

CONDITIONING PROGRAM

Speed and Agility are two major components of sport that need to be trained just like strength, size, and power are developed in the weight room. It is true that no matter what your genetic disposition for speed and agility may be, you can enhance these qualities to some degree with proper training. When looking to improve speed there are only five ways for this to occur.

1. Improve Sprinting Form and Technique
2. Improve Starting Ability – First Step Quickness
3. Increase Stride Length – Distance covered heel to heel on 1 stride
4. Increase Stride Frequency – Number of Steps Taken Per Second
5. Improve Ground Contact & Flight Time
6. Improve Speed Endurance

Remember: $\text{Speed} = \text{Stride Length} \times \text{Stride Frequency}$

KEYS TO IMPROVING SPRINTING TECHNIQUE

- 1. Arms**
 - a. Relaxed and kept close to body
 - b. Hands move from hip to chin height at the shoulder and bent at 90*
 - c. Facilitate leg action
- 2. Start**
 - a. Body weight evenly distributed
 - b. Explosive push-off : Toes Up, Heels Up, Knee Up
 - c. Trunk Angle ~ 45* from horizontal
 - d. Good, strong arm action – Drive elbow back
- 3. Acceleration**
 - a. Good stride frequency to length ratio - Toes Up, Heels Up, Knee Up
 - i. Rapid Ground Contact
 - ii. Rapid Recovery Time
 - b. Trunk Angle – moves to upright position
 - c. Head Relaxed & Neutral
- 4. Max Speed**
 - a. Stride rate to length – Rapid Contact & Recovery Time
 - b. Body relaxed

SPRINT TECHNIQUE DRILLS – Toes Up, Heels Up, Knees Up

*Allow body plenty of time to recover. Performing these drills while tired will not help to improve technique and can lead to improper form and wasted motions.

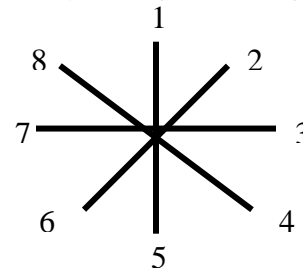
- 1. Seated/Standing Arm Swing** - In a chair work on correct arm movement swinging from the shoulder moving hip to chin while bent at 90* and relaxed. Drive elbows back
 - a. 2 x 5 - 30 seconds each with 15 second rest between repetitions
- 2. Cycling** – Lying on your side, cycle one leg through the sprinting action
- 3. Fast Claw** – Standing, cycle one leg through the sprinting action
- 4. Ankling** - Forward quick shuffle of the feet with good running posture and steps over the opposite ankle as quickly as you can . Get on the ground and off as quick as possible.

5. **High Knees** - Quick knees drive, body angle slightly forward - Key is quick repetitions
6. **Heel Flicks** - Good, quick recovery leg - taking the heel to the hip - Key quick repetitions
7. **Skips** – Good, quick skipping action moving forward. Good arm action. - Quick reps
8. **A-March** - Heel to butt, knee up, toe up, foot strikes under hip, stay tall through hips
9. **A-Skip** - Same as above, add a hop to each foot strike, quick contact with the ground
10. **A-Run** - Same as above, add a run (High Knees) to each foot strike, quick contact with the ground. Think step up and over other knee
11. **Backward Stride** – Sprint mechanics backward. Cue: Step back through the window, grab the foot under the body. Diminish synergistic dominance.
12. **Shake-Ups** - Straight leg shuffle - Pretend shoes are tied together: High foot speed
13. **Wall Runs**
 - a. **Linear 2 Arms** – Facing the wall with 2 arm in contact with and feet behind the hips (45 to 47 degree angle).
 - i. **Singles** – Single leg movement
 - ii. **Doubles** – Double leg movement
 - iii. **Triples** – Triple Leg Movement
 - b. **Linear 1 Arm** – Facing the wall with 1 arm in contact, feet behind the hips, with other arm moving opposite of the lower body.
 - i. **Singles** – Single leg movement
 - ii. **Doubles** – Double leg movement
 - iii. **Triples** – Triple Leg Movement
 - c. **Lateral 1 Arm** – Facing parallel to the wall with closest are in contact with the wall. Feet are outside of the hips with other arm moving opposite of the lower body.
 - i. **Singles** – Single leg movement
 - ii. **Doubles** – Double leg movement
 - iii. **Triples** – Triple Leg Movement

FIRST STEP QUICKNESS DRILLS – Primary Energy System: ATP-PCr and LA

1. **Falling Starts** – Sit your hips back slightly, fall forward as far as possible; when you feel as if you are going to fall, facilitate a good leg drive and explode for ~ 10 yard.
2. **Stride Starts** – 10 step explosive movement over hurdles or cones that progressively increase in distance from one another forcing you to increase stride length correctly.
3. **Crossover Power Step** – 10 step explosive movement crossing over with the left while pushing off with the right.
 - a. Normal
 - b. Sport Cord

4. **Open Step** – 10 step explosive movement stepping out with you lead foot in the direction you want to go in a quick fashion.
 - a. Normal
 - b. Sport Cord
5. **Drop Step** – 10 step explosive movement turning your hips and stepping back and out.
 - a. Normal
 - b. Sport Cord
6. **Wheel** – Utilizing straight ahead movements explode to cone 1, backpedal slow to center. Continue this pattern around the wheel until you get back to your original starting position.
As you feel comfortable incorporate the crossover step, open step and drop step techniques into the wheel.



7. **Ball Drops** – Approximately 6 feet from the start line, one partner will drop a ball to the ground from head height. The other partner, at the start line and in ready position, will explode in the direction toward the ball and try to catch the ball before it bounces a second time.
8. **Wall Ball** – Facing away from the wall, a partner throws a tennis ball off of the wall. Once the ball passes you, you must explode and get it within one to two bounces.

ACCELERATION DRILLS – Primary Energy System: ATP-PCr and LA

1. **Pick Up Sprints** – Jog at 50% for 10 yards, increase the pace to 75% for 10 yards, sprint (100%) for 15 yards, breakdown in 5 yards, walk back to beginning
2. **Acceleration Sprints** – Jog 10 yards, sprint 10 yards, jog 10 yards, sprint 10 yards, breakdown in 5yards, walk back to beginning
3. **10:10:10** – Walk, Jog, Sprint: Walk for 10 seconds, Jog for 10 seconds, Sprint for 10 seconds. Repeat this activity for 15 repetitions. Utilize the walk as your recovery time. Do not allow yourself extra rest time, as you are training to improve our ability to accelerate while also improving your ability to recover at a faster rate. Improving recovery rate will allow you to perform the required activity at, or close to full speed again and again, much like the demands found on the field.
4. **Assisted Running** – Utilizing the sport cord or tubing, have the partner holding the end of the cord walk back as far as possible. On their signal the runner will explode and take off running with good form in the direction of the holder. Begin to decelerate just after you pass the holder. This drill will help to increase stride rate, stride length, and speed in short distance.
5. **Resistive Running** – Utilizing the sport cord or tubing, have the partner wearing the cord walk out as far as possible. On the holders signal the runner will explode and take off running with good form in the direction of the holder. Begin to decelerate just after you pass the holder.

6. **Down Hill Running** – Utilizes the same principles as assisted running if you are unable to use the cord or tubing. Attempt to find a 50 yard area with a hill that has a 1 to 2.5 degree slope. Sprint 20 yards on a flat surface, sprint 15 yards downhill, finish by sprinting 15 yards on a flat surface. This type of running will develop the increased stride rate and stride length by allowing you to carry the increased rate and length attained during the down hill phase over to the flat surface phase.

DECELERATION/ACCELERATION TRAINING – Primary Energy System: ATP-PCr and LA

1. **Start, Stop, Cut, and Accelerate Drill** – Begin by running at full speed, break down, and accelerate toward instructed direction. Vary Starting Directions
 - a. Visual cues can be given to make activity resemble sport
2. All sprint drills can involve deceleration training. To modify, add a deceleration aspect following the sprint training. Place a cone 5 yards from the previous ending point. Accelerate to the last cone and stop by the new deceleration cone that was added to the drill.

SPEED ENDURANCE – Primary Energy System: ATP-PCr and LA

Goal: To improve VO₂max and increase lactate threshold

1. **Gassers**
 - a. **Shuttle Run** – Sprint 50 yards, stop and change direction, sprint 50 yards. Continue until you have reached the appropriate distance
 - i. 3 x 200
 - ii. Build to 3 x 300, 3 x 400
 - b. **10:10** – Sprint for 10 seconds. Rest for 10 seconds
 - c. **Down & Back** – Sprint 50 yards down and back (100 yards total) in 15 seconds or less. Rest 30 seconds and run again
2. **Interval Drills**
 - a. **10 X 100 in 10 Minutes** – Run ten 100 yard runs in ten minutes. Sprint 100 yards, turn and jog back, walk when 20 yards from start. Should take 1 minute. Repeat for 10 repetitions.
 - b. **Power Alleys** – Jog 15 yards, Sprint 30 yards, Walk 10 yards. Repeat for 10 Repetitions
 - c. **Two-Fers** – Hard Jog for 100 yards (50 up & 50 back), when you get back – sprint up and back 10 yards for 10 repetitions; Hard Jog for 100 yards (50 up & 50 back) when you get back – shuffle up and back 10 yards for 10 repetitions; Hard Jog for 100 yards (50 up & 50 back) when you get back – sprint up and back 10 yards for 10 repetitions

3. Gauntlet

- a. Run 1 mile as fast as possible (Goal time is 6:00 to 6:15)
- b. Rest 1 minute
- c. Run ½ mile as fast as possible (Goal time is 3:00 to 3:07)
- d. Rest 1 minute
- e. Run ¼ mile (440 yards) as fast as possible. (Goal time is 1:30)
- f. Rest 1 minute
- g. Run ½ lap (220 yards) as fast as possible (Goal time is 45 seconds)
- h. Rest 1 minute
- i. Run ¼ lap (110 yards)

4. Pacer Run

- a. Is a progressive cardiovascular run that measures aerobic capacity. Utilizing cones or painted lines, mark off 21 yards and 32 inches (20 meters). The provided CD has the pacer cadence that increases in intensity as you run. The program will tell you when to begin, from that point you must run to the 20 meter line prior to the next beep. When you hear the next beep you will progress back to the start. If you reach the line prior to the beep you must wait until you hear the beep to progress back to the next line. Continue running back and forth remembering the intensity will progressively increase. The activity is complete as soon as you do not reach the intended line before the beep sounds. Each time you run 20 meters counts as 1 lap. Keep track of your laps and record your final lap count so that you can see your improvements over the course of the summer.

5. 150 yard shuttle

- a. Place a cone at your starting point and pace out 5 yards and place the next cone down. Not including your starting cone, you should have five cones in front of you at 5, 10, 15, 20, and 25 yards. Sprint from the starting cone to the first cone and back, second cone and back, and so on. Do 10 sets. Goal time is 40 seconds on the first 5 shuttles and 45 seconds on the second five shuttles. Rest time is 30 seconds between shuttles. Completion is 10 shuttles.

6. 200 yard shuttle

- a. Place a cone at your starting point and then one at 10, 20, 30, and 40 yards. Sprint from the starting cone to the first cone and back, second cone and back, and so on. Do 10 sets. Goal time is 45 seconds on the first 5 shuttles and 50 seconds on the second 5 shuttles. Rest time is 45 seconds between each shuttle. Completion is 10 shuttles.

7. 300 yard shuttle

- a. Place two cones 50 yards apart. Sprint from one cone to the other and back three full times without stopping to equal 300 yards. Goal time is 1:15. Rest 1:15 seconds between each shuttle. Completion is 5 shuttles.

8. 20's, 40's, 60's, 80's, 100's

- a. Do the required number of 20 yard sprints then go immediately to the 40's then immediately to the 60's, 80's, and 100's. Rest 15 seconds between each sprint.

9. 50 Sprint Workout

- a. Place a cone at the starting line and out at 10, 20, 30, 40, & 50 yards. Sprint out to the 50 yard cone, run through the line. Walk back to the end line for your rest time then sprint the second 50 yard sprint back to the start line. Do ten of the 50 yard sprints. Walk back to the start line then sprint to the cone marking the 40 yard sprint. Again run through the line, walk back to it and sprint back to the start line. Do ten of the 40 yard sprints. Do the same for the ten 30 yard sprints, ten 20 yard sprints, and ten 10 yard sprint.

10. Position Drill (Football)

- a. This drill is designed to represent a series of plays on the field and the metabolic demands to perform at your peak each play. The drill begins at the goal line. The idea of the drill is to sprint at game speed the required yardage for your position each play of a series. The drill last for 3 series'. In between each play you have a few choices as to your recovery time. One, you may jog back to the line you started at (incomplete pass) and rest for 10 seconds. Two, you may stay at the yardage you sprinted to (completed pass) and rest 15 seconds. Three, you may sprint back to the starting yard line with no rest (hurry up offense). Four, any play of your series you may sprint back to the goal line and rest for 40 seconds (interception w/ return & tackle at goal line). I highly encourage you to vary your rest selections as the game will occur in a varied fashion. Please see next page for the drill.

O & D Line

LB, RB, K, QB

Receivers & DB

Series 1

Play 1	8 yards	14 yards	15 yards
Play 2	12 yards	7 yards	25 yards
Play 3	4 yards	8 yards	10 yards
Play 4	17 yards	25 yards	40 yards
Play 5	10 yards	12 yards	40 yards
Play 6	4 yards	6 yards	25 yards
Play 7	3 yards	35 yards	10 yards
Play 8	6 yards	40 yards	25 yards

Recover: 2 minutes week 1 & 2 Recover: 1:45 week 3 & 4 Recover: 1:30 week 5 & 6

Series 2

Play 1	4 yards	12 yards	10 yards
Play 2	7 yards	40 yards	15 yards
Play 3	12 yards	20 yards	30 yards
Play 4	5 yards	8 yards	10 yards
Play 5	5 yards	10 yards	8 yards
Play 6	18 yards	15 yards	15 yards
Play 7	4 yards	12 yards	40 yards
Play 8	22 yards	4 yards	30 yards
Play 9	9 yards	6 yards	10 yards
Play 10	10 yards	10 yards	20 yards
Play 11	3 yards	15 yards	15 yards
Play 12	28 yards	30 yards	50 yards

Recover: 2 minutes week 1 & 2 Recover: 1:45 week 3 & 4 Recover: 1:30 week 5 & 6

Series 3

Play 1	10 yards	5 yards	10 yards
Play 2	5 yards	20 yards	10 yards
Play 3	32 yards	15 yards	30 yards
Play 4	11 yards	40 yards	20 yards
Play 5	6 yards	8 yards	50 yards
Play 6	4 yards	5 yards	10 yards
Play 7	37 yards	50 yards	15 yards
Play 8	4 yards	25 yards	25 yards
Play 9	5 yards	20 yards	60 yards

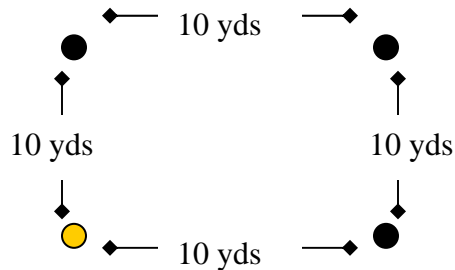
AGILITIES – Primary Energy System: ATP-PCr and LA

1. Ladder Drills

- a. Various Drills – See Warm-Up Section
 - i. Linear & Lateral
 - 1. Combination
 - 2. Change Ladder Direction
 - 3. Change Ladder Length
 - 4. Add Hurdles

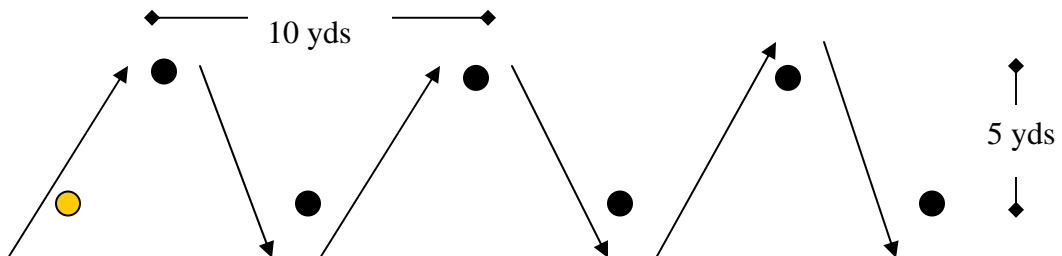
2. 4 Cone Box Drills

- a. Set up cone 10 yards apart in a box shape. Move around the cones using any combination of movement you choose. Vary your directions and add diagonal movements across the middle.
 - i. Movements include: sprint, shuffle, backpedal, carioca



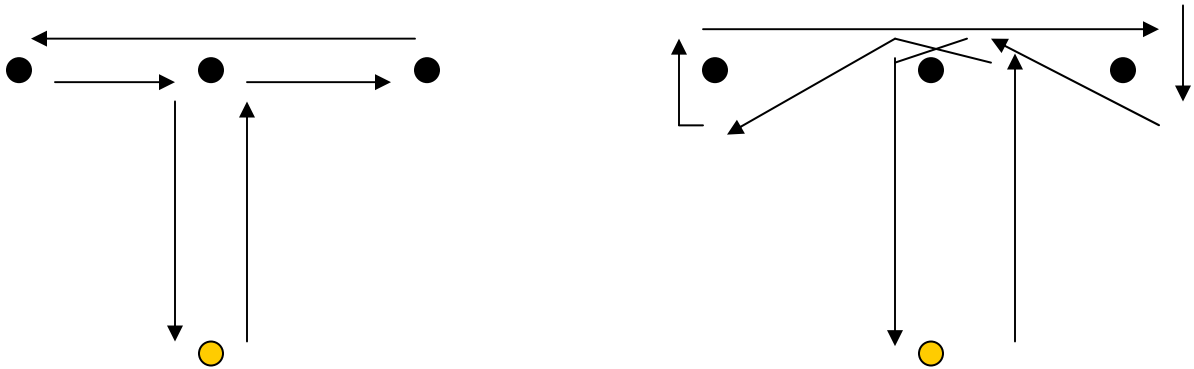
3. 7 Cone Zigzag Drill

- a. Stager cones in two lines 10 yards from each other. Zigzag through the cones using various movement patterns. Movement patterns include: sprint, shuffle, backpedal, carioca, sprint & backpedal, etc.

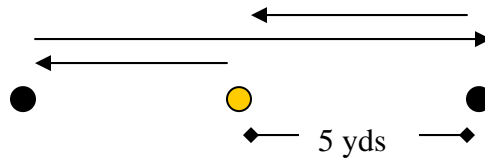


4. **“T” Drill**

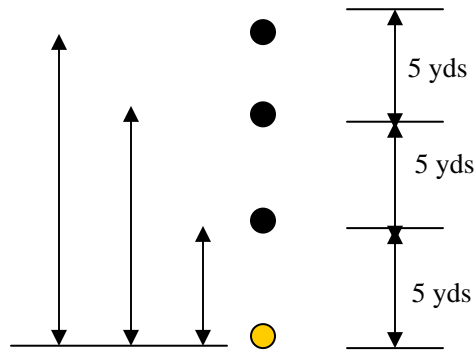
- a. Cones are in the shape of a T. Use various movement patterns through the drill. Movement patterns include: sprint 10 yd, shuffle 5 yd, shuffle 10 yd, backpedal 10 yd; sprint all; shuffle 10, sprint 5, backpedal 10 sprint 5, shuffle 10; carioca 10, backpedal 5, sprint 10, backpedal 5, shuffle 10; etc.



5. **5-10-5** – With three cone set up 5 yards apart from one another in a straight line, start at the middle cone perform a movement patten 5yards, turn use a movement pattern 10 yards, turn, and use a movement patten back to start. Movement patterns include: sprint, backpedal, shuffle, carioca, combination, etc.



6. **60 Yard Shuttle Run** – In a continuous sequence, begin at the first cone, sprint to the second and back, sprint to the third and back, and finally sprint to the fourth cone and back. Cones should be set 5 yards apart and in a straight line.

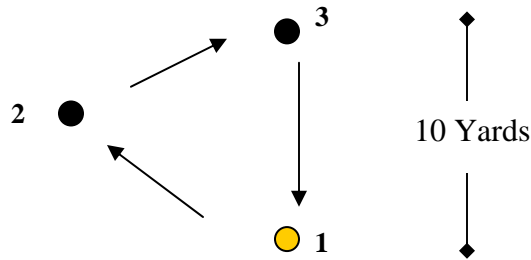


7. **Cone Toss**

- a. Have athlete throw cones in any direction. Develop an agility drill that utilizes directional change, acceleration, and deceleration that resembles movements found in the sport

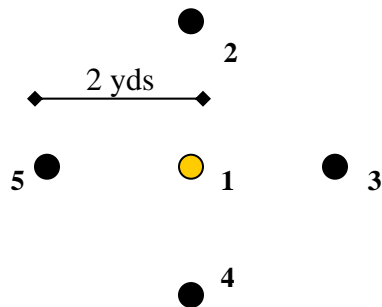
8. **Triangle**

- a. Move laterally from cone 1 to cone 2 leading with your left shoulder (shuffle), then move laterally from cone 2 to cone 3 leading with your right shoulder (shuffle), then backpedal back to cone 1. When doing this drill do not use cross-over steps. Perform the triangle three times continuous then a one minute rest. **Completion is found after 9 total Triangles.**



9. **Scramble Drill**

- a. Start standing in the middle touching cone 1. Sprint and touch cone 2 then back to cone 1, then to cone 3 and back to cone 1, **continue until you have gone completely around three times.** Keep your body facing the same direction at all times. Rest for one minute after going around three times. **Completion is found after 9 total scrambles.**



Rope Jumping

1. Using a single jump (one turn in one jump, no double bounce) you will perform 100 jumps of each type of jump. **The goal of the activity is for you to jump as fast as you can and as efficiently as you can.** If performed correctly, this activity should take 6 to 10 minutes. A great goal to set would be to not miss less than 5 jumps.
 - a. **Basic Jump** – Jump with feet together.
 - b. **Alternate Foot Step** – Jump with alternate foot, like jogging.
 - c. **Skiers Jump** – Jump to the right, then to the left. Alternate.
 - i. Note: Keep feet together and torso straight ahead. Result should look like a skier's slalom.
 - d. **Bell Jump** – Jump a few inches forward then back. Results should look like a clapper of a bell.
 - e. **Alternate Foot High Step** – Jump with alternate foot, and high knees.
 - f. **Basic Jump** – Jump with feet together

Fast Footwork

1. All fast footwork is done on a line
 - a. You may use a piece of tape, line on a floor – 2 yards
 - b. Jumping – 2 Feet Together
 - c. **Time: Work 30 seconds, Rest 30 seconds**
 - i. Jump Forward and Back
 - ii. Criss-cross: Back and forth over the line
 - iii. Jump Sideways Over and Back
 - iv. Square: stand in a spot, jump to the left, up, right, back
 - v. + Jump – start in the center of the +, jump forward then jump backwards back to the spot, jump to the right then jump back to the spot, jump backwards then jump forward back to the spot, jump left then jump right back to the spot
 - d. Hoping – 1 Foot
 - e. **Time: Work 15 seconds, Rest 15 seconds**
 - i. Hop Forward and Back: Left & Right
 - ii. Hop Sideways Over and Back: Left & Right
 - iii. Square: stand in a spot, hop to the left, up, right, back
 - iv. Left & Right
 - v. + Hop – start in the center of the +, hop forward then hop backwards back to the spot, hop to the right then hop back to the spot, hop backwards then hop forward back to the spot, hop left then hop right back to the spot