



# Cartilage Repair Center

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## **Weight Bearing Femoral Condyle/PF**

Autologous Chondrocyte Transplantation PT Protocol (#5)  
Stage 1- Proliferative Phase (0-6 weeks)

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### **PRIMARY GOALS**

DO NOT OVERLOAD GRAFT  
INCREASE TIBIAL FEMORAL AND PATELLA FEMORAL MOBILITY  
RESTORE QUADRICEPS CONTROL

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- BRACE** ♦ Hinged knee Brace locked in full extension for transfers and ambulation
- PRECAUTIONS** ♦ Heel-toe TDWB with crutches
- ROM**
- ♦ Gentle AROM flexion as tolerated. Only PROM extension allowed.
  - ♦ 90 Degree Leg dangle every hour every day with Massage and Deep Friction at same time.
  - ♦ CPM  $\geq$  6-8 hours daily 0-40 degrees for first 3 week then full ROM as tolerated by pain.
  - ♦ Minimum 90 degrees flexion by 3 weeks, 110 degrees by 6 weeks, and full ROM by 12 weeks post-op.
- THEREX**
- ♦ Quad sets, NO SLR
  - ♦ Stationary bicycle with no resistance once 90 degrees knee flexion obtained (4wks).
  - ♦ 90 Degree Leg dangle Q1H QD to get ROM
- THERAPY**
- ♦ 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.
  - ♦ Standing resisted isometrics and closed-chain terminal knee extension (0-30 degrees) with elastic band permitted at 3 weeks post-op.
  - ♦ Massage/deep friction to hamstring insertions, suprapatellar quadriceps, medial/lateral gutters, and infrapatellar fat pad region at 2 weeks post-op.
  - ♦ Whirlpool 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 to within 20 degrees of goal.
  - ♦ No progression of this protocol until cleared by M.D at 6 weeks post-op.
  - ♦ No leg presses/squats.
  - ♦ NO active open-chain due to increased patellofemoral contact forces

For Outpatient Physical Therapist:  
2-3x week / 6 weeks



**ORTHOPEDIC & SPINE INSTITUTE**  
at St. Mary's Medical Center