



Cartilage Repair Center

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Autologous Chondrocyte Transplantation

DFVO/TTO + PF

Stage 1 – Proliferative Phase (0-6 weeks)

PRIMARY GOALS

DO NOT OVERLOAD GRAFT

INCREASE TIBIAL-FEMORAL AND PATELLA-FEMORAL MOBILITY

RESTORE QUADRICEPS CONTROL

BRACE

♦Hinged knee brace locked in full extension for transfers and ambulation

PRECAUTIONS

♦Heel to toe TDWB with crutches

ROM

♦Gentle AROM flexion as tolerated only PROM extension allowed

♦CPM \geq 6-8 hours daily 0-40 degree for first 3 weeks, full ROM as tolerated by pain

♦Minimum 90 degree 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 degree knee flexion obtained (~4 weeks)

♦90 degree leg dangle once an hour each day to regain flexion ROM

THERAPY

♦Patella mobilization immediately after surgery

♦Cryotherapy and Ace wrap 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 degree) 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 2 weeks after surgery

♦Whirlpool therapy recommended at 2-3 weeks post-op to enhance motion

COMMENTS

♦Avoid active open-chain extension and repetitive knee flexion 40-70 degree due to increased patellofemoral contact forces

♦Contact MD if ROM not achieved to within 20 degree of goal

♦No progression of this protocol until cleared by MD 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