

## ACL-R / Lower Extremity Return to Sports Assessment

**Athlete:** \_\_\_\_\_  
**DOB:** \_\_\_\_\_  
**Sport:** \_\_\_\_\_  
**Date:** \_\_\_\_\_  
**Involvement:** \_\_\_\_\_

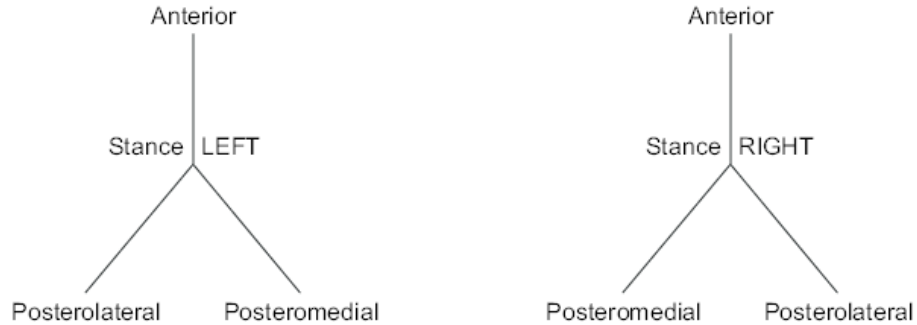
### Ticket To Entry (see page 4 before use)

Symmetry Requirements	Right	Left
Knee Flexion / Extension ROM		
CKC Ankle Dorsiflexion		
FMS / Y-Balance (page 2)		
Single Leg Squat Quality		

### Jumping Mechanics / Neuromuscular Control

<p><b><u>Tuck Jump</u></b></p> <ul style="list-style-type: none"> <li>- Assess front and side view</li> <li>- Sagittal and frontal planes</li> </ul>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Non- Parallel / Symmetrical hip flexion</td> <td style="width: 40%;">Y / N</td> </tr> <tr> <td>Unequal Landing Time (no gallop)</td> <td>Y / N</td> </tr> <tr> <td>Unequal Foot Placement</td> <td>Y / N</td> </tr> <tr> <td>Knee Valgus</td> <td>Y / N</td> </tr> <tr> <td>Pause between jumps</td> <td>Y / N</td> </tr> <tr> <td>Foot placement &gt; shoulder width</td> <td>Y / N</td> </tr> <tr> <td>Excessive landing noise</td> <td>Y / N</td> </tr> <tr> <td colspan="2"># of errors: _____</td> </tr> <tr> <td colspan="2">Overall Quality : Poor    Fair    Very Good    Excellent</td> </tr> </table>	Non- Parallel / Symmetrical hip flexion	Y / N	Unequal Landing Time (no gallop)	Y / N	Unequal Foot Placement	Y / N	Knee Valgus	Y / N	Pause between jumps	Y / N	Foot placement > shoulder width	Y / N	Excessive landing noise	Y / N	# of errors: _____		Overall Quality : Poor    Fair    Very Good    Excellent			
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<p><b><u>Landing Error Scoring System</u></b></p> <ul style="list-style-type: none"> <li>- Assess front and side view</li> <li>- Sagittal and frontal planes</li> <li>- Slow motion video recording recommended</li> </ul>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Knee Valgus</td> <td style="width: 40%;">Y / N</td> </tr> <tr> <td>Excessive Knees over Toes</td> <td>Y / N</td> </tr> <tr> <td>Excessive Trunk Flexion</td> <td>Y / N</td> </tr> <tr> <td>Excessive Trunk Side Bend</td> <td>Y / N</td> </tr> <tr> <td>Non-Parallel / Symmetrical Foot Placement</td> <td>Y / N</td> </tr> <tr> <td>Unequal Landing Time</td> <td>Y / N</td> </tr> <tr> <td>Heel landing</td> <td>Y / N</td> </tr> <tr> <td>Excessive Tibial ER/IR (landing)</td> <td>Y / N</td> </tr> <tr> <td colspan="2"># of errors: _____</td> </tr> <tr> <td colspan="2">Overall Quality : Poor    Fair    Very Good    Excellent</td> </tr> </table>	Knee Valgus	Y / N	Excessive Knees over Toes	Y / N	Excessive Trunk Flexion	Y / N	Excessive Trunk Side Bend	Y / N	Non-Parallel / Symmetrical Foot Placement	Y / N	Unequal Landing Time	Y / N	Heel landing	Y / N	Excessive Tibial ER/IR (landing)	Y / N	# of errors: _____		Overall Quality : Poor    Fair    Very Good    Excellent	
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**Dynamic LE Functional Reach / Y-Balance**



<b>Left Total</b>		<b>Right Total</b>		<b>LSI (%)</b>	
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**Strength: Isokinetic Testing / Peak Torque**

	<b>30 degrees</b>	<b>45 degrees</b>	<b>90 degrees</b>	<b>120 degrees</b>
<b>Right Knee Ext.</b>				
<b>Left Knee Ext.</b>				
<b>Symmetry Index (%)</b>				

**Power**

	<b>Right</b>	<b>Left</b>	<b>Quality (P,F,VG,E)</b>	<b>Symmetry Index (%)</b>
<b>Anterior Hop</b>				
<b>Triple Hop</b>				
<b>Lateral Hop</b>				
<b>Vertical Hop</b>				
<b>Triple Crossover Hop</b>				
<b>6M Timed Hop</b>				
<b>Hop and Stop</b>				

**Agility / Cutting**

<b>Lateral COD (5-10-5)</b>	Quality of Movement: Poor Fair Very Good Excellent Comments:
<b>Reactive Agility</b>	Quality of Movement: Poor Fair Very Good Excellent Comments:
<b>T-Drill</b>	Quality of Movement: Poor Fair Very Good Excellent Comments:
<b>9-Dot Reactive Box Drill</b>	Quality of Movement: Poor Fair Very Good Excellent Comments:

*\*Get creative, sport specific, needs analysis, cones and lasers*

**Sprinting Assessment**

	<b>Time</b>	<b>Quality</b>			
<b>10 Yards</b>		Poor	Fair	Very Good	Excellent
<b>40 Yards</b>		Poor	Fair	Very Good	Excellent
<b>100 Yards</b>		Poor	Fair	Very Good	Excellent
<b>Comments:</b> (Knee Valgus, Decreased Stride W / L, Insufficient Knee / Hip ROM, Gait Deviation, etc.)					

**Psychological Readiness**

<b>Questionnaire</b>	<b>Score / Interpretation</b>
ACL RTI Scale ( <a href="http://orthotoolkit.com/acl-rsi">orthotoolkit.com/acl-rsi</a> )	
IKDC ( <a href="http://orthotoolkit.com/ikdc">orthotoolkit.com/ikdc</a> ) appendix pp. 5 & 6	

### **Important Notes Prior To Assessment**

- This return to sport assessment was designed to be used by orthopedic physicians, physical therapists and certified strength and conditioning specialists in the late return-to-sport phase after successful rehabilitation.
- This assessment is not intended to be used during the subacute phases of rehabilitation. It is expected that the patient has successfully completed rehabilitation with satisfactory running and jumping progressions.
- The individual should not perform this battery of tests alone without supervision from a clinician as previously stated.
- This testing battery requires the athlete to perform high intensity and high quality athletic movements under maximal effort, and should be conducted with care. For this reason, the clinician should use clinical judgment and complete the “Ticket To Entry” pre-assessment in order to determine if it is safe for the athlete to attempt the entire battery. It is also highly suggested the athlete perform a proper warm-up prior to beginning the assessment.
- If you are interested or have questions, please contact our office to speak with a physical therapist.

### **References**

Davies GJ, McCarty E, Provencher M, Manske RC. ACL Return to Sport Guidelines and Criteria. *Curr Rev Musculoskelet Med*. 2017 Sep;10(3):307-314. doi: 10.1007/s12178-017-9420-9.

Gokeler A, Dingenen B, Hewett TE. Rehabilitation and Return to Sport Testing After Anterior Cruciate Ligament Reconstruction: Where Are We in 2022? *Arthrosc Sports Med Rehabil*. 2022 Jan 28;4(1):e77-e82. doi: 10.1016/j.asmr.2021.10.025.

Unverzagt C, Andreyo E, Tompkins J. ACL Return to Sport Testing: It’s Time to Step up Our Game. *IJSPT*. 2021;16(4):1169-1177. doi:10.26603/001c.25463

**Appendix IKDC**



**International Knee Documentation Committee Subjective Knee Form**

Patient Name: \_\_\_\_\_ Affected Knee: R L (Circle One)  
Date: \_\_\_\_\_

**A: Symptoms**

Grade symptoms at the highest activity level at which you think you could function without significant symptoms, even if you are not actually performing activities at this level.

1. What is the highest level of activity that you can perform without significant knee pain?

- Very strenuous activities like jumping or pivoting as in basketball or soccer (+4)
- Strenuous activities like heavy physical work, skiing, or tennis (+3)
- Moderate activities like moderate physical work, running, or jogging (+2)
- Light activities like walking, housework, or yard work (+1)
- Unable to perform any of the above activities due to knee pain (+0)

2. During the past 4 weeks, or since your injury, how often have you had pain?

Never|      0      1      2      3      4      5      6      7      8      9      10      |Constant  
                                

3. If you have pain, how severe is it?

No|      0      1      2      3      4      5      6      7      8      9      10      |Worst pain  
Pain|                                       |imaginable

4. During the past 4 weeks, or since your injury, how stiff or swollen was your knee?

- Not at all (+4)
- Mildly (+3)
- Moderately (+2)
- Very (+1)
- Extremely (+0)

5. What is the highest level of activity you can perform without significant swelling in your knee?

- Very strenuous activities like jumping or pivoting as in basketball or soccer (+4)
- Strenuous activities like heavy physical work, skiing, or tennis (+3)
- Moderate activities like moderate physical work, running, or jogging (+2)
- Light activities like walking, housework, or yard work (+1)
- Unable to perform any of the above activities due to knee pain (+0)

6. During the past 4 weeks, or since your injury, did your knee lock or catch?

- Yes (+0)    No (+1)

7. What is the highest level of activity you can perform without significant giving way in your knee?

- Very strenuous activities like jumping or pivoting as in basketball or soccer (+4)
- Strenuous activities like heavy physical work, skiing, or tennis (+3)
- Moderate activities like moderate physical work, running, or jogging (+2)
- Light activities like walking, housework, or yard work (+1)
- Unable to perform any of the above activities due to knee pain (+0)

**B: Sports Activities**

8. What is the highest level of activity you can participate in on a regular basis?

- Very strenuous activities like jumping or pivoting as in basketball or soccer (+4)
- Strenuous activities like heavy physical work, skiing, or tennis (+3)
- Moderate activities like moderate physical work, running, or jogging (+2)
- Light activities like walking, housework, or yard work (+1)
- Unable to perform any of the above activities due to knee pain (+0)

9. How does your knee affect your ability to:

	Not difficult at all	Minimally difficult	Moderately difficult	Extremely difficult	Unable to do
A. Go up stairs	<input type="checkbox"/> (+4)	<input type="checkbox"/> (+3)	<input type="checkbox"/> (+2)	<input type="checkbox"/> (+1)	<input type="checkbox"/> (+0)
B. Go down stairs	<input type="checkbox"/> (+4)	<input type="checkbox"/> (+3)	<input type="checkbox"/> (+2)	<input type="checkbox"/> (+1)	<input type="checkbox"/> (+0)
C. Kneel on the front of your knee	<input type="checkbox"/> (+4)	<input type="checkbox"/> (+3)	<input type="checkbox"/> (+2)	<input type="checkbox"/> (+1)	<input type="checkbox"/> (+0)
D. Squat	<input type="checkbox"/> (+4)	<input type="checkbox"/> (+3)	<input type="checkbox"/> (+2)	<input type="checkbox"/> (+1)	<input type="checkbox"/> (+0)
E. Sit with your knee bent	<input type="checkbox"/> (+4)	<input type="checkbox"/> (+3)	<input type="checkbox"/> (+2)	<input type="checkbox"/> (+1)	<input type="checkbox"/> (+0)
F. Rise from a chair	<input type="checkbox"/> (+4)	<input type="checkbox"/> (+3)	<input type="checkbox"/> (+2)	<input type="checkbox"/> (+1)	<input type="checkbox"/> (+0)
G. Run straight ahead	<input type="checkbox"/> (+4)	<input type="checkbox"/> (+3)	<input type="checkbox"/> (+2)	<input type="checkbox"/> (+1)	<input type="checkbox"/> (+0)
H. Jump and land on your involved leg	<input type="checkbox"/> (+4)	<input type="checkbox"/> (+3)	<input type="checkbox"/> (+2)	<input type="checkbox"/> (+1)	<input type="checkbox"/> (+0)
I. Stop and start quickly	<input type="checkbox"/> (+4)	<input type="checkbox"/> (+3)	<input type="checkbox"/> (+2)	<input type="checkbox"/> (+1)	<input type="checkbox"/> (+0)

**C: Function**

10. How would you rate the function of your knee on a scale of 0 to 10 with 10 being normal, excellent function and 0 being the inability to perform any of your usual daily activities which may include sports?

Function prior to your knee injury:

Couldn't perform daily activities | 0  1  2  3  4  5  6  7  8  9  10  | No limitations in daily activities

Current function of your knee:

Couldn't perform daily activities | 0  1  2  3  4  5  6  7  8  9  10  | No limitations in daily activities

**Scoring Instructions:**

Question 2: The responses are reverse-scored such that "Constant" is assigned a score of 0 points and "Never" is assigned a score of 10 points.

Question 3: The responses are reverse-scored such that "Worst pain imaginable" is assigned a score of 0 points ; "No pain" is assigned a score of 10 points.

Question 10: Only include the "Current function of your knee" when scoring.

All other questions: Use points listed in parenthesis

$$IKDC \text{ Score} = \left[ \frac{\text{Sum of Items}}{\text{Maximum Possible Score}} \right] \times 100$$

IDKC Score = \_\_\_\_

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