



# Indiana University Health

*IU Health Physicians Orthopedics & Sports Medicine*

## **CARTILAGE RESTORATION – FEMORAL CONDYLE CARTILAGE**

### **PHYSICAL THERAPY PROTOCOL**

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[www.bryansaltzmanmd.com](http://www.bryansaltzmanmd.com)

**Patient Name:** \_\_\_\_\_ **Date of Surgery:** \_\_\_\_\_

\_\_\_ **Evaluate and Treat**                      \_\_\_ **Provide patient with home program**

**Frequency:** \_\_\_\_\_ x/week    x    \_\_\_\_\_ weeks

### **PHASE I (Weeks 0 – 6):**

Period of protection, decrease edema, activate quadriceps



- **Weightbearing:** Non weight-bearing with crutches
- **Hinged Knee Brace:**
  - **Week 0-1:** Locked in full extension for ambulation and sleeping (remove for CPM and PT)
  - **Weeks 2-6:** Unlock brace as quad control improved; discontinue when able to perform SLR without extension lag
- **Range of Motion:** Continuous Passive Motion (CPM) machine for 6-8 hours/day
  - **CPM Protocol:** 1 cycle per minute starting 0-40°, advance 5-10°/day (goal is 100° by week 6)
  - PROM/AAROM with PT assistance
- **Therapeutic Exercises:** patellar mobs, quad/hamstring sets, calf pumps, passive leg hangs to 90°, heel slides, straight-leg raises with brace in full extension until quad strength prevents extension lag
- **Modalities:** Per therapist, including electrical stimulation, ultrasound, heat (before), ice (after)

## Phase II (Weeks 6 – 8)

- **Weightbearing:** Partial (25%/wk)
- **Hinged Knee Brace:** None
- **Range of Motion:** Progress to full, painless AROM
- **Therapeutic Exercises:** Continue Phase I, add stationary bike
- **Modalities:** Per therapist, including electrical stimulation, ultrasound, heat (before), ice (after)

## Phase III (Weeks 8 – 12)

- **Weightbearing:** Progress to full
- **Range of Motion:** Full, painless
- **Therapeutic Exercises:** Advance Phase II, begin closed chain exercises (wall sits, shuttle, mini-squats, toe-raises), begin unilateral stance activities and balance training
- **Modalities:** Per therapist, including electrical stimulation, ultrasound, heat (before), ice (after)

## Phase IV (Weeks 12 – 24)

- Advance Phase III exercises; focus on core/glutes; advance to elliptical, bike, and pool as tolerated

## Phase V (>6 months):

Gradual return to athletic activity



- Encourage maintenance program
- Return to sport-specific activity and impact when cleared by MD at 8-9 months postop

**By signing this referral, I certify that I have examined this patient and physical therapy is medically necessary. This patient \_\_\_ would \_\_\_ would not benefit from social services.**

\_\_\_\_\_

**Date:** \_\_\_\_\_

**Bryan M. Saltzman, MD**