

## ***Ankle Return to Sport Assessment***

This assessment is designed to give the patient objective feedback on their performance of high level activities. This evidence-based ankle return to sport guideline is designed for assessing an individual after any lower leg injury or surgery. Modifications to this may be necessary dependent on physician preference or the patient's goals for returning to activity.

This guideline is intended to provide the patient and clinician with objective information to aid in the decision making on the continuum of return to sport. It is not intended to substitute for clinical judgment regarding the performance of the tests and measures. If the clinician should have questions regarding the assessment, they should reach out to the physician or a sports physical therapist.

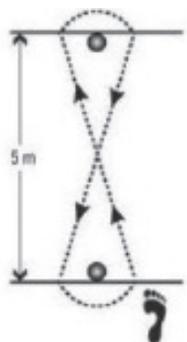
# Ankle Return to Sport Assessment

Name:	Injury Side:    R      L
DOB:	Injury Description:
Date of Testing:	Procedure (if applicable):
Date of Surgery (if applicable):	Referring provider:

## Return to Play Test Results:

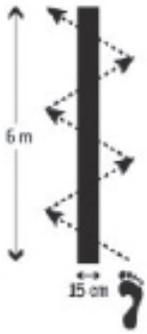
Test	Movement Quality	R	L	Percent difference
Single limb heel raise	N/A			
Y-Balance Anterior:				
Posterolateral:				
Posteromedial:				
Dorsiflexion lunge	N/A			
Single limb vertical jump				
Figure of 8 Hop Test				
6M Cross Over Hop Test				
Side Hop Test				
T-Test				

## Testing Procedures:



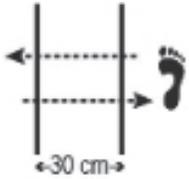
### **Figure of 8 Hop Test:**

With two cones placed five (16' 5") meters apart, the participant will hop as fast as possible on one limb twice around the cones in a figure-8 pattern while being timed. A failed test consists of an inability to maintain the figure-8 pattern or placing the contralateral limb down. The best time of the two trials is recorded.



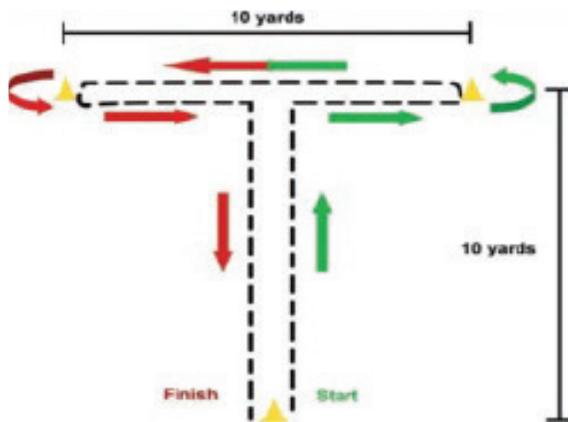
### 6M Crossover Hop Test:

Perform three successive hops crossing over a 15-cm wide strip or marker, landing on the same limb. The first hop should be lateral in respect to the direction of the crossover. There should be no pauses between hops. Tester will time from starting point to the 6-meter mark. May perform three trials per side taking the average per side or greatest jump per side. Looking to have a discrepancy less than 10% of distance.



### Side Hop Test:

Mark two lines 30 cm apart. Standing on one leg, the participant will stand with the foot outside the marker lines. The patient will hop laterally over the line and back, which constitutes one rep. The participant will perform as many reps as possible over 30 seconds. If the participant touches the line, that rep does not count. A failed test consists of a fall, the contralateral foot touching the ground or the testing foot not completely clearing a 30-cm distance. The best reps in one to two trials are recorded.



### T-Test:

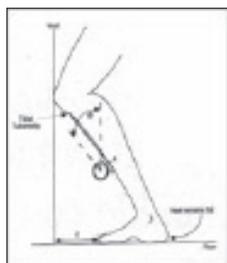
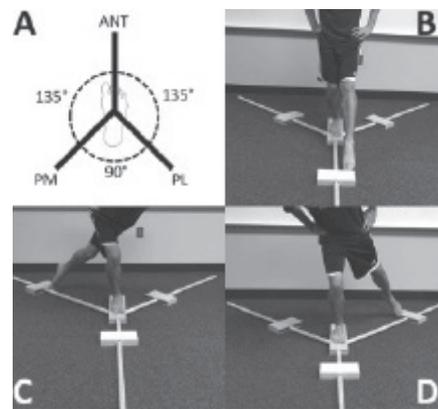
A course to be set up in a T shape with cones or markers 10 yards apart in each direction. The participant sprints from the base of the longitudinal arm to the center or horizontal arm. While still facing forward, they side-step to one end of the horizontal arm without crossing their feet and continue to the other end of the horizontal arm. The patient finishes by side-stepping back to the middle of the horizontal arm and then running backwards down the longitudinal line to the starting point. Time for athletes should be between 8.9 and 13.5 seconds.

### Single Leg Heel Raise Test:

Standing on the unaffected leg first, the participant may use a single finger on the examiner for balance. The participant is to rise up onto the ball of their foot and lower down at the rate of one heel raise every two seconds for up to 25 repetitions (60 BPM on the metronome). Record the number of successful repetitions. The test is terminated if the subject leaned or pushed down on the examiner for assistance, the subject flexed their knee, the heel height/plantar flexion ROM decreases by 50% or the subject stops.

## Y- Balance Test:

Standing with one leg on the ground with toes behind the line and hands placed firmly on hips, the subject is instructed to reach with the toes in the desired direction as far as they can while maintaining balance and return to starting position under control. The heel must stay in contact with the floor during the test. The subject may not touch the free leg to the ground during the movement to keep balance. Once the subject has completed three successful trials with the uninjured leg they will repeat the process with the injured leg before moving on to the next direction. The best of the three reaches is recorded as the patient's reach distance. Reach distances should be recorded to the nearest centimeter. For the Y-balance anterior, a difference of >4cm between limbs constitutes a failed test.



## Dorsiflexion Lunge Test

The patient stands against the wall with about 10 cm between the big toe and the wall. The patient then bends the front knee until it touches the wall while keeping their heel on the ground. If the knee cannot touch the wall without the heel coming off the ground, move the foot closer to the wall and repeat. If the knee can touch the wall without the heel coming off the ground, move the foot back further and keep repeating until the maximum distance possible is found. Measure the distance between the wall and the big toe (less than 9-10 cm is considered restricted) or measure the angle made by the anterior tibia relative to the vertical line (less than 35-39° is considered restricted). Test contralateral for comparison.

## Single Leg Vertical Hop

The subject jumps off one leg without an approach step but may land on two legs. The objective is to measure the maximal vertical jump, comparing the uninjured limb to the injured limb. Two to three trials are performed on each side and the best score from each of the trials is accepted for comparison. Common methods for testing include a force plate, vertical hop tester or phone app.

## REFERENCES:

1. Caffrey, E et al (2009). The ability of 4 single-limb hopping tests to detect functional performance deficits in individuals with functional ankle instability. *Journal of Orthopaedic & Sports Physical Therapy*, 39(11), 799-806. <https://doi.org/10.2519/jospt.2009.3042>
2. Powden CJ, Dodds TK, Gabriel EH. The Reliability of the Star Excursion Balance Test and Lower Quarter Y-Balance Test in Healthy Adults: A Systematic Review. *Int J Sports Phys Ther*. 2019 Sep;14(5):683-694. PMID: 31598406; PMCID: PMC6769278
3. Clanton et al (2012). Return to play in athletes following ankle injuries. *Sports Health: A Multidisciplinary Approach*, 4(6), 471-474. <https://doi.org/10.1177/1941738112463347>
4. Xergia, S. A., Pappas, E., amp; Georgoulis, A. D. (2014). Association of the single-limb hop test with isokinetic, Kinematic, and kinetic asymmetries in patients after anterior cruciate ligament reconstruction. *Sports Health: A Multidisciplinary Approach*, 7(3), 217-223. <https://doi.org/10.1177/1941738114529532>