

## **Medial Patellar Femoral Ligament (MPFL) Repair or Reconstruction**

**Precautions:** FWB/WBAT

### **Phase I (1 – 5 days post-op)**

- Wound care: Observe for signs of infection. Keep covered until post-op day 5
  - On day 5, OK to remove dressing and begin showering. Cover incision with gauze and ace wrap
- Modalities: prn for pain and inflammation (ice, IFC)
- Brace:
  - Locked in full extension for all activities except therapeutic exercises and CPM use
  - Locked in full extension for sleeping and ambulation
- Gait: WBAT with 2 crutches
- ROM:
  - Knee: 0 – 30 degrees (no active, open-chain extension)
  - Ankle AROM
- Exercises:
  - Hamstring and calf stretches
  - Quad sets

### **Phase II (5 days – 4 weeks post-op)**

- Wound care: Observe for signs of infection.
  - On day 5, OK to remove dressing and begin showering. Cover incision with gauze and ace wrap
- Modalities: prn for pain and inflammation (ice, IFC)
- Brace:
  - Weeks 0 -4, locked in full extension for all activities except therapeutic exercises
  - Until 2 weeks post-op, locked in full extension for sleeping
- Gait: FWB/WBAT with 2 crutches
- ROM:
  - Weeks 0 – 2: 0 – 60 to 70 degrees
  - Weeks 2 – 4: 0 – 75 to 80 degrees

- Weeks 4 – 6: 0 – 90 to 105 degrees
- Strengthening:
  - Quad sets with biofeedback and e-stim for VMO
    - By 6 weeks, goal of regaining active quad and VMO control
  - Heel slides to recommended ROM, SLR in 4 planes with brace locked in full extension
  - Resisted ankle ROM with theraband
  - Patellar mobilization, as tolerated

**Phase III (4 weeks – 10 weeks post-op)**

- 4 – 6 weeks:
  - Brace
    - Removed for sleeping
    - Locked in full extension for ambulation
  - ROM
    - 0 – 105 degrees week 5
    - 0 – 115 degrees week 6
  - Strengthening: Continue same as Phase II
- 6 – 8 weeks:
  - Brace
    - D/C for sleeping
    - Unlock for ambulation as allowed by physician
  - Gait: Wean from crutches and normalize gait
  - ROM: Increase flexion gradually to normal range for patient
  - Strengthening
    - Continue NMES as needed
    - Progress to WB gastroc and soleus stretching
    - Closed chain balance exercises
      - AVOID deep knee squatting greater than 90 degrees
    - Stationary bike: low resistance and high seat
    - Wall slides progressing to mini-squats 0 – 45 degrees of flexion
- 8 – 10 weeks:
  - Brace: D/C
  - Gait: D/C if no extension lag is present, patient is able to achieve full extension, and gait pattern is normalized with one crutch
  - Strengthening:
    - SLR without extension lag

- Closed-chain strengthening including step-up (begin at 2-inch step)
- Moderate resistance for stationary bike
- 4-way resisted hip strengthening
- Leg press 0 – 60 degrees of flexion
- Swimming and/or stair master for endurance
- Toe raises, hamstring curls, and proprioceptive exercises
- Treadmill walking
- Flexibility exercises

#### **Phase IV (10+ weeks post-op)**

- **Criteria:**
  - Clearance from physician to begin more concentrated closed-kinetic chain exercises and resume full or partial activity level
  - At least 0 – 115 degrees AROM with no swelling and complete voluntary contraction of quad
  - No evidence of patellar instability
  - No soft tissue complaints
- **Strengthening:**
  - Progression of closed-kinetic chain activities including partial squats (0 – 60 degrees), leg press, forward and lateral lunges, lateral step-ups, bicycle and/or stepper
  - Functional progression, sport specific activities
- **Testing:** Performance to <25% deficit compared to non-surgical side by D/C

Adapted From:

- 1) Brotzman SB, Wilk KE. Clinical Orthopedic Rehabilitation. 2<sup>nd</sup> Ed. Philadelphia: Mosby; 2003.
- 2) University of Miami. Postoperative Rehabilitation Protocols: MPFL Reconstruction.
- 3) Wile, KE. Medial Patellofemoral Ligament Reconstruction Rehabilitation Program. Advanced Continuing Education Institute. 2019.