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.
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
   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: ________________

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### 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)**
     - **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

3. **Drop off box to squat jump plyometric performance** (Repeat 3-5 times)
   - **Yes**  **No**
     - Feet symmetric and hit together
     - Avoid valgus
     - Symmetric and sufficient knee flexion
     - Landing is balanced
     - Landing is soft

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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

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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 ________________

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