

## Autologous Chondrocyte Implantation (MACI) of Patella/Trochlea Rehabilitation Protocol (No Osteotomy)

	<b>Weight-bearing</b>	<b>Brace</b>	<b>Range of Motion</b>	<b>Exercises</b>
<b>Phase 1</b> 0-4 weeks	As tolerated with crutches*	<b>0-1 week:</b> Locked in full extension for ambulation and sleeping  <b>1-4 weeks:</b> Unlocked for ambulation, remove for sleeping**	As tolerated, goal 90° @ first post-op visit	Heel slides, quad/hamstring sets, patellar mobilization, gastroc/soleus stretch  SLR w/ brace in full extension until quad strength prevents extension lag
<b>Phase 2</b> 4-12 weeks	Full, progressing to normal gait pattern	Discontinue at day 28 if patient has no extension lag	Main full extension and progressive flexion	Progress Phase I  Begin toe raises, closed chain quads, balance exercises, hamstring curls, stationary bike, step-ups, front and side planks, hip/glute/core, pool
<b>Phase 3</b> 12-16 weeks	Full with a normalized gait pattern	None	Gain full and pain-free	Advance closed chain strengthening, progress proprioception activities  Begin stairmaster, elliptical and running straight ahead
<b>Phase 4</b> 16 weeks – 6 months	Full	None	Full	<b>16 wks:</b> Begin jumping  <b>20 wks:</b> Advance running to sprinting, backward running, cutting/pivoting/changing direction, initiate plyometric program and sport-specific drills  <b>22 wks:</b> Advance as tolerated  FSA completed at 22 wks***
<b>Phase 5</b> 6-12 months	Full	None	Full	Gradual return to sports participation after completion of FSA  Maintenance program based on FSA

CPM – continuous passive motion machine; SLR – Straight-leg raise;

\*Modified with concomitantly performed meniscus repair/transplantation or articular cartilage procedure

\*\*Brace may be removed for sleeping after first post-operative visit (day 7-10)

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

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