

# US Women's National Soccer Team

## *Battery of 10 Physical Tests*

1. Vertical Jump (one step)  
(most organizations/institutions have access to a Vertec, however, to purchase a Vertec call 1-800-321-6975 )
2. 20 yard Agility  
(stop watch and tape measure needed)
3. The 3 – Hop  
(30 foot tape measure needed)
4. 40 Yard 'T' Test  
(stop watch, tape measure and cones needed)
5. 20 yard Sprint  
(stop watch, tape measure and cones needed)
6. 40 yard Sprint  
(stop watch and tape measure needed)
7. Sit – ups  
(stop watch and partner needed)
8. Push – ups  
(stop watch and partner needed)
9. 300 yard Shuttle  
(stop watch, tape measure and cones needed)
10. Yo Yo Intermittent Recovery Test (**level 1**)  
(stop watch, tape measure, cones and cassette tape player needed)  
(to purchase the Yo Yo Tests 3 cassette tapes, protocol, conversion charts and booklet call 1-402-489-9984 \$52.95)

**\*Day 1: 20 yard Sprint, 40 yard Sprint, Vertical Jump, 3-Hop and Yo Yo Test.**

**\*Day 2: 20 yard Agility, 40 yard 'T' Test, Push-ups, Sit-ups and 300 yard Shuttle.**

# Vertical Jump (one step)

## **Purpose:**

Some athletes may outwardly appear to be powerful, and they might even possess vertical jump (no step) values in the excellent range; but for some reason, on the playing field, this power is not readily seen. These athletes may lack the deceleration ability, strength, coordination, flexibility, or some other variable which inhibits successful performance of a dynamic vertical jump. By allowing the athlete to take an approach step during the vertical jump test, we can determine the individual's ability to convert momentum from horizontal to vertical, which is thus a measure of transfer of power. The ability to out head an opponent either defensively or offensively is an example of horizontal velocity, which must be converted to vertical lift.

## **Protocol:**

1. Stand under the Vertec. With the arm closest to the Vertec have the athlete 'reach' high (with feet kept flat on ground) in an effort to touch and move the highest possible flag. This is the standing reach value.
2. The athlete takes a position an unspecified distance from the Vertec. This distance is predetermined by the athlete for comfort through practice trials.
3. The athlete is allowed to take one full stride to a 'plant' step (taking off with either one or two feet. This should place her in a position directly under the Vertec flags, thus maximizing potential vertical jump peak height.
4. During the jump, the athlete extends one arm as high as possible and taps the Vertec flags, pushing away the highest flag reached.
5. After a brief recovery, the athlete is allowed subsequent trials until she can no longer reach a flag.
6. The highest flag moved is recorded in inches.
7. The standing reach value is subtracted from the vertical jump score to determine absolute vertical jump. { Vertical Jump – Standing Reach = Vertical (one step) Jump Total. }

## 20 Yard Agility

### Purpose:

Physical maneuverability with minimal sacrifice of time (acceleration) is certainly an advantage in performing most movements in sport. Agility involves upsetting the body's equilibrium to accommodate a rapid and accurate change of position during movement. The 20 yard agility run is a simple measure of an athlete's ability to accelerate, decelerate, change direction, and to accelerate again. Otherwise known as 'athleticism.'

### Protocol:

1. Set up three cones in a straight line exactly 5 yards apart.

**C**      (5 yards)      **A**      (5 yards)      **B**

2. The timer is positioned at the center cone (facing the athlete).
3. The athlete straddles the center cone **A** with feet an equal distance apart and parallel to the line.
4. The athlete will then signal to the timer she is ready.
5. Run to cone **B** (touching the line with a foot), turn and accelerate to cone **C** (touching the line with a foot), and finish by accelerating through the line at cone **A**.
6. The tester starts the watch on the first movement of the athlete and stops the watch when the athlete's torso crosses the center line.
7. Record the best of two trials.

\*Encourage athletes to accelerate through the finish line.

## The 3-Hop Test

### **Purpose:**

Measures horizontal and vertical power with a balance and coordination component. It differs from the vertical jump test, in that it rewards an athlete for the ability to control deceleration and momentum downward and then return to an upward and horizontally explosive move.

### **Protocol:**

1. Tightly extend in a straight line a tape measure roughly 30 feet on a flat grass surface.
2. Athlete will start standing behind line with feet shoulder width apart.
3. Perform three consecutive broad jumps non-stop using a forward as well as a vertical jump style that allows her to finish the third jump as far away from the start point as possible.
4. Use arms for explosive movement and balance. (The use of momentum is encouraged for a longer jump.)
5. Tester will measure distance from the closest heel to the start point. (Athlete is encouraged to pause feet on third jump so that tester may accurately measure distance.)
6. Record the best of three trials.

# 40 Yard 'T' Test

## Purpose:

Physical maneuverability with minimal sacrifice of time (acceleration) is certainly an advantage in performing most movements in sport. Agility involves upsetting the body's equilibrium to accommodate a rapid and accurate change of position during movement. The 20 yard agility run is a simple measure of an athlete's ability to accelerate, decelerate, change direction, and to accelerate again, otherwise known as 'athleticism.'

## Protocol:

1. Set up three cones in a straight line exactly 5 yards apart, and a 4<sup>th</sup> cone 10 yards away and perpendicular from the center cone.

**D** (5 yards)                      **B/E** (5 yards)                      **C**

(10 yards)

**A/F**

2. The athlete signals to the timer she is ready.
3. Starts on the left side of cone **A**.
4. Sprint to left side cone **B**.
5. At cone **B**, side shuffle right (not crossing feet) to cone **C** (touching the line with a foot).
6. At cone **C**, plant foot, turn and sprint to cone **D** (touching line with a foot).
7. At cone **D**, plant left foot, and side shuffle right again (not crossing feet) to far side of cone **E**.
8. At cone **E**, back pedal as fast as you can to cone **F**.
9. The tester starts the watch on the first movement of the athlete and stops the watch when the athlete's torso crosses the line at cone **F**.
10. Record the best of two trials. (There is a slight learning curve so I recommend you set up a mini 'T' Test off to the side for practice.)

# The 20 and 40 Yard Sprint

## **Purpose:**

To determine an athlete's explosiveness and running speed. The 20 yard is a good test of a powerful first step. The 40 yard will give you an estimate of the athlete's speed.

## **Protocol:**

1. These tests are only as good as the timer and/or the timing device you use.
2. One coach should time the 20 yard at the same time another coach times the same athlete on the 40 yard sprint. (This will help you get consistency within your times, reduce the amount of sprints the athletes run, and the amount of time it takes to administer the test.)
3. Have the athlete position herself behind the start line.
4. The athlete signals to the timers she is ready.
5. Timer should start on the first movement of the athlete from the line.
6. As the athlete's torso passes through the 20 and 40 yard mark, the timers should stop the timing device.
7. Repeat 3 times for lowest time in the 20 yard sprint and the lowest time in the 40 yard sprint.

# Sit-ups and Push-ups

## Purpose:

Muscular endurance is the capacity of a muscle or group of muscles to sustain repeated contractions. It also refers to the ability of a muscle to hold a fixed or static contraction over an extended period of time. Most sports require the ability of a muscle to apply force and sustain it for a period of time. The sit-up test determines muscular endurance of the abdominal muscles and hip flexors, while the push-up test will assess strength of the upper body.

## Sit-up Protocol:

1. The athlete is positioned on her back with hips flexed to 45 degrees, knees flexed to 90 degrees, and feet flat on the ground.
2. A partner should hold the feet stationary by using her hands, feet or own body weight.
3. The hands must remain clasped behind the head.
4. The athlete performs as many sit-ups as possible in a 60-second period.
5. To qualify as a completed sit-up:
  - elbows must touch the knees.
  - shoulders must touch the ground.

**\*Important Note:** Be certain to warm up the leg and neck muscles before beginning the test. Any athlete with a history of low back pain or neck problems should not perform this test. Additionally, this type of sit-up should not be done for training purposes.

## Push-up Protocol:

1. The athlete is positioned face down, arms shoulder width apart, with the weight of the lower body on the toes.
2. Start with arms extended and the head, shoulders, back, hips, knees and feet in a straight line. This position will be maintained through the duration of the test.
3. Record the number of successfully completed push-ups the athlete performs in a 60 second period.
4. To qualify as a completed push-up:
  - the athlete must lower her upper body so that the chest touches a partners fist firmly planted on the ground.
  - the arms must completely extended the upper body in the 'up' position.
  - the straight/stiff body alignment must be maintained.
5. This is one 60 second test.

# 300 Yard Shuttle

## **Purpose:**

The 300-yard shuttle is a conditioning test that measures anaerobic endurance.

## **Protocol:**

1. On a flat grass surface, measure and mark two cones 25 yards apart.
2. Run to the 25-yard mark, touch it with your foot, turn and run back to the start. Repeat this 6 times without stopping.
3. Rest 5 minutes and repeat the shuttle.
4. Record the average of the two 300-yard shuttles.

\*Encourage athletes not to pace themselves. This is an anaerobic test and in order to receive the highest score they must sprint at 100% effort the entire time.