

Provider: Mark Wood, MD

NCFC Youth: ACL Reconstruction Return to Sport Protocol

Given the variability in recommendations for safe return to sport after ACL injury, a group of sports medicine providers with extensive experience in treating ACL injuries met with the goal of evaluating the current published body of literature to define a consensus, researched-based “best practice” recommendation for safe return to sport for NCFC Youth athletes. After an ACL injury occurs in youth soccer players, up to 15% of players will suffer a recurrent ACL injury in the same knee and a second ACL tear occurs in up to 34% of athletes in either knee. ACL tears, both initial and recurrent, are more common in female than male athletes competing in the same sport.

The modern published research from the world’s literature has provided evidence that safe return to sport (minimizing risk of another ACL tear) depends on allowing adequate time for optimal ACL graft healing/strength and confirmation of passing objective performance testing focused on evaluating neuromuscular strength, core/hip/knee control and symmetry to the un-injured extremity. The typical length of time needed to achieve (pass) the objective batter of functional testing and allow graft healing is 9 to 12 months. Thus, full-contact participation in training and games is recommended at 9 to 12 months. Even if a community physical therapist or surgeon “clears” an athlete to play, the athlete must be evaluated and pass the NCFC Youth return to sport protocol presented below:

- **0-4 Months** – Standard Surgeon/PT ACL rehab protocols are followed based on surgeon/patient and family preferences, graft choice and presence of meniscus injury. The focus is on achieving early full range of motion, quadriceps muscle control, strengthening with closed-chain exercises, stationary bike for fitness, etc.
- **4 Months** – Straight ahead jogging begins, gradually increase time, speed and distance. Advance strengthening program.
- **5 Months** – Light cutting as knee control permits, only under direct supervision of a physical therapist or NCFC trainer.
- **6-9 Months** – Return to Sport training begins – Individual sessions with Jason at WRAL field. This process will be advanced based on movement patterns, knee control and objective testing measures.
- **6 Months** – Baseline objective testing obtained (then measured monthly).

Dynamometry (digital strength testing) is recommended with collaborating PTs: Luke, Dan, Matt (Pivot specific PTs) or other qualified/approved PT. The identified focus areas (for instance Hamstring strength deficit) will allow the most effective home exercise program to be prescribed. Jason can assist with scheduling.

- **7-9 Months** – As knee control allows, gradually return to **TECHNICAL (NONCONTACT)** training with team. Objective testing monthly and modify strengthening program as indicated.
- **9-12 Months** – Gradual return to Full Contact participation in training and games after objective testing criteria is documented - **MUST** achieve the following:
 - o Full range of motion
 - o Quadriceps strength – R/L – 95%
 - o Hamstring strength – R/L – 95%
 - o Quad/Ham ratio – min 66%, ideally 70+ in females%
 - o Hop testing (single, triple, crossover, 6 meter) – distance - R/L – 95%
 - o Y-Balance - R/L – 100%
 - o T-Test – running – under 11 seconds

NCFC Youth's ACL reconstruction return to sport protocol is research-based and designed to allow the safest return to soccer with evidence that confirms a decreased risk of another ACL tear.

Name _____
Date _____

Diagnosis _____
Post-op Month _____

NCFC Return to Sport Protocol

Return of Motion	Involved (°)	Uninvolved (°)
Knee Extension		
Knee Flexion		

Strength	Involved (lbs)	Uninvolved (lbs)
Hamstrings		
Quadriceps		
H / Q Ration		

Y-Balance	Involved (cm)	Uninvolved (cm)	Level of Symmetry
Anterior			
Posteromedial			
Posterolateral			

Hop Testing	Involved (cm)	Uninvolved (cm)	Level of Symmetry
Single Hop			
Triple Hop			
Crossover Hop			
6 Meter Timed Hop			

T-Test	Trial 1	Trial 2
Time (seconds)		

Patient Notes/Recommendations:
