KEVIN O'DONNELL, MD

Orthopaedic Surgery · Sports Medicine

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PHYSICAL THERAPY PROTOCOL

ACL Reconstruction — Allograft

Anterior cruciate ligament reconstruction using allograft tissue

Rehabilitation restores full extension and quadriceps control early, then progressively rebuilds strength, neuromuscular control, and confidence. Progression is criteria-based rather than purely time-based. There is no donor-site to protect, so early motion is comfortable; however, allograft incorporation is slower than autograft, so aggressive loading and return to sport are approached more conservatively.

General Precautions

- Weight bearing as tolerated with crutches; brace per surgeon preference (locked in extension for ambulation early).
- Achieve and maintain full passive knee extension — this is a top early priority.
- Avoid active open-chain knee extension through the last ~40° (0–40°) for the first ~6–12 weeks to protect the graft.
- No pivoting, cutting, or running until cleared by criteria.

Phase I — Protection & Motion Weeks 0-2

Goals

- Full passive extension equal to the other knee
- Restore quad control
- Control swelling
- Flexion to ~90°

Precautions / Restrictions

- Brace as directed; crutches
- No open-chain resisted extension 0–40°

Exercises & Interventions

- Quad sets, straight-leg raises
- Patellar mobilizations
- Heel slides / passive flexion to 90°
- Prone hangs / heel props for full extension
- Ankle pumps
- Calf/hamstring stretching

Criteria to Advance

- Full passive extension
- Good quad set with SLR (no lag)
- Swelling controlled

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Phase II — Motion & Early Strength Weeks 2–6

Goals

- Full range of motion
- Normalize gait
- Wean brace/crutches

Precautions / Restrictions

- Continue to avoid resisted open-chain extension 0–40°
- No running/pivoting

Exercises & Interventions

- Progress flexion to full
- Wean crutches/brace per surgeon
- Closed-chain strengthening (mini-squats, leg press 0–60°, bridges)
- Stationary bike
- Balance/proprioception
- Hamstring and calf strengthening

Criteria to Advance

- Full ROM
- Normal gait without assistive device
- Good quad control

Phase III — Strengthening Weeks 6–12

Goals

- Restore strength and neuromuscular control

Exercises & Interventions

- Progressive closed-chain strengthening
- Add open-chain quad work in protected ranges as cleared
- Elliptical / bike / pool conditioning
- Advanced balance and proprioception
- Core and hip strengthening

Criteria to Advance

- Strength ≥70% of opposite side
- No swelling with activity
- Full pain-free ROM

Phase IV — Running & Agility Months 3–5

Goals

- Return to running
- Restore power and agility

Exercises & Interventions

- Criteria-based running progression
- Plyometric progression (double- then single-leg)

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- Agility and change-of-direction drills
- Sport-specific conditioning

Criteria to Advance

- Quad strength ≥80% (isokinetic/functional)
- Symmetric hop testing
- No pain or swelling with running

Phase V — Return to Sport Months 7–9

Goals

- Safe return to cutting/pivoting sport

Exercises & Interventions

- Full plyometric and agility program
- Sport-specific drills and controlled scrimmage
- Continued maintenance strengthening

Criteria to Advance

- Limb Symmetry Index ≥90% (strength and hop battery)
- Full confidence and no apprehension
- Surgeon clearance

This protocol is a general guideline. Progression is criteria-based and may be advanced or slowed by Dr. O'Donnell based on intraoperative findings, tissue quality, fixation, and individual healing. Time frames are approximate. Direct questions to the office at (305) 393-8810.