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## ACL “Return to Sport” Testing

The following protocol has been created to help determine your readiness to return to sport / activity, and to identify potential areas of weakness that will be helpful in guiding additional therapy intervention.

1. **KOOS Knee Survey** <sup>(1)</sup>

2. **Self Perceived Function** – How do you rate your knee function compared to your pre-injury level of function? (100% = same as before injury, 0% = worst possible knee function)

3. **VAS Pain Scale** - 0 = no pain, 10 = worst possible pain. Measure before, during, and after testing.

4. **Functional Tests:**

These tests are designed to measure your strength, power, balance, coordination, muscular endurance and overall quality of movement. For exercises D, E, F, and G, 2 practice trials will be allowed followed by 2 testing trials. The best of the two testing trials will be scored.

**A. Single Leg Squats**

Stand on one leg. You may use 2 fingers of either hand to help maintain balance. Slowly and with good control, bend your knee and perform maximum repetition of single leg squats. You must maintain good hip, knee and ankle alignment and demonstrate knee flexion of at least 60° as judged by therapist. To pass, the involved leg must measure at least 90% of the repetitions compared to the non-involved leg.

**B. Vertical Jump**

Standing with feet approximately shoulder width apart, jump vertically into the air to a height of at least 4 inches, as measured by the height of a cone and judged by your therapist. Perform 3 consecutive jumps. Good hip, knee and ankle alignment must be demonstrated on both the take off and the landing as judged by your therapist.

**C. One Minute Single Leg Hop**

Standing on one leg, jump up and down for one minute while maintaining balance. The foot must fully clear the ground on each repetition and a maximum number of repetitions completed in one minute will be counted. To pass, the involved leg must measure at least 90% of the repetitions compared to the non-involved leg and good hip, knee and ankle alignment must be maintained.

**D. Single Hop for Distance** <sup>(2,3,4)</sup>

Begin with toes behind starting line. While standing on one leg, jump as far as you can landing on the same leg. Balance must be maintained for 2 seconds after landing. The hop is measured in centimeters from starting line to the heel of the landing leg. To pass, the involved leg must measure at least 90% of the distance compared to the non-involved leg.

### E. Single Leg Triple Hop for Distance (2,3,4)

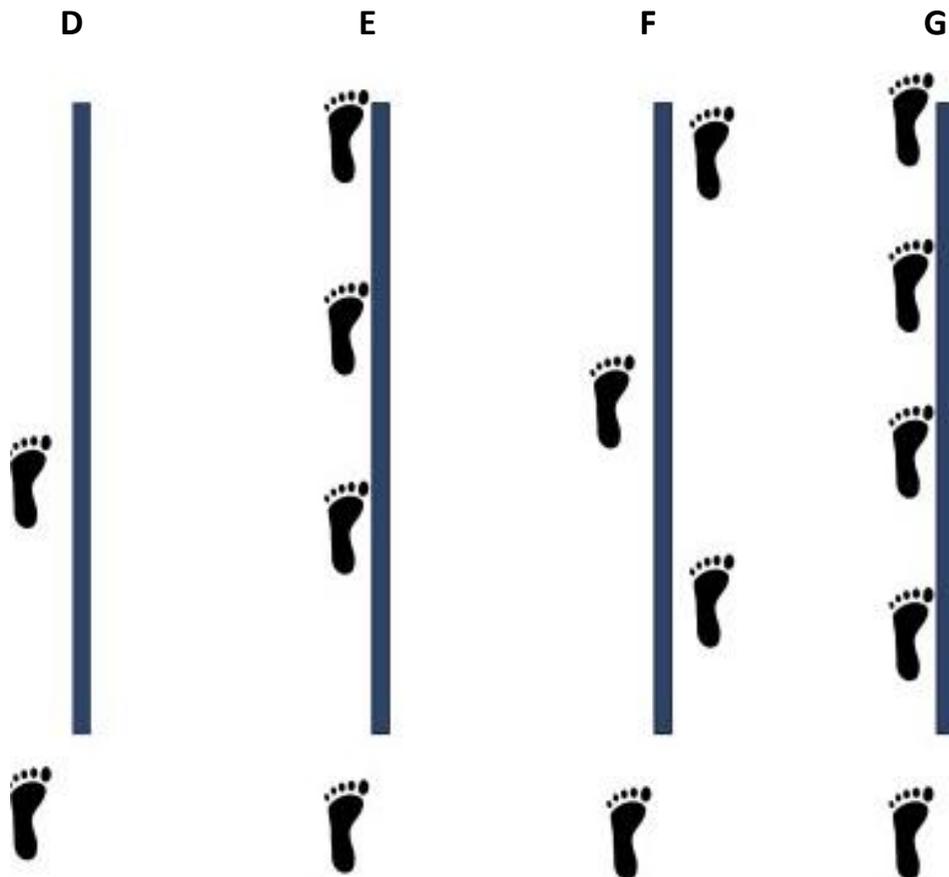
Begin with toes behind starting line. While standing on one leg, hop forward three consecutive times for distance, landing on the same leg. Balance must be maintained for 2 seconds on last hop. To pass, the involved leg must measure at least 90% of the distance compared to the non-involved leg.

### F. Single Leg Crossover Hop for Distance (2,3,4)

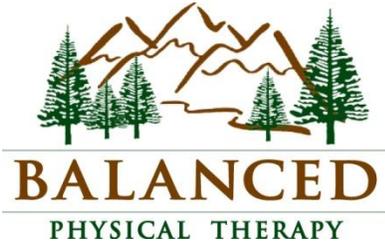
Begin with toes behind starting line. While standing on one leg to the left of the center line, jump medially across line as far as possible then immediately jump laterally, then medially again, for a total of 3 hops on the same leg. Balanced must be maintained for 2 seconds on last hop. To pass, the involved leg must measure at least 90% of the distance forward as compared to the un-involved leg.

### G. Timed 6 Meter Single Leg Hop (2,3,4)

Begin with toes behind starting line. While standing on one leg, hop as fast as possible for a distance of 6 meters. To pass, the involved leg must hop 6 meters in at least 90% of the time compared to the non-involved leg.



1. Roos EM, Roos HP, Lohmander LS, Ekdahl C, Beynnon BD. Knee Injury and Osteoarthritis Outcome Score (KOOS)—development of a self administered outcome measure. *J Orthop Sports Phys Ther.* 1998;28:88-96.
2. Bolgla LA, Keskula DR. Reliability of lower extremity functional performance tests. *J Orthop Sports Phys Ther.* 1997;26:138-142.
3. Fitzgerald GK, Lephart SM, Hwang JH, Wainner RS. Hop tests as predictors of dynamic knee stability. *J Orthop Sports Phys Ther.* 2001;31:588-597
4. Reid A, Birmingham TB, Stratford PW, AlcockGK, Giffin JR. Hop testing provides a reliable and valid outcome measure during rehabilitation after anterior cruciate ligament reconstruction. *Phys Ther.* 2007;87:337-349.



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## ACL "Return to Sport" Test Scoring Sheet

NAME: \_\_\_\_\_ DOB: \_\_\_\_\_

PHYSICIAN: \_\_\_\_\_ SURGERY DATE: \_\_\_\_\_

|  |   |               |                   |
|--|---|---------------|-------------------|
| <b>KOOS Knee Survey</b>                | <b>Symptoms:</b>  |               | <b>Sport/Rec:</b> |
|  | <b>Pain:</b>  |               | <b>QOL:</b>       |
|  | <b>ADLs:</b>  |               |                   |
| <b>Self Perceived Function (0-100)</b> |   |               |                   |
| <b>VAS Pain Scale (0-10)</b>           | <b>Before</b>   | <b>During</b> | <b>After</b>      |
| <b>Vertical Jump</b>                   | <b>Good alignment: YES <input type="checkbox"/> NO <input type="checkbox"/></b> |               |                   |
|  | <b>Left</b>   | <b>Right</b>  | <b>Diff</b>       |
| <b>Single Leg Squats</b>               |   |               |                   |
| <b>1 min Single Leg Hop</b>            |   |               |                   |
| <b>Single Hop for Dist</b>             |   |               |                   |
| <b>Triple Hop for Dist</b>             |   |               |                   |
| <b>Crossover Hop for Dist</b>          |   |               |                   |
| <b>Timed 6 meter Hop</b>               |   |               |                   |

**COMMENTS:**

THERAPIST: \_\_\_\_\_ DATE: \_\_\_\_\_

**Achieve Goals... Exceed Expectations**