

AUTOLOGOUS CHONDROCYTE IMPLANTATION (TROCHLEA/PATELLA)* REHABILITATION PROTOCOL

| | WEIGHT BEARING | BRACE | ROM | THERAPEUTIC EXERCISE |
|---|---|---|---|--|
| PHASE I 0 - 12 weeks | <p>0-6 weeks: non-weight bearing</p> <p>6-8 weeks: advance to partial weight bear 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 (removed for CPM and exercise)</p> <p>*2-4 weeks: Locked at 0° for ambulating</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 - after week 3, increase flexion by 5 - 10° daily</p> <p>6-8 weeks: gain 0-90°</p> <p>8 weeks: gain 0-120°</p> | <p>1-4 weeks: Quad sets, SLR, hamstring isometrics - complete exercises in brace if quad control is inadequate</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 a slow to moderate pace, progress balance/proprioceptive activities, initiate sport cord lateral drills |
| PHASE III 6 - 9 months | Full with a normalized gait pattern | None | Full and pain-free | Advance closed 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 - 18 months | Full with a normalized gait pattern | None | Full and pain-free | Continue strength training - emphasize single leg loading, begin a progressive running and agility program - high impact activities may begin at 16 months if pain-free |

*Most trochlear/patellar defect repairs are performed in combination with a distal realignment procedure, and thus 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

NOTE: Post-operative stiffness in flexion following trochlear/patellar implantation is not uncommon and patients are encouraged to achieve 90° of flexion at least 3x/day out of the brace after their first post-op visit (day 7-10)