

**Cartilage Restoration (MACI/Microfracture)
of Patella/Trochlea without Tibial Osteotomy**

Physical Therapy Post-op Protocol

***Blood Flow Restriction (BFR) encouraged at all stages**

Weeks 0-6

Primary goals: Eliminate swelling; initial ROM

- Touch down weight bearing in brace 2 weeks, then full weight bearing in brace
- Brace:
 - 0-2 weeks: locked in extension; off for CPM
 - 2-6 weeks: can remove to sleep, discontinue when quad control
- ROM:
 - 0-6 weeks: Use CPM 6 hours/day, begin @ 0-30 degrees for 2 weeks, then 0-60 for 2 weeks, then 0-90 for 2 weeks.
- Exercises:
 - 0-2 weeks: Quad sets, SLR, calf pumps, passive leg hangs to 45 degrees at home
 - 2-6 weeks: PROM/AAROM to tolerance, patella and tibiofibular joint mobility, quad, hamstring and gluteal sets, SLR, side-lying hip and core

Weeks 6-8

Primary goals: Increase ROM, initial strength

- Discontinue brace, slowly advance to full weight bearing
- Advance strengthening exercises
 - Closed chain quads, proprioception, core/pelvic stability.
 - Begin stationary bike
 - Advance SLR, floor-based exercise
- Full range of motion

Weeks 8-12

Primary goals: Full ROM, increase strength

- Gait training
- Closed chain activities
 - Wall sits, mini-squats, toe raises, stationary bike
- Unilateral stance activities

- Proprioception
- Progress flexibility, strengthening

Months 3-6

Primary goals: Full painless ROM, advanced strength

- Advance strengthening as tolerated
- Maximize core, gluteal strength, pelvic stability, eccentric hamstrings
- Advance to elliptical, bike, pool as tolerate
- Begin agility and cutting activities when strength adequate

Months 6+

Primary Goals: return to function/sport

- Advance functional activity
- Return to sport specific activity when cleared by MD