



ACL Quad Tendon Rehabilitation Protocol

Phase I (0–2 weeks)

- Protect graft
- Control pain/swelling
- Full extension
- Flexion 0–90°
- Brace locked in extension
- WBAT with crutches
- Avoid resisted open-chain extension
- Cryotherapy, compression, elevation
- Patellar mobilizations
- Heel slides goal 0–90°
- Quad sets, SLR (brace locked)
- Ankle pumps

Phase II (2–6 weeks)

- ROM 0–120°
- Normalize gait
- Improve quad control
- Brace until quad control and gait normal
- Avoid resisted knee extension 40–0°
- Stationary bike $\geq 100^\circ$ flexion
- Mini-squats 0–45°
- Leg press 0–60°
- Step-ups, bridges
- Core and hip strengthening
- Balance drills

Phase III (6–12 weeks)

- Achieve full ROM
- Improve strength and endurance



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- Proprioception
- Avoid impact

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- Progress gradually
- Squats to 70–80°
- Step-downs, lunges
- Single-leg strengthening
- Balance training
- Low-impact cardio bike swim elliptical

Phase IV: Strength & Controlled Plyometrics (3–5 months)

- $\geq 80\%$ limb strength symmetry
- Dynamic control
- Begin running if cleared
- Avoid uncontrolled pivoting
- Single-leg squats step-down progressions
- Agility ladder lateral drills
- Light plyometrics double-leg hops jump rope
- Core rotational strengthening
- Running progression if cleared

Phase V: Advanced Strength & Controlled Plyometrics (6–9 months)

- $\geq 90\%$ symmetry
- Continue progressing plyometrics as appropriate
- Cutting and pivoting drills
- Begin sport specific training as appropriate
- Ongoing strengthening

Phase VI: Return to Sport (9–12 months)

- $\geq 90\text{--}95\%$ quad and hamstring symmetry



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- Advanced multi-directional cutting and pivoting at full speed
- Reactive and sport-specific plyometrics
- Full sport-specific participation progression
- Clearance from surgeon and PT required prior to returning to sport

Return-to-Sport Criteria

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- Full ROM no pain swelling
- $\geq 90\%$ quad hamstring symmetry
- Hop test success
- Surgeon and PT clearance