

ACL Functional Testing
Return to Sport

John Jurjans, PT, ATC, SCS
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ACL FUNCTIONAL TESTING PEARLS

1. Consistency in the testing protocol is paramount.
Minimize cues unless safety is a concern.
2. If at all possible, do not have the test be the first time the athlete has jumped!
3. There is a learning curve. Expect to perform 2-3 trials before most can pass. It is OK to stop the test early if there are issues that may put the athlete at risk.
4. Technique is as important as the time/distance measured. Therefore, skilled clinicians should be doing the assessment and not technicians.
5. Get clearance from the surgeon if there is a question on whether Level 2 functional testing is appropriate (6 months post operative is usually the earliest).
6. Test uninvolved first. Watch for quality on the uninvolved as well. Many athletes had poor biomechanics prior to their injury, and their current performance may not just be a compensatory strategy that they will “grow out of.”
7. Some athletes are clearly ready, while others are clearly not. It is the athletes that are close to being ready where comments on quality of performance can further assist the surgeon in determining readiness to play.
8. Testing is not a “final exam”. Athletes need to understand that their rehab/home program will continue even if they are cleared for sports participation. The last 10-15% does not come back without continued hard work!
9. Agility activities are clinically useful, but are difficult to quantify in a testing situation.
10. Stay up with the research on ACL rehabilitation. Some recommendations made today may be antiquated tomorrow

University of Kentucky – Level 1 Functional Test
(Normally performed at 12-16 weeks post-op to determine readiness for running/impact)

Diagnosis: _____ Date: _____

1. Gait Assessment: Fast walking on treadmill for 5 minutes (goal: no deviations)

Normal: ___ Abnormal: ___

Deviations: _____

2. 10 Step and Holds on involved leg	Yes	No
Avoids Valgus (knee not medial to great toe)?	___	___
Sufficient Knee Flexion?	___	___
Good Trunk Control?	___	___
(no hip drop, excessive lordosis, or other trunk movement)		

3. 60 Second front step down test to 45 degrees (goal <15%)

Reps:	Right ___	Left ___	% deficit ___
		Yes	No
Avoids valgus?		___	___
Good Trunk control?		___	___

4. Y Balance Test	leg length (cm) Right: ___	Left: ___	
	Right	Left	Deficit
Anterior	___cm	___cm	___cm
Posteromedial	___cm	___cm	___cm
Posterolateral	___cm	___cm	___cm
Composite Score	___cm	___cm	
Composite Score/3x leg length	___%	___%	___%
(Long term goal is less than 4cm difference each direction and 95-100% composite/3x leg length)			

5. Strength	Testing	Right	Left	% deficit
	Knee extension isometric at 90 deg	___#	___#	___
	S/L Hip Abduction (above knee)	___#	___#	___
	Seated Hip ER	___#	___#	___
	One legged bridges to fatigue	___ reps	___ reps	___
	Forward Plank: ___ sec			
	Right side down Plank: ___ sec			
	Left side down Plank: ___ sec			

Assessment: ___ Passes all phase ___ Did not pass all phases because of the following deficiencies:
 ___ Decreased eccentric knee control ___ Decreased proximal strength
 ___ Decreased neuromuscular strength ___ Pain during assessment

Therapist/ATC: _____ Date: _____

University of Kentucky Sports Physical Therapy
 Level 2 Functional Test (Clearance for Sporting Activities) Worksheet

Name: _____ Date: _____ Surgery: _____

Leg Length (cm): R: _____ L: _____ Body Weight (kg): _____

1. Hop Testing (in inches)

Vertical Hop Test (inches)	1	2	3	%deficit max
Right	_____	_____	_____	_____
Left	_____	_____	_____	_____
Single leg broad jump (in m)				
Right	_____	_____	_____	_____
Left	_____	_____	_____	_____
Timed 6m hop (in sec)				
Right	_____	_____	_____	_____
Left	_____	_____	_____	_____
Single leg Triple Jump (in m)				
Right	_____	_____	_____	_____
Left	_____	_____	_____	_____
Single leg Crossover Jump (in m)				
Right	_____	_____	_____	_____
Left	_____	_____	_____	_____

2. Hop Testing Quality Assessment

	Yes	No
Good trunk control	_____	_____
Symmetric and sufficient knee flexion	_____	_____
Avoids valgus	_____	_____

Other _____

3. Drop off box to squat jump plyometric performance (Repeat 3-5 times)

- | | |
|---|---------------------------|
| _____ Feet symmetric and hit together | _____ Avoid valgus |
| _____ Symmetric and sufficient knee flexion | _____ Landing is balanced |
| _____ Landing is soft | |

Other _____

4. SPORT SPECIFIC TESTING

List: _____

Agility Testing: 10 yard Lower Extremity Functional Testing

Sprint/back-peddle, shuffle R/L, carioca R/L, Sprint to opp. cone and finish

Goal for males 18-22 sec, Females: 20-24 seconds

Trial 1: _____ Trial 2: _____

Quality: _____ Comfortable with direction change

Note any other deviation: _____

Cutting Quality (comment on deviation from norm):

- a. 90 degree turn R outside _____
- b. 90 degree turn L outside _____
- c. 90 degree turn R inside _____
- d. 90 degree turn L inside _____
- e. S running _____

5. Step Down Test 0-60 degrees +10- 25% BW for 60 seconds (extra weight used: _____)

Reps : Right _____ Left _____ % deficit _____

Y N

No valgus _____

No hip drop _____

No excessive trunk mvmt _____

No excessive lordosis _____

6. Additional tests/strength measures (plank, isometric data, one-legged bridge, heel raises,

7. IKDC Question #10: How would you rate your knee function on a scale of 0 to 10 with 10 being excellent function and 0 being the inability to perform your normal daily activities including sports? _____ (goal > or = to 9/10)

RESULTS / P.T. RECOMMENDATIONS

_____ Pass (>90% on all measures and no quality issues)

_____ Did not pass hop testing

_____ Passed hop testing for distance, but had abnormal quality of movement during certain functional tasks. Recommend improving the following and retest:

_____ Strength _____ Jumping/hopping technique _____ Agility

_____ Endurance _____ Neuromuscular control _____ Trunk control

University of Kentucky
Chandler Medical Center
Lexington, Kentucky
Rehabilitation Services

Patient Name: _____

Medical Record #: _____

DOB: _____

Attending MD: _____

**ASSESSMENT, PLAN OF CARE
AND PROGRESS NOTES**

Sports Physical Therapy Functional Test- LEVEL 2

TESTING DATE: _____ Diagnosis: _____

HOP TESTING RESULTS % Deficit (goal is <15% deficit each tests, and <10% composite)
Vertical _____
Single Leg _____
Timed 6 meter _____
Triple Jump _____
Cross-over Triple Jump _____

COMPOSITE HOP DEFICIT _____

HOP TESTING QUALITY RESULTS
___ Normal Mechanics ___ Abnormal: _____

PLYOMETRIC JUMP QUALITY
___ Normal Mechanics ___ Abnormal: _____

SPORT SPECIFIC TESTING/AGILITY: _____
___ Normal ___ Abnormal: _____

STEP DOWN TEST + ___ # in 1 minute: ___ reps Right ___ reps Left ___% DEFICIT (goal: <10%)

ADDITIONAL TESTS:

Self Reported Global Knee Function (goal >9/10): ___/10

RESULTS

___ **PASS ALL PHASES**
___ **DID NOT PASS ALL PHASES. RECOMMEND FURTHER TRAINING:**
 ___ Strengthening ___ Jumping/hopping technique ___ Endurance
 ___ Neuromuscular control ___ Trunk control ___ Agility ___ Plyometric Training
___ **Other** _____

Physical Therapist/ATC _____ Date _____

