

POST-OPERATIVE REHABILITATION PROTOCOL

Osteochondral Allograft — Femoral Condyle

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

Phase 1 | 0-6 Weeks

GOALS FOR THIS PHASE

- Protect the allograft with TTWB in brace locked in extension.
- Achieve and maintain ROM 0-45°.
- Initiate quadriceps activation and patellar mobility.

Weight Bearing & Bracing

- TTWB in brace locked in full extension with crutches.
- Brace in extension for sleeping during weeks 0-2.

Range of Motion

- Active/passive ROM 0-45°.

Therapeutic Exercises

- Quad sets, SLR, calf pumps.
- Passive leg hanging to 90° at home.
- Heel slides.
- Patellar mobilization.

Phase 2 | 6-8 Weeks

GOALS FOR THIS PHASE

- Advance weight bearing 25% weekly until WBAT.
- Unlock brace and progress ROM to full.
- Initiate closed-chain quadriceps strengthening and hip work.
- Begin stationary bike for ROM.

Weight Bearing & Bracing

- Advance WB 25% weekly until WBAT.
- May unlock brace.

Range of Motion

- Progress with ROM until full.
- May begin stationary bike for ROM.

Therapeutic Exercises

- Straight-leg raise.
- Closed-chain quadriceps strengthening.
- Hip strengthening.

Phase 3 | 8-12 Weeks

GOALS FOR THIS PHASE

- Achieve full, pain-free ROM.
- Begin closed-chain activities.
- Discontinue brace when quadriceps control is normalized.
- Progress unilateral stance and balance training.

Range of Motion

- Full, pain-free ROM.

Bracing

- Discontinue brace when quad control is normalized.

Therapeutic Exercises

- Begin closed-chain activities — wall sits, mini squats, lunges, shuttle.
- Unilateral stance activities, balance training.

Phase 4 | 12 Weeks - 6 Months

GOALS FOR THIS PHASE

- Advance Phase III exercises.
- Maximize core, glute, and pelvic stability work; add eccentric hamstrings.
- Advance low-impact cardiovascular conditioning.

Therapeutic Exercises

- Advance Phase III exercises.
- Maximize core / glutes / pelvic stability work; eccentric hamstrings.
- May advance to elliptical, bike, pools as tolerated.

Phase 5 | 6-12 Months

GOALS FOR THIS PHASE

- Advance functional activity.
- Return to sport-specific activity and impact when cleared by MD after 8 months.

Activity Progression

- Advance functional activity.
- Return to sport-specific activity and impact when cleared by MD after 8 months.

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