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# ORTHOPAEDICS

## MPFL Rehab Protocol

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### MEDIAL PATELLO-FEMORAL LIGAMENT RECONSTRUCTION (MPFL)

#### **GENERAL GUIDELINES FOR MPFL REHAB**

- No closed kinetic chain exercises for 6 weeks
- General for medical patellofemoral reconstruction (MPFL)
- Supervised physical therapy takes place for 3-6 months postoperatively

#### **GENERAL PROGRESSION OF ACTIVITIES OF DAILY LIVING**

Patients may begin the following activities at dates indicated (unless otherwise specified by the physician)

- Bathing/showering after suture removal
- Sleep with brace locked in extension for first 2 weeks
- Non weight-bearing with brace locked in 20 degrees of flexion immediately post-op with gradual advancing at 2 weeks
- Brace locked in extension starting at 2 weeks until 6 weeks post-op for ambulation
- Use of crutches continued for 6-8 weeks post-op
- Driving at 8 weeks post-op



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## PHYSICAL THERAPY ATTENDANCE

The following is an approximate schedule for supervised physical therapy visits:

Phase I (0-6 weeks): 1 visit/week

Phase II (6-8 weeks): 2-3 visits/week

Phase III (2-4 months): 2-3 visits/week

Phase IIII (4-6 months): 1 visit/1-2 weeks

## REHABILITATION PROGRESSION

The following is a general guideline for progression of rehabilitation program following patellar realignment. Progression through each phase should take into consideration patient status (e.g. healing, function) and physician advisement. Please consult the attending physician if there is any uncertainty regarding advancement of a patient to the next phase of rehabilitation.



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## PHASE I

Begins immediately post-op through approximately 6 weeks

### Goals:

- Protect fixation and surrounding soft tissue
- Control inflammatory process
- Regain active quadriceps and VMO control
- Minimize the adverse effects of immobilization through CPM and heel slides in the allowed ROM
- Full knee extension
- Patient education regarding rehabilitation process

### ROM

0-6 weeks: 0° to 90° of flexion

### Brace

0-2 weeks: Locked in 20 degrees of flexion for first 2 weeks

2-4 weeks: Locked in full extension for ambulating with partial weight bearing and sleeping. Unlock for all only therapeutic exercises and CPM use.



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4-6 weeks:                      Unlock brace for sleeping. Continue with brace locked in full extension for ambulation.

## **Weight-Bearing Status:**

0-2 weeks:                      Non weight-bearing

2-4 weeks:                      Non weight-bearing

4-6 weeks:                      Full weight bearing

## **Therapeutic Exercises:**

- Quad sets and isometric adduction with biofeedback for VMO
- No NMES and MPFL for 6 weeks
- Heel slides from 0-90 starting at 2 weeks
- CPM for 2 hours, twice daily, start 0-60 advance to 90
- Non weight-bearing gastrocnemius /soles, hamstring stretches
- SLR in 4 planes with brace locked in full extension (can be performed in standing)



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- Resisted ankle ROM with Theraband
- No patellar mobilization!
- Begin aquatic therapy at 3-4 weeks with emphasis on gait

## PHASE II

Begins approximately 6 weeks post-op and extends to approximately 8 weeks post-op

### **Criteria for advancement to Phase II:**

- Good quad set
- Approximately 90° of flexion
- No signs of active

### **Goals:**

- Increased range of flexion
- Avoid overstressing fixation
- Increase quadriceps and VMO control for restoration of proper patellar tracking

### **Brace**

6-8 weeks: Discontinue use for sleeping. Unlock for ambulation as allowed by physician



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## Weight-Bearing Status:

6-8 weeks: As tolerated with two crutches

## Therapeutic Exercises:

- Continue exercises as noted above. Progress towards full flexion with heel slides
- Progress to weight bearing gastrocnemius / soles stretching
- Discontinue CPM if knee flexion is at least 90°
- Begin aquatic therapy, emphasis on normalization of gait
- Balance exercises (e.g. single-leg standing, KAT)
- Remove brace for SLR exercises
- Stationary bike, low resistance, high seat
- Short arc quadriceps exercises in pain-free ranges (0-20, 60-90 of flexion), emphasize movement quality
- Wall slides progressing to mini-squats (0-45 of flexion)

## PHASE III

Begins approximately 8 weeks post-op and extends through approximately 4 months

## Criteria for advancement to Phase III:

- Good quadriceps tone and no extension lag with SLR
- Non-antalgic gait pattern



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- Good dynamic patellar control with no evidence of lateral tracking or instability

## **Weight-Bearing status:**

May discontinue use of crutches when the following criteria are met:

- No extension lag with SLR
- Full extension
- Non-antalgic gait pattern (may use one crutch or cane until gait is normalized)

## **Therapeutic Exercises:**

- Step ups, begin at 2" and progress towards 8:
- Stationary bike, add moderate resistance
- 4-way hip for flexion, adduction, abduction, extension
- Leg-press 0-45 of flexion
- Closed kinetic chain terminal knee extension with resistive tubing or weight machine
- Swimming, Stairmaster for endurance
- Toe raises
- Hamstring curls
- Treadmill walking with emphasis on normalization of gait
- Continue proprioception exercises
- Continue flexibility exercises for gastroc/soles and hamstrings, add iliotibial band and quadriceps as indicated



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## PHASE IV:

Begins approximately 4 months post-op and extends through approximately 6 Months

### **Criteria for advancement to Phase IV:**

- Good to normal quadriceps strength
- No evidence of patellar instability
- No soft tissue complaints
- Normal gait pattern
- Clearance from physician to begin more concentrated closed kinetic chain exercises and resume full or partial activity

### **Goals:**

- Continue improvements in quadriceps strength
- Improve functional strength and proprioception
- Return to appropriate activity level

### **Therapeutic Exercises:**

- Progression of closed kinetic chain activities
- Jogging in pool with wet vest or belt
- Functional progression, sport-specific activities of work hardening as appropriate