






Autologous Chondrocyte Implantation (MACI) of Femoral Condyle Rehabilitation Protocol

NO knee motion for the first 48 hours after surgery (DO NOT BEND THE KNEE). During this time, you must wear the brace locked in extension 24/7.

	Weight-bearing	Brace	Range of Motion	Exercises
Phase 1 0-6 weeks	No weight-bearing	0-2 weeks: Locked in full extension at all times Off for exercise only Discontinue at 2 wks assuming quads can control SLR w/o extension lag	Non weight bearing goal 0- 90° @ first post-op visit 2-6 weeks: Main full extension and progressive non weight bearing flexion	0-2 weeks: Quad tightening, SLR, calf pumps, passive leg hangs to 90° at home 2-6 weeks: PROM/AAROM to tolerance, patella and tibiofibular joint mobilization, quad, hamstring, and gluteal sets, SLR, side-lying hip and core
Phase 2 6-8 weeks	Wean off crutches and progress to full with normalized gait pattern	Discontinue brace at 6 weeks once normal gait achieved	Full	Advance Phase I exercises
Phase 3 8-12 weeks	Full	None	Full	Gait training, begin closed chain activities: wall sits, shuttle, mini-squats, toe raises Begin unilateral stance activities, balance training
Phase 4 12 weeks – 6 months	Full	None	Full	Advance Phase III exercises; maximize core/glutes, pelvic stability work, eccentric hamstrings May advance to elliptical, bike, pool as tolerated 22 wks: Advance as tolerated FSA completed at 22 wks*
Phase 5 6-12 months	Full	None	Full	Advance functional activity Gradual return to sports participation after completion of FSA Maintenance program based on FSA Return to sport-specific activity and impact when cleared by MD

SLR – Straight-leg raise; PROM – passive range of motion; AAROM – active assist range of motion

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*Completion of FSA (Functional Sports Assessment) not mandatory, but recommended at approximately 22 wks post-op for competitive athletes returning to play after rehab.