



ADVANCED ORTHOPAEDIC SPECIALISTS



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AUTOLOGOUS CHONDROCYTE IMPLANTATION (TROCHLEA/PATELLA)* REHABILITATION PROTOCOL

	WEIGHT BEARING	BRACE	ROM	THERAPEUTIC EXERCISE
PHASE I 0 - 12 weeks	<p>0-2 Weeks: non-weight bearing</p> <p>2-4 Weeks: partial weight bearing (30 - 40 lbs)</p> <p>4-8 Weeks: continue with partial weight bearing status - progress to use of one crutch</p> <p>8-12 Weeks: progress to full weight bearing and discard crutches</p>	<p>0-2 Weeks: Locked in full extension (remove for CPM/exercise)</p> <p>2-4 Weeks: Locked at 0° with weight bearing</p> <p>4-6 Weeks: Begin to open 20° to 30° with ambulation - discontinue use after 6 weeks</p>	<p>0-4 Weeks: CPM: Use in 2 hour increments for 6 - 8 hours per day. Begin at 0-30° 1 cycle/minute.</p> <p>Week 1-2: 0-60° Week 3: 0-90° Week 4: 0-105°</p> <p>6-8 Weeks: Gain 0-90°</p> <p>8 Weeks: Gain 0-120°</p>	<p>1-4 Weeks: Quad sets, hamstring isometrics - complete exercises in brace if quad control is inadequate. Avoid straight leg raises and patellar mobilization</p> <p>4-10 Weeks: Begin <i>isometric</i> closed chain exercises. At 6-10 weeks, may begin weight shifting activities with involved leg extended if full weight bearing. At 8 weeks begin balance activities and stationary bike with light resistance.</p> <p>10-12 Weeks: Hamstring strengthening, theraband 0-30° resistance, light open chain knee isometrics</p>
Phase II 12 weeks - 6 months	Full with a normalized gait pattern	None	Full range of motion	Begin treadmill walking at slow to moderate pace, progress balance/proprioceptive activities, initiate sport cord lateral drills
Phase III 6 months - 9 months	Full with a normalized gait pattern	None	Full and pain-free	Advance close chain strengthening, initiate unilateral closed chain exercises, progress to fast walking and backward walking on treadmill (initiate incline at 8-10 months), initiate light plyometric activity
Phase IV 9 months - 18 months	Full with a normalized gait pattern	None	Full and pain-free	Continue strength training, emphasize single leg loading, progressive running/agility program, high impact activities may begin at 16 months

*Most trochlear/patellar defect repairs are performed in combination with a distal realignment if pain-free, weight bearing is restricted for the first 4-6 weeks to protect the bony portion of the distal realignment during healing.

**May consider patellofemoral taping or stabilizing brace if improper patella tracking stresses implantation.

***If pain or swelling occurs with any activities, they must be modified to decrease symptoms.