



Cartilage Repair Center

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Autologous Chondrocyte Transplantation PT Protocol Stage 1- Proliferative Phase (0-6 weeks)

Patellar and/or Trochlear Defect

PRIMARY GOALS

DO NOT OVERLOAD GRAFT

INCREASE TIBIOFEMORAL AND PATELLOFEMORAL MOBILITY

RESTORE QUADRICEPS CONTROL

BRACE

- ◆ Bledsoe Hinge knee brace for ambulation (locked) and at night
- ◆ Out of brace for CPM.
- ◆ No brace, but towel/pillow behind heel when lying down

PRECAUTIONS

- ◆ If tubercle osteotomy: Touch-down weightbearing (locked brace)
- ◆ If no osteotomy: Full weightbearing in full extension (locked brace)

ROM

- ◆ Gentle AROM flexion as tolerated 3x/day. Only PROM extension allowed.
- ◆ Dangle knee over edge of bed 5x per day to achieve 90 degrees.
- ◆ CPM \geq 6-8 hours daily. 0-40 degrees only, do not advance.
- ◆ Minimum 90 degrees flexion by 3 weeks, 110 degrees by 6 weeks, and full ROM by 12 weeks post-op.

THEREX

- ◆ Quad sets, leg curl/heel slides, hip abduction. SLR with brace locked if no osteotomy.
- ◆ Stationary bicycle with no resistance once 90 degrees knee flexion obtained (>4 wks).

THERAPY

- ◆ Gentle multi-directional patella mobilization immediately after surgery.
- ◆ Cryotherapy and compression stockings/TEDS for swelling and pain control.
- ◆ E-stim for VMO/quadriceps muscle re-education/biofeedback encouraged early after surgery if needed.
- ◆ Gentle massage/deep friction to hamstring insertions, suprapatellar quadriceps, medial/lateral gutters, and infrapatellar fat pad region at 2-3 weeks post-op.
- ◆ Pool therapy recommended 2-3 weeks post-op to enhance motion.

COMMENTS

- ◆ Avoid active open-chain extension and repetitive knee flexion 40-70 degrees due to increased patellofemoral contact forces.
- ◆ Contact MD if ROM not achieved within 20 degrees of goal.
- ◆ No progression of this protocol until cleared by M.D at 6 weeks post-op.
- ◆ No leg presses/squats



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