

POST-OPERATIVE REHABILITATION PROTOCOL

Anterior Cruciate Ligament Reconstruction

William McLaughlin, MD | Sports Medicine Surgery | Advanced Bone & Joint

Phase 1 | 0-2 Weeks

GOALS FOR THIS PHASE

- Protect the graft and surgical reconstruction.
- Achieve and maintain full passive knee extension.
- Progress flexion ROM to 0-90 degrees.
- Initiate quadriceps activation and patellar mobility.
- Control pain and post-operative swelling.

Weight Bearing & Bracing

- WBAT (weight-bearing as tolerated).
- Brace locked at 0° for ambulation and sleeping.

Range of Motion

- ROM: 0-90° with emphasis on full extension.

Therapeutic Exercises

- Patella mobilization.
- SLR supine with brace locked at 0°; quad sets.
- Ankle pumps.
- Short-crank (90 mm) ergometry.

Phase 2 | 2-6 Weeks

GOALS FOR THIS PHASE

- Progress flexion ROM to 0-125° while maintaining full extension.
- Restore quadriceps control sufficient for unbraced ambulation.
- Wean off crutches and brace as quadriceps control allows.
- Begin functional closed-chain strengthening and proprioception.

Weight Bearing & Bracing

- Brace unlocked once quadriceps control is adequate.

- Discontinue crutches once quadriceps control is adequate.
- Discontinue brace between weeks 3-4 based on quadriceps control.

Range of Motion

- ROM: 0-125° (maintain full extension).
- Active knee extension from 40°.

Therapeutic Exercises

- Standard (170 mm) ergometry once knee ROM > 115°.
- Leg press (80°-0° arc).
- Mini squats / weight shifts.
- Proprioception training.
- Initiate step-up program.

Phase 3 | 6-14 Weeks

GOALS FOR THIS PHASE

- Advance lower-extremity strength and neuromuscular control.
- Progress step-down and squat programs.
- Introduce agility and cardiovascular conditioning.

Therapeutic Exercises

- Progressive squat program.
- Initiate step-down program.
- Leg press, lunges.
- Isotonic knee extensions (90°-40°, closed chain preferred).
- Agility exercises with sport cord.
- VersaClimber / NordicTrack.
- Retrograde treadmill ambulation.

Phase 4 | 14-22 Weeks

GOALS FOR THIS PHASE

- Initiate forward running program once 8" step-down is satisfactory.
- Continue progressive strengthening and flexibility.
- Advance sport-specific agility drills.
- Begin plyometric program.

Therapeutic Exercises

- Begin forward running (treadmill) program when 8" step-down is satisfactory.
- Continue strengthening & flexibility program.
- Advance sport-specific agility drills.
- Initiate plyometric program.

Phase 5 | > 22 Weeks

GOALS FOR THIS PHASE

- Progress to advanced plyometrics and sport-specific training.
- Prepare for return to sport when criteria are met.

Therapeutic Exercises

- Advance plyometric program.
- Return to sport — MD directed.

This protocol is a general guideline. Progression is patient-specific and at the discretion of William McLaughlin, MD.