

## **Age-Appropriate Fitness Testing for Soccer**

Anyone who has ever played a game of soccer knows that the sport places great demands on the physical capacity of the players. At the highest levels of competition, soccer players require extremely high levels of all aspects of physical fitness, including strength, endurance, agility, speed and power. Furthermore, the intermittent nature of physical activities in soccer means that players must be able to apply the various aspects of their fitness – speed, for example – into a constantly changing game environment.

Tests of physical fitness for soccer players must be matched as closely as possible to the actual physical demands of the sport. In addition, the age and physical maturity level of the players must be taken into consideration when choosing which fitness tests to use. If administered correctly, fitness tests should give soccer coaches a clear picture of the physical strengths and weaknesses of their players, as well as a good indication of their ability to perform optimally in competition.

Following are age-appropriate fitness tests for senior (16-19yrs.) soccer players. The testing protocol is organized into a 3-day plan for senior players, which should give the coach enough time to complete the entire range of tests for a team of 15-25 players.

### **Senior Fitness Tests:**

#### **Day 1:**

(Have the players warm-up for 5-10 minutes with some light jogging and stretching exercises)

#### **Test #1: Sit-And-Reach:**

##### **Fitness Component Tested: Flexibility**

##### **Equipment Required:**

- measuring tape
- 1 strip of adhesive tape

##### **Administering the Test:**

- Lay the measuring tape on the ground
- Take a piece of adhesive tape and place it perpendicular to the measuring tape, at the 15 inch mark
- Have the player sit, with legs extended and heels in line with the 15 inch tape mark
- Player will then reach forward, by bending at the waist with arms extended, trying to reach as far as possible
- They must be able to hold this position for a count of 2 seconds (no bouncing)
- Measure the distance reached in inches, counting the 15 inch mark as zero, in the best of 2 tries (for example: a player getting to the 16 inch mark would get a score of 1, etc...)



### **Test #2: Vertical Jump:**

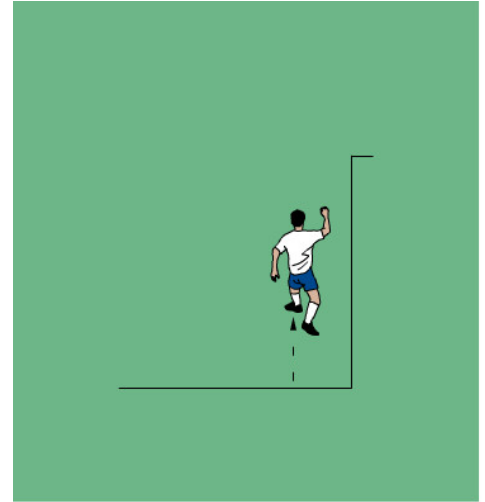
#### **Fitness Component Tested: Leg Power**

#### **Equipment Required:**

- measuring tape
- 2 strips of adhesive tape
- 1 piece of chalk

#### **Administering the Test:**

- Place the measuring tape up against a flat wall, and using the adhesive tape, secure it against the wall, with the “0” mark in line with the floor
- Have the players stand about 2 feet from the wall, with their right shoulder facing the wall
- Using the chalk, make a mark on the player’s right index finger
- Have the player stand and reach as high as possible with the right hand, maintaining foot contact with the floor, and place a mark on the measuring tape
- To perform the jump test, players must start their jump from a motionless start, jump upwards and reach with their right hand, trying to touch the highest point possible on the measuring tape
- The vertical jump distance is measured in inches, by subtracting the stand and reach mark from the total jump height



### **Test #3: 10metre Sprint:**

#### **Fitness Component Tested: Speed off the Mark**

#### **Equipment Required:**

- measuring tape
- 2 cones
- 1 stopwatch to the nearest 10<sup>th</sup> of a second

#### **Administering the Test:**

- Using the measuring tape, measure the distance and place cones on the ground, on a flat surface, at 0 and 10 metres
- Have the players warm up by practicing the short sprint a few times at a sub maximal speed
- The player must be completely motionless at the start of the sprint
- Count “three, two, one, go” instructing the player not to start the sprint until they hear “go”
- The player runs as fast as possible, right through the 10 metre distance, and should not slow down until well beyond the 10 metre cone
- When finished, have the player walk slowly back to the starting point, and perform the test again, recording the fastest of 2 trials



#### **Test #4: 30metre Sprint:**

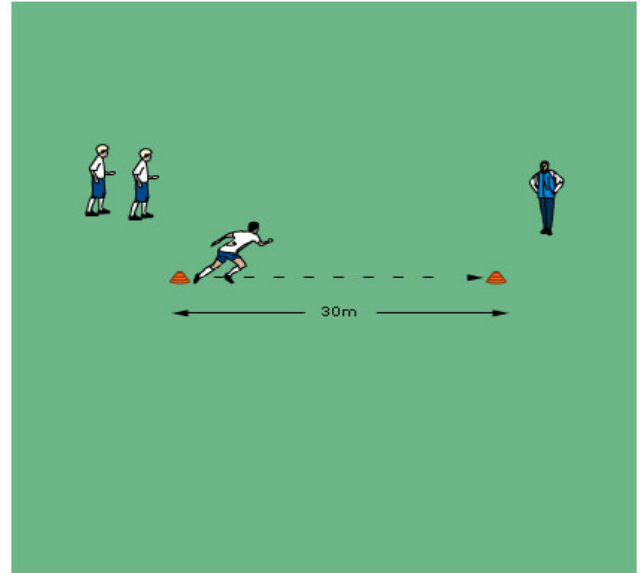
#### **Fitness Component Tested: Speed**

#### **Equipment Required:**

- measuring tape
- 2 cones
- 1 stopwatch to the nearest 10<sup>th</sup> of a second

#### **Administering the Test:**

- Using the measuring tape, measure the distance and place cones on the ground, on a flat surface, at 0 and 30 metres
- Have the players warm up by practicing the short sprint once at a sub maximal speed
- The player must be completely motionless at the start of the sprint
- Count “three, two, one, go” instructing the player not to start the sprint until they hear “go”
- The player runs as fast as possible, right through the 30 metre distance, and should not slow down until well beyond the 30 metre cone
- When finished, have the player walk slowly back to the starting point, and perform the test again, recording the fastest of 2 trials



### **Test #5: T-Test:**

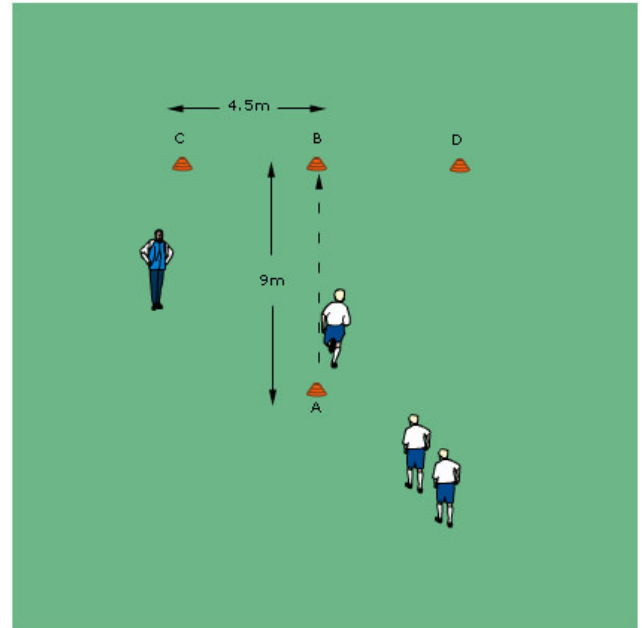
**Fitness Component Tested: Agility**

#### **Equipment Required:**

- measuring tape
- 4 cones
- 1 stopwatch to the nearest 10<sup>th</sup> of a second

#### **Administering the Test:**

- Using the cones and measuring tape, create a “T” of cones on the field, with the side part of the “T” 9 metres long, and the two short sides 4.5 metres each (see picture)
- Designate cones as “A, B, C and D” in accordance with picture
- To perform the test, players must start motionless at cone A
- Count “three, two, one, go” instructing the player not to start the sprint until they hear “go”
- The player performs the test as follows:
  - Run forward from cone A to cone B, and touch the base of cone B with the right hand
  - Shuffle to the left and touch the base of cone C with the left hand
  - Shuffle to the right and touch the base of cone D with the right hand
  - Shuffle to the left and touch the base of cone B with the left hand
  - Run backward past cone A
- Record the fastest of two trials



**(Allow a 10 minute rest and water break following completion of the T-Test)**

## **Test #6: Hexagon Test**

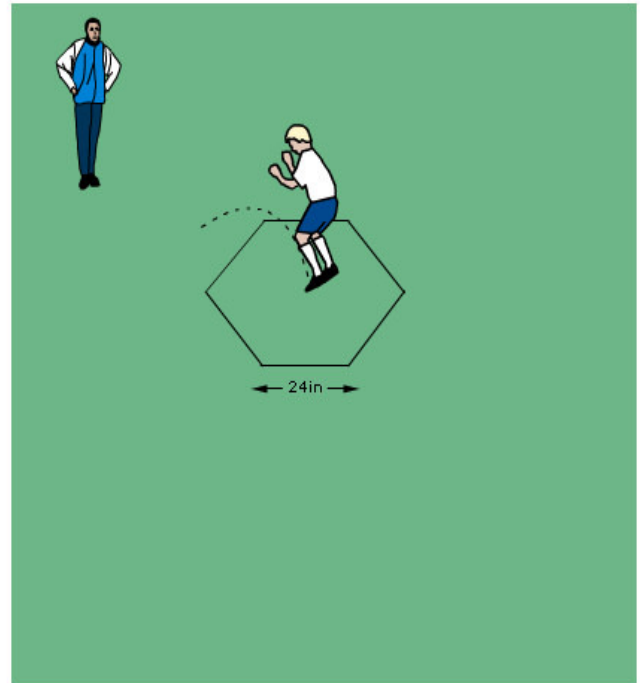
### **Fitness Component Tested: Agility**

#### **Equipment Required:**

- measuring tape
- 6 strips of adhesive tape
- 1 stopwatch to the nearest 10<sup>th</sup> of a second

#### **Administering the Test:**

- Using the measuring tape and adhesive tape, measure a hexagon that has six sides which are all 24 inches (60cm) in length and form 120 degree angles
- Have the players practice the jumping motion at a lower speed to warm-up
- The test is performed from a motionless start inside the hexagon
- Count “three, two, one, go” instructing the player not to start jumping until they hear “go”
- To perform the test, the player begins double foot hopping from the centre of the hexagon over each side and back to the centre in a clockwise direction until all six sides are covered three times (three revolutions around the hexagon) and the player is again standing in the centre of the hexagon
- The player must remain facing the same direction throughout the test
- If a player lands on one of the sides of the hexagon, loses balance, takes an extra step or changes their direction of movement, the test is stopped and restarted
- The time is stopped when the player lands inside the hexagon after three full clockwise revolutions (18 total double foot jumps)
- Record the best time of three trials



## **Senior Fitness Tests:**

### **Day 2:**

#### **Test #1: 7 x 30metre Sprint:**

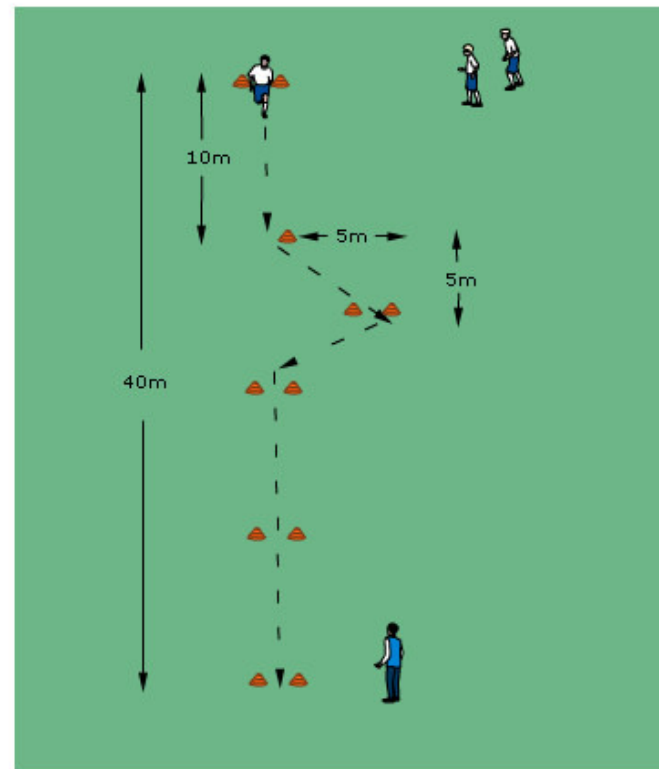
#### **Fitness Component Tested: Speed Endurance**

#### **Equipment Required:**

- measuring tape
- 11 cones
- 1 stopwatch to the nearest 10<sup>th</sup> of a second

#### **Administering the Test:**

- Using the measuring tape, and cones, create a line 40 metres long, with small 1 metre goals placed at the 0 metre, 20 metre, 30 metre and 40 metre marks (see picture)
- One goal is also placed at the 15 metre mark, 5 metres to the left of the other cones (see picture)
- To perform the test, players must start motionless at the first small goal
- Count “three, two, one, go” instructing the player not to start sprinting until they hear “go”
- The player sprints as fast as possible, for 10 metres, then cuts to their left, through the goal at the 15 metre mark, then cuts back to their right through the goal
- At this point, the player must sprint straight through the next 2 goals (20 and 30 metre marks)
- The sprint concludes when the player passes through the goal at the 30 metre mark, at which point the player has 25 seconds to jog back to the starting goal, before the start of the next sprint
- One coach records the times of each sprint, to the nearest 10<sup>th</sup> of second, while another records the rest periods to ensure accuracy
- A total of 7 (seven) sprints are performed by each player and recorded
- If the player slips or falls during one sprint, then it is not counted and the remaining six are recorded
- If a player slips or falls in more than one trial, then the test must be repeated in its entirety



**(Allow a 10 minute rest and water break following completion of the 7 x 30metre Sprint test)**

### **Test # 2: 1 Minute Push-Up Test:**

**Fitness Component Tested: Muscular Strength/Endurance**

#### **Equipment Required:**

- stopwatch

#### **Administering the test:**

- Have the players pair up, with one player designated as the tester, and the other the test subject
- The tester must lie on the ground, with one arm extended along the ground and hand in a fist, thumb facing towards the ceiling/sky (see picture)
- The test subject performs push-ups, with hands placed shoulder width apart, thumbs in line with the nipple, and upper body held in a straight position (see picture)
- The tester is in charge of counting the number of correct repetitions in one minute, while the coach times the 1 minute time period using the stopwatch
- One correct repetition occurs when the testing subject bends the arms, and lowers the torso to touch the tester's fist (down position), then straightens the arms completely (up position)
- Testing subjects are allowed to rest during the 1 minute time period, but only in the up position



### **Test #3: 1 Minute Sit-Up Test:**

**Fitness Component Tested: Abdominal Strength/Endurance**

#### **Equipment Required:**

- stopwatch

#### **Administering the Test:**

- Have the players pair up, with one player designated as the tester, and the other the test subject
- The test subject must sit on the ground, with knees bent and feet flat on the ground, and arms crossed, hands touching the shoulders and elbows extended (see picture)
- The tester must place hands on the test subject's feet, leaning forward so that their body weight is holding the test subject's feet firmly on the ground (see picture)
- The test subject performs sit-ups while the tester counts repetitions, and the coach times the 1 minute period
- One correct repetition counts when the test subject touches the ground with the back of their shoulders (down position) then uses the abdominals to raise their body, touching the elbows to the knees (up position)
- Testing subjects are allowed to rest during the 1 minute time period, but only in the up position



## **Senior Fitness Tests:**

### **Day 3:**

#### **Test #1: Yo-Yo Intermittent Recovery Test:**

**Fitness Component Tested: High Intensity Endurance Capacity**

#### **Equipment Required:**

- measuring tape
- 7 or 8 cones
- Yo-Yo test audio CD/ CD player

#### **Administering the Test:**

- Using the measuring tape, measure the distance and place cones on the ground, at 0 and 20 metres, using extra cones to form a line with enough room for the total number of players to perform the test (see diagram below)
- Next use three or four more cones to make a zone running 5 metres from the original “0” metre starting line (see diagram below)
- To keep the course markings more clear, an area of the field that has straight lines painted on can be used as well
- Have the players line up on the 0 metre line, and start the Yo-Yo audio CD
- After hearing the audio signal (“bleep”) from the CD, the players must run to the 20 metre line, stop at that line until they hear the next signal (“bleep”), at which point they must run back to the “0” metre line
- At this point the players must run slowly to the 5 metre line, and then back to the “0” metre line, before the next “bleep” from the CD
- The test continues in this manner, while the time interval between the beeps becomes shorter and shorter
- The audio CD will inform the coach of the stages completed over the course of the test
- Players must be instructed to stop when they reach the line, keeping one foot touching the line and pivoting so that their other foot is placed behind the line
- At the first instance in which a player cannot reach the line in time with the bleep, a warning is given to that player
- When the same player cannot reach the line for a second straight time, the player is instructed to leave the tested area, and their score (stage reached) is recorded
- Continue the test until the last player cannot reach the line for a second straight time, recording all scores (stage reached) for all players

