



# Cartilage Repair Center

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[www.cartilagerepaircenter.org](http://www.cartilagerepaircenter.org)  
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## Weightbearing Femoral Condyle

Autologous Chondrocyte Transplantation  
Stage 2- Transitional Phase (7-12 weeks)

### PRIMARY GOALS

DO NOT OVERLOAD GRAFT

INCREASE TIBIAL-FEMORAL AND PATELLA-FEMORAL MOBILITY

RESTORE QUADRICEPS CONTROL

#### **BRACE**

- ◆ Knee immobilizer with ambulation until good quad control/independent SLR

#### **GAIT**

- ◆ Use bathroom scale to progress as follows:
 

Weeks 7 & 8	PWB 1/3 Body Weight
Weeks 9 & 10	PWB 2/3 Body Weight
Weeks 11 & 12	FWB with crutches
Week 13+	Crutch, Cane, or No Device as tolerated

\* Progress per guidelines above as pain allows.

#### **ROM**

- ◆ Full AROM and gentle PROM exercises
- ◆ CPM may be discontinued

#### **THEREX**

- ◆ Low weight (max 10-20lbs.) open-chain leg extension and curl
- ◆ Stationary bicycle with gradual increased tension per level of comfort
- ◆ Continue quad sets, SLR in brace, leg curl and heel slides
- ◆ Strengthen quadriceps, hamstrings, and hip abductors/extensors using ankle weights and/or elastic band resistance through full ROM as tolerated
- ◆ Gentle closed-chain terminal knee extension 0-40 degrees (TKE) permitted starting at 9-10 weeks as tolerated per weight bearing restriction

#### **THERAPY**

- ◆ Continue multi-directional patella mobilization as needed
- ◆ Whirlpool or pool therapy as available to enhance ROM and quadriceps/hamstring muscle control.
- ◆ E-stim for VMO/quadriceps muscle re-education/biofeedback as needed
- ◆ Massage/deep friction to hamstring insertions, suprapatellar quadriceps, medial/lateral gutters, and infrapatellar regions

#### **COMMENTS**

- ◆ Activity level should be modified if increased pain, catching, or swelling occurs
- ◆ No progression of this protocol until cleared by M.D at 12 weeks post-op
- ◆ No open-chain strengthening permitted until 6 months after surgery.
- ◆ No closed-chain leg press or squatting

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



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