete is dragging them instead of sprinting with them. Run with good technique.
2. **Sand Sprints:** Athletes should drive and pick up feet as quick as possible.
3. **Parachutes:** Run fast enough to keep chute off ground.
4. **Speed Ramp:** Hill should not exceed 5 % grade
5. **Band Starts:** Athletes sprint 5 yards then backpedal low and slow back to line. Reset then sprint again.
6. **Band High Knees:** Athletes high knee runs for 5 yards. Upon 5 yards the band are released and the athletes sprints 5 to 10 yards.
7. **Sling shot starts:** Athletes get in speed stance with a band around shoulders (backpack). The Partner gives light resistance and the sprinters burst out 10 yards.

Over Speed

1. **Down Hill Sprints:** Downhill sprints teach the athletes to run at slightly faster rates than they naturally can by allowing gravity to assist them. This will reprogram the athlete's neuromuscular system to fire at quicker rates. Since this drill has a high neuromuscular dependence a full recovery must be used between each sprint to insure athletes can run at maximum speed. Hills should not exceed more than 3 degrees to ensure correct running technique will be used.
2. **Over Speed Bands:** Band assistant sprints teach the athletes to run at slightly fast rates that thy nature can by allowing the band to assist them. This will reprogram the athlete's neuromuscular system to fire a quicker rate. Since this drill has a high neuromuscular dependence a full recovery must be used between each sprint to insure athletes can run at maximum speed.

Stride Length

1. **Bounding**: Bounding is as high plyometric drill used to teach athletes how to apply ground force in the correct direction. This drill will help you maximize your stride length.
 - a. **Power Bounding**: The focus is getting vertical spaces and hang time each stride. Put big force into the ground
 - b. **Speed Bounding**: Speed bounding is related to acceleration training. Focus on keeping drive leg at 45 degree angle and low to the ground. Minimize vertical projection and maximize horizontal projection.
2. **Bounding to sprints**: Bounding 10 yard then transition to a sprint
3. **Single Leg Bounds**: Bounding on one leg
4. **20 steps in 40 (dots)**: This drill teaches each athlete how to run 40 yards in 20-18 steps by having a visual goal for each step.

Focus on:

- Drive hips to each dot
- Don't reach foot to dot
- Run pretty and fast/ don't overstride

Linear Speed Drill Menu

<u>Bounding Series</u>	<u>Resistance</u>	<u>Sand Pit</u>
Ankle Bound	Speed Ramp Sprints 10's 20's 30's 40's	Sprints
Bound	Sled Sprints	Sled Sprints
SL Bound	3 Band Starts	Sewing Machine
Speed Bound	3 pt Speed Bound w/ Sled	123 Cut
SL Bound Alt.	Face to Face Runs	Diagonal Bound/ Cut Drill
Diagonal Bound/ Cut Drill	Sand Sprints 10's 20's 30's 40's	3 Long Jumps
Bound Over Mini-Hurdle	High Knee Runs Green Bands	Low Back Pedal
SL Bound Over Mini-Hurdle	High Knee Runs Release	Transitional Survival
Bound w/ the Sled	Bullet Belt Starts	Fly in Skims
Straight Leg Bound		
Lateral Bound		
<u>Stride Length</u>	<u>Acceleration</u>	<u>Mechanics</u>
Bounding Series	Gears 70%-80%-90%100%	Wall Drills Pick ups
Bound 20 Sprint 20	Hollow Sprints (1/2-Full-1/2-Full-1/2)	Wall Drill Switches
40 in 20 (dots)	Harness Sled Low lunge (strength)	Wall Drill Rapid Fire
Rolling 40's		Wall Drill Hammer Skips
Rolling 60's		<u>Pose Drills</u>
<u>Neural Drills</u>	<u>Starts</u>	Stationary Single, Dbl, Trip, Rapid Fire
Three Whistle Drill	Belly 10's	On 10" Box
Butt Kicks	Belly 20's	Transit Single, Dbl, Triple, Rapid Fire
High Knees	Push-up Starts (up, down, clap)	With Band or Overhead plate
Fast Leg	Mountain Climber Starts	<u>Competitive Intensity</u>
Slow Skip R/L	Kneeling Starts	Tag Drills
Hammer Skip R/L	Supine (back) Starts	2 point
Super Fast R/L	Tall and Fall	3 point
SL Butt Kicks	Opposite stance 3pt	Get up
Circle Drill	SL Starts (knee punch)	Roll over
SL Circle Drill	Arm Swing Starts	Push Up Starts
	2pt Starts	Mountain Climber
	Lunge Starts	<u>Come to Balance</u>
		Porsche

MULTI-DIRECTIONAL SPEED DRILL MENU

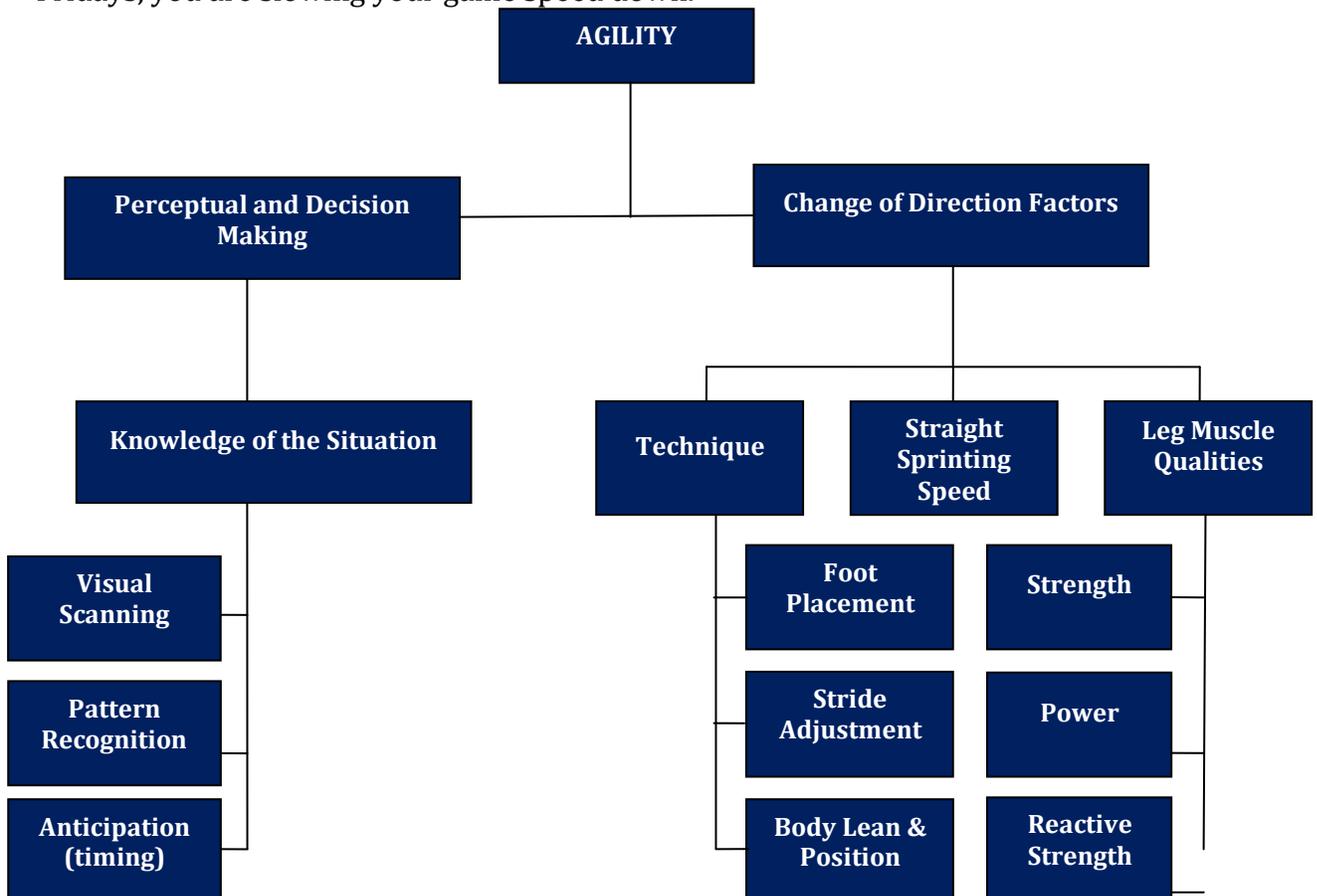
<u>Ladder</u>	<u>Plyometrics</u>	<u>Speed Box</u>
Icky shuffle	Ankle Hops	Icky
Icky Shuffle Wide	Vertical Jumps	IN IN OUT OUT
In In Out Out	Squat Jumps	Dance on Dance off
In In Out Out lateral	Tuck Jumps	Cut Drill
Shuffle lateral	Zimmers	20 in 5
Lateral runs	SL Jumps	Double Hops
Hip Twist	SL Lateral Jumps	
Ankling	Lateral Bounds/ Speed Skates	<u>Reaction</u>
High Knees	Plyo Push Ups	Shuffle directional
Ankling Lateral	Bound Height	Sprint- Backpedal
High Knee Lateral	Bound Distance	Backpedal- Sprint
Hand Speed (All Above Drills)	Broad Jumps	Cross Over Run
<u>Grass Drills</u>	Box Jumps	
"ALL Ready- Feet-Hit	Lateral Box Jumps	<u>SAO (Cones)</u>
2 Pt Wave	Seated Box Jumps	Chaos
2 Pt Seat Roll	Kneeling Box Jumps	Pro-Agility
4 Pt Wave	Repeative Box Jumps	L-Drill
4 Pt Seat ROLL	<u>High Hurdles</u>	Rody
Front to Back	Skip Over	Hurdles
Mirror Drill	SL Bent	Nebraska
Suicide	SL Straight	T-Drill
<u>Tumbling</u>	DBL Bent	Figure 8
Forward Roll-3	DBL Straight	40-in 20 steps
Backward Roll-3	COD	Hoops
Diving Roll-2	Shuffle Lateral	Circle Drill
Backward Roll to Handstand Ext	Cut Drill	<u>Lateral Starts</u>
Forward Roll to Crab Crawls	<u>Pro Agility</u>	Pro-Agility Start
Forward Roll to Bear Crawls	Starts (crossover run/ Stop)	Base Stealing Start
Cartwheel-Roll-Cartwheel	1 st Turn (Hockey Stop)	Lateral Kneeling Starts In /Out
Knee Stepping	2 nd Turn(1 step, 2 step, 3 step, 4step)	Lateral Bound Start
	Band Pro-Agility Broad Jump	Backwards Starts R & L
		Lateral Bounds Starts/ Double

Agility

Agility is more than the cutting around cones, bags, and moving feet through an agility ladder. While these are great drills for general physical preparedness, there is more than just moving your feet to becoming more agile on the playing field. It is important to understand what agility is and what we are trying to accomplish with it.

The two essential parts to agility is being able to change directions as fast and efficient as possible. The second part is less thought about. This is the perceptual influence of why an athlete would change direction in the first place. The chart below describes the factors that influence what makes an athlete agile. You can have the physical ability to be agile but not have the decision make ability, and that factor will slow your game speed down. This is why sport practice at game speed is important. You must practice making those decisions and reacting at full speed on a consistent basis so that it is second nature on game day.

When you are performing drills it is important that you practice visualizing yourself in a game like situation and every cut you make is the cut or foot placement that is the game winning tackle, block, or touchdown. It's also important to understand that the more practice and position preparedness you have the quicker you will react and move on game day. If you have to think about what you are going to do on Fridays, you are slowing your game speed down.



Speed Agility Quickness (SAQ)

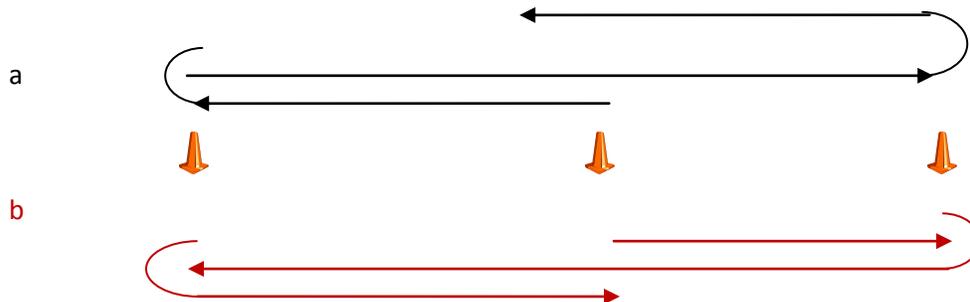
SAQ is a series of short & explosive drills designed to improve individual and team playing Speed, Agility, and Quickness. (Work to rest ratio should match game work to rest ratio) 6-8 seconds 100% effort with 25-30 seconds of rest. SAQ should be done 3 times a week before practice. Speed development should be done while the body is fresh. Speed can't be improved under neuromuscular fatigue. Monday and Tuesday each station should be done 2 times, Wednesday 1 time. In-season development is necessary to peak during the post season.

Coaching Points for all drills:

- Get Set (3 point speed stance or 2 point) ****NO ROLLING STARTS****
- Explode and accelerate to 1st break (Burst)
- Stop/ change direction in 1 step (stop Quick)
- Sink hips and explode in and out of turns (spring in and out)
- Start and finish fast (GAME SPEED)

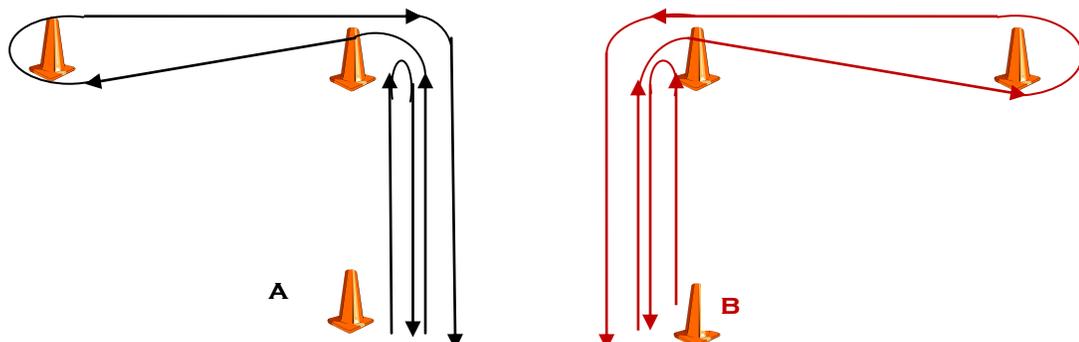
1. Pro-Agility

- Two Athletes face each other with left hand down at center cone
- On coach's cue both athletes burst 5 yards to the right and touch the cone with right hand.
- Athletes explode out of 1st turn and sprint 10 yards to the left
- Athletes touch the cone with the left hand and burst back through the center cone.



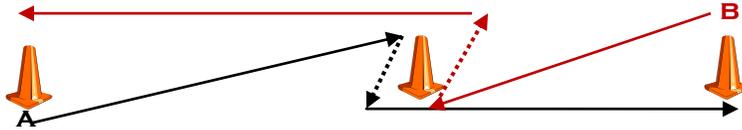
2. NFL-Drill(L-drill)

- Two Athletes get in 3 point speed stance at the start cones
- On coach's cue both athletes burst 5 yards
- Athlete's plant & touch with outside hand and burst back to start line
- Athlete's plant & touch with outside hand then burst back 5 yards
- At the 2nd cone athletes lean in and sprint in toward the 3rd cone
- Athletes round the 3rd cone and sprint back toward to 2nd cone
- At the 2nd cone athletes lean in towards cone and burst toward finish line



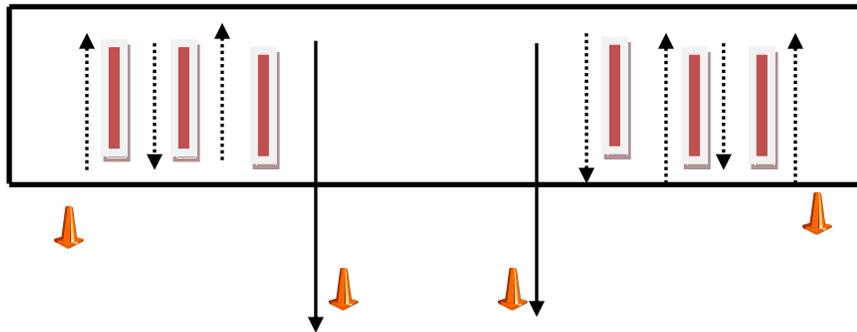
3. Chaos Drill

- Both athletes start from 2 point speed stance on the right side of the cone
- On coach's cue both athletes burst toward left side of the middle cone
- At the center cone both athletes sink hips and stop in 1 step
- Athletes back step and cut hard right
- Athletes burst pass last cone



4. Chute Shuttle

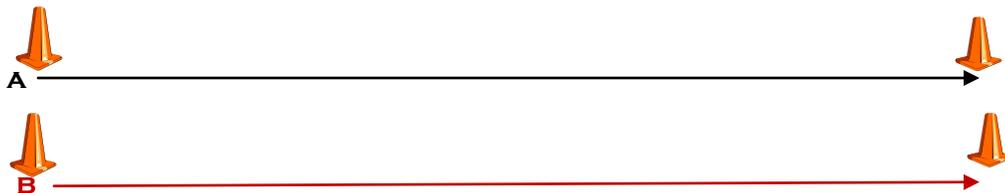
- Shoot Feet (Athletic Position)
- Shuffle Lateral under chute around bags
- Make Cuts sharp and fast
- Turn and burst off last bag



5. 40 in 20 steps

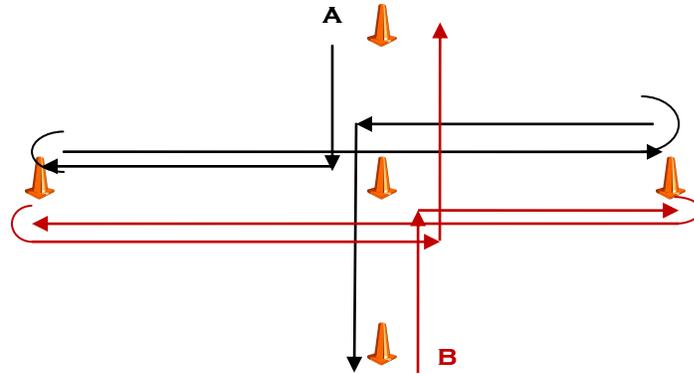
Both athletes start from 3 point speed stance

On coach's cue athletes burst on 1st step and run 40 yards in 20 or less steps with pretty form



6. T- Drill

- Two Athletes face each other 10 yards apart on the right side of the cone
- On coach's cue both athletes burst 5 yards straight ahead and touch the center cone with left hand
- Athletes burst right for 5 yards.
- Athletes touch right and then burst left for 10 yards
- Athletes touch cone with left hand and sprint towards center cone
- Once athletes pass each other they cut up field and finish

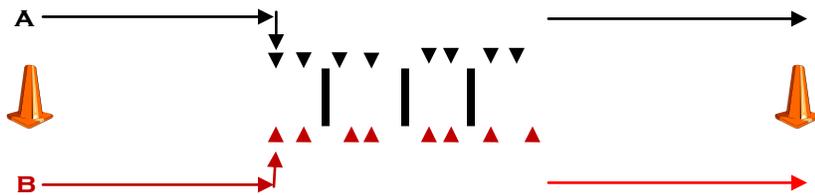


7. Hurdle Speed

From 2 pt speed stance athletes burst 5-8 yards toward outside edge of hurdles and turn in toward hurdles (stop in 1 step or less)

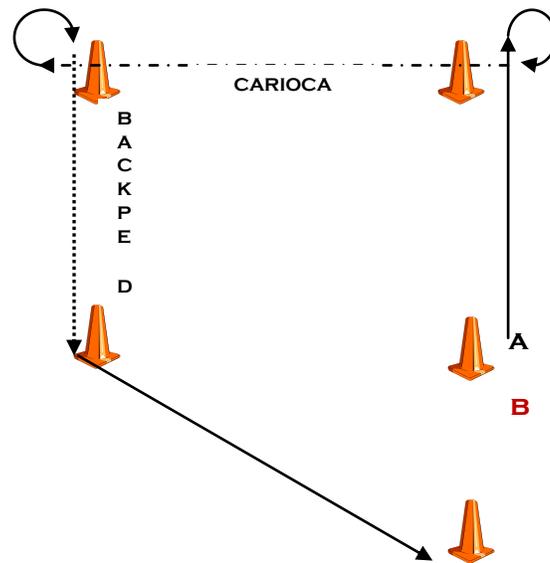
Athletes skip over hurdles with both legs

At the end of the last hurdle athletes burst 5-8 yards



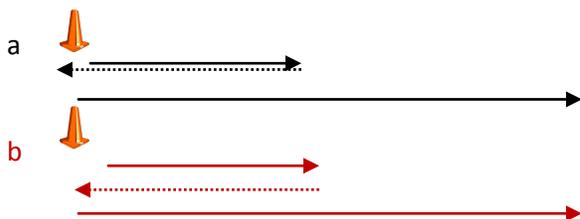
8. Rody (Square) Drill

- Athletes start from 2 pt speed stance
- On coach's cue athletes burst 5 yards (stop in 1 step)
- At 2nd cone athletes flip hips (180) and Quick feet Carioca (face toward inside square) to 3rd cone
- At the 3rd cone athletes flip hips (180) and backpedal toward 4th cone
- At 4th cone athletes flip hip (135) and burst toward 5th cone



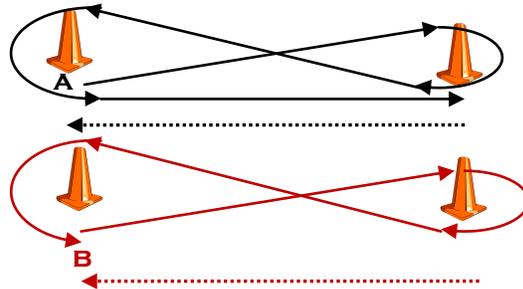
9. Dominator

- On coach's cue athletes burst 5 yards
- Athletes quickly backpedal 5 yards
- Athletes release dominator and sprint 10 yards



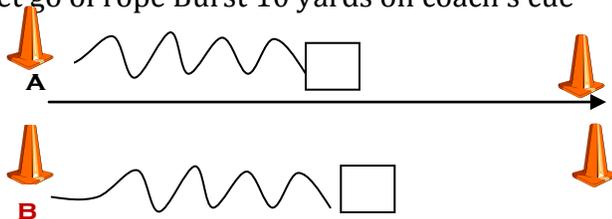
10. Nebraska (2x)

- Both athletes start from 2 point speed stance on right side of the cone
- At coach's Cue both athletes burst 5 yards toward left side of the 2nd cone
- At 2nd cone athletes turn right and burst toward right side of 1st cone
- Athletes turn left and burst back toward right side of the 2nd cone
- At 2nd cone athletes stop in 1 or 2 steps then backpedal past finish line



11. Speed Ropes

- 2 Pt speed stance
- 18 swings in 5 sec.
- Let go of rope Burst 10 yards on coach's cue



12. Hurdle (Quick Cuts)

- Both athletes start from 2 point speed stance on the right side of cone (5-10 yards from 3 hurdles)
- On coach's cue both athletes burst toward left side of hurdle
- At 1st hurdle athletes sink hips, plant with outside foot, turns and bursts between 1st and 2nd hurdle
- Athlete plants and cuts between 2nd and 3rd hurdle
- At the edge of 3rd hurdle athletes plant with outside foot and bursts straight toward finish line 5-10 yards from 3rd hurdle

