

# Arthroscopic MPFL Reconstruction Rehabilitation Protocol

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**Patient Name:**

**Date of Surgery:**

## **Phase I - Immediate postoperative phase - Weeks 0-2**

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

### **Goals**

- Protect fixation and surrounding soft tissue
- Control pain and inflammation
- Regain active quadriceps contraction
- Minimize adverse effects of immobilization
- Regain full knee extension

### **Bracing and weightbearing status**

Weeks 0-2:

- Brace locked in extension
- WBAT with crutches

### **ROM and CPM (if available) goals**

Weeks 0-2:

- Progressing to 0-90 degrees

### **Days 1-14**

- Quad sets, hamstring sets, glute sets
- Active-assistive heel slides with towel, within ROM guidelines
- Gastroc/soleus, hamstring stretches
- 4-way SLR (hip abduction, adduction, extension, flexion) with brace locked in extension
- Cryotherapy and E-stim PRN for pain and inflammation

## **Phase 2 - Maximum protection phase - Weeks 2-6**

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

### **Goals**

- Manage pain and swelling
- Range of motion: progressing to full ROM
- Good quadriceps contraction with ability to perform SLR with no extensor lag
- Improve soft tissue and scar mobility
- Improve patellar mobility

### **Bracing and weightbearing status:**

Weeks 2-6:

- Brace can be unlocked when patient can perform SLR x 20 with no extensor lag
- WBAT with crutches
- Criteria to D/C crutches:
  - Non-antalgic gait pattern
  - Full knee extension ROM

### **ROM and CPM (if available) goals**

Week 3: at least 120 degrees knee flexion

Weeks 4-6: full ROM equal to contralateral

### **Weeks 2-4**

- Continue above listed exercises
- Isotonic hamstring curls within ROM guidelines
- Instruct patient in self-scar tissue mobilizations when incisions are healed
- PFJ mobilizations (no lateral glides)

### **Weeks 4-6**

#### **• MD recheck at 6 weeks**

- Continue above listed exercises
- Bike within ROM guidelines, starting with ½ revolutions
- Quad sets with NMES as need for improved quad activation
- Total gym or partial wall squats (0-45 degrees)
- Initiate proprioceptive/balance training: DLSL once patient has sufficient quad control
- Initiate core strengthening exercises
- Continue cryotherapy and E-stim PRN for pain and inflammation

### Phase III - Intermediate phase - Weeks 6-12

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

#### Goals

- Progress to full ROM equal to contralateral
- Demonstrate normalized gait with no assistive device or brace
- Avoid overstressing fixation site (excessive dynamic valgus, lateral patellar gliding, etc.)
- Improve quadriceps control and lower extremity strength

#### Bracing and weightbearing status

Weeks 6-8:

- Progress to FWB
- MD D/C's brace and patient transitions to lateral patella stabilizing brace

#### ROM guidelines

- Progress to full ROM

#### Weeks 6-12

- **MD recheck at 12 weeks**
- Continue and progress above listed exercises
- Emphasize full ROM equal to contralateral
- Progress hip strengthening—clam shells, standing hip extension and abduction, lateral band walks, monster walks, etc.
- Progress core strengthening—planks, Swiss ball exercises, etc.
- Step ups, starting at 2-inch step progressing to 8 inches +
- Partial lunges (0-45 degrees), starting with involved leg in the front monitoring PFJ tracking
- Partial lunges (0-45 degrees)
- Increase resistance on stationary bike
- Step downs, starting at 2-inch step progressing to 6-8-inch step
- Continue proprioceptive/balance activities: DLSL, solidunstable, eyes open, eyes closed, predictable, unpredictable. **\*\*Caution with single leg balance on unstable surfaces prior to 3 months unless patient demonstrates good postural control**
- Continue flexibility exercises; initiate quad stretch
- Continue cryotherapy and E-stim PRN for pain and inflammation

### Phase IV - Dynamic strengthening phase - Weeks 12-16

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

#### Goals

- Demonstrate full knee ROM equal to contralateral
- Improve strength, balance, and proprioception
- Minimal to no pain
- Completion of isokinetic testing (if available) at approximately week 12 for progression to running
- Initiate running program

**Weeks 12-16**

- Continue and progress above listed exercises

Testing (if available)

- Isokinetic testing (90/180/300 degrees/sec, full ROM, 10/15/15 reps)
- Maintain/beginning running (if patient fulfills criteria and with physician clearance)
  - If testing not available, assess for good lumbo/pelvic/hip control, good eccentric quad control with single leg squat and step downs
- Running progression:
  - Treadmill walking
  - Treadmill walk/run interval
  - Treadmill run
  - Track: run straights, walk turns
  - Track: run straight and turns
  - Run on road
- Introduce low impact agility and plyometric exercises

**Phase V - Return to sport/activity phase - Weeks 16-24**

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

**Goals**

- Development of strength, power, endurance
- Gradual return to higher level work activities
- Gradual return to recreational sport activities

**Weeks 16-24**

Exercises:

- Continue all above exercises
- Continue and progress running progression
- Emphasize eccentric quad work
- Progress plyometric program—DLSL, stable/unstable, single planar/multi-planar, controlled/uncontrolled situations
- Progress agility activities
- Sports specific training and drills

Testing (if available)

- Isokinetic testing (90/180/300 degrees/sec, full ROM, 10/15 reps)
  - Compare scores to 3-month testing
  - Quadriceps bilateral comparison (80% or greater)
  - Hamstring bilateral comparison (110% or greater)
  - Quadriceps torque/body weight ratio (55% or greater)
  - Hamstrings/quadriceps ratio (70% or greater)
- Complete return to sport evaluation at 90% or greater of contralateral lower extremity