



# Indiana University Health

IU Health Physicians Orthopedics & Sports Medicine

## PATELLA OPEN REDUCTION INTERNAL FIXATION (ORIF)

### PHYSICAL THERAPY PROTOCOL

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

**Procedure:** Right / Left Knee MPFL Reconstruction

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

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



**Associated Procedures (Circle if applicable):**

- Lateral release
- Chondroplasty
- Cartilage Repair with Bio-absorbable or Metal Screws
- DeNovo cartilage transplantation

**CPM**

- Initiate POD1 with 0-30°.
- Perform 3x per day in 2-hour sessions.
- Limitations:
  - 0-1 weeks: 0-30°
  - 1-2 weeks: 0-60°
  - 2-4 weeks: 0-90°

**Phase I (0-2 wks): *Period of protection.***

- **Primary Goals:** Protect the reconstruction, minimize effusion, ROM to 60° flexion, post op pain control to 0/10 at rest, regain control of quadriceps.
- **Weightbearing:** Non-weight bearing with the brace locked in extension.
- **Hinged Knee Brace:** Locked in extension for all activities (including sleeping) – removed for PT, CPM and hygiene.
- **Range of Motion:** AROM/AAROM for flexion 0-60°. PROM extension (no active extension).
- **Precautions:**
  - Avoid patellar lateralization
  - No active knee extension until 6 weeks post-op
- **Therapeutic Exercises:**
  - Heel slides 0-60°
  - Quad sets with towel under heel
  - Hamstring sets
  - Ankle pumps
  - Core and hip strengthening
  - Non-weightbearing calf/hamstring stretches
  - Very gentle patellar mobilization (medial ONLY)
  - Cryotherapy and elevation important

**Phase II (2-6 wks): *Healing phase.***

- **Primary Goals:** Increase ROM, supine straight leg raise without extensor lag, demonstrate good quadriceps contraction.
- **Weightbearing:**
  - 2-4 weeks: Non-weight bearing (NWB)
  - 4-6 weeks: Toe Touch weight bearing (TTWB)
- **Hinged Knee Brace:** Locked in extension for all activities (including sleeping) – removed for PT, CPM and hygiene.
- **Range of Motion:** AROM/AAROM/PROM in flexion: 0-90° by 4 weeks, 120° by end of phase. Passive extension only.



- **CPM:** Discontinued after  $>90^\circ$  of flexion achieved (typically between 4-6 weeks).
- **Precautions:**
  - Avoid patellar lateralization
  - No active knee extension until 6 weeks post-op (Phase III)
- **Therapeutic Exercises:**
  - As above.
  - Initiate straight leg raises with brace locked in full extension. Can progress to straight leg raise out of the brace if capable of full extension; goal is to do a set of 30 SLRs to graduate out of the hinged knee post-op brace.

### Phase III (6-12 wks): *Transitional Phase*

- **Weightbearing:** Gradual return to WBAT. Continue crutch use, but increase weight bearing gradually (~50% each week).
- **Hinged Knee Brace:** May discontinue once WBAT once able to do a strong set of 30 SLR.
- **Range of Motion:** AROM/AAROM/PROM – Full pain free ROM 0-130°.
- **Therapeutic Exercises:**
  - Once no lag on SLR, can begin closed-chain quad/core and hamstring strengthening as follows: ***for weeks 6-9, only do strengthening with knee bent 60 degrees or more;*** after 9 weeks, can begin to advance closed chain strengthening at progressively greater degrees of extension (advance ~20 degrees per week, such that strengthening is done from full extension to full flexion by 3 months).
    - No lunges.
  - Stationary biking at 6wks (no resistance)
  - Rowing, Elliptical and Stair Master at 8wks
  - Swimming at 10wks
  - Continue core and hip strengthening

### Phase IV (3-6 months): *Advanced Phase*

- **Weightbearing:** Full
- **Range of Motion:** Full
- **Therapeutic Exercises:**
  - Light plyometrics initiated at 3 months.
  - Criteria to start running program: walk with normal gait for 20 minutes, pain free ADLs, ROM  $> 0-125^\circ$ , hamstring and quad strength  $>70\%$  contralateral side, no pain, no edema, no crepitus, no giving-way
  - From 4.5 – 6 months, begin and advance sport-specific activities (running, agility training).
  - High-impact activities (jumping, contact sports) allowed once full motion and strength achieved (usually between 5-6 months).
- **Return to sport**
  - 85% limb symmetry with strength and functional testing
  - Demands of sport met



- Muscular endurance
- Flexibility
- First Season back to play in J-brace

**Other:**

- Modalities                       Electrical Stimulation                       Ultrasound  
 Heat before/after                       Ice before/after exercise  
 May participate in aquatherapy after week three, begin aqua-running week 6

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

**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**