

## Medial Patellofemoral Ligament Reconstruction +/- Trillat Tubercle Transfer

PHYSICAL THERAPY PROTOCOL

---

### Rehabilitation Goals

**Restore flexion as soon as possible. MPFL is tight in extension, and looser with flexion, so pushing early flexion WILL NOT harm ligament reconstruction. Stiffness/ loss of flexion is the most common complication of this procedure, so PLEASE PUSH EARLY FLEXION!!**

### PHASE I: Protective Phase

#### Goals:

Minimize pain and inflammatory response  
Progress ROM goals  
Quad activation and control

#### POST-OP WEEKS 1-4

- **Brace:**
  - WBAT as soon as possible, quad firing will not disturb the reconstruction. But lock brace for early WB in case quad gives out
  - SLR with no extension lag
  - Good quad control
- **Exercises**
  - Quad sets (SLR's) hourly +/- e-stim (4 directions)
  - Ankle pumps, HS and gluteal sets
  - Active extension from 90-50 degrees out of brace
  - Patella Mobs – superior/inferior and med/lat
  - AROM/PROM exercises – (0-90 degrees) AT LEAST, but go further if you can
  - Hip flexor exercises, hip abductor exercises
- **Criteria to progress to phase II**
  - Minimal swelling
  - Gait with full extension
  - Ability to lock knee while weight bearing

### PHASE II: Motion and Increased Activity

#### Goals:

Achieve ROM goals  
Minimize swelling  
Improve quad function

#### POST-OP WEEKS 5-8

# Medial Patellofemoral Ligament Reconstruction

POST-OPERATIVE INSTRUCTIONS

---

- Can discontinue brace if quad control adequate around week 6
- Advance to FWB/no crutches over this phase
- Exercises
  - Increase AROM/ PROM
  - Stationary bike: Start with no resistance. Advance duration as tolerated
  - Resisted gastroc/soleus exercises with theraband only
  - Progress to bilateral toe raises and then to unilateral toe raises
  - Resisted hamstring curls with therabands
  - Step-ups (lateral and forward) on 2-4 inch steps. Progress as tolerated
  - Forward and backward walking with theraband around thighs
  - Ankle weights to SLR if no extension lag.
- Criteria to progress to Phase III
  - Full active extension and 110 degrees of flexion
  - No extension lag
  - Good quad control on single leg stance
  - Stairs foot over foot
  - WBAT

## PHASE III: Strengthening and Advanced Conditioning

### Goals:

Full ROM

Normal Gait

No swelling or pain

Normalize strength, endurance and power for age

Return to full ADL's and recreational activities

### Precautions:

In Tibial Tubercle Osteotomy patients, NO RESISTED QUAD EXTENSIONS OR LEG PRESS UNTIL OSTEOTOMY SITE IS HEALED. Please call us to confirm healing before quad strengthening is started.

## POST-OP WEEKS 9-12

- Stationary cycle with light resistance
  - RPM>80
  - Progress to 15-20 minutes per day
- Leg Press or Total Gym 40-45 degrees knee flexion toward full extension
- Calf raises using leg machine to add resistance
- Proprioception exercises
  - Balance Board/BABS
  - Theraband "kicks" (wt bear on operative leg)
  - Pool program if available
  - Resistance Walking (forward/backward)
  - Hip exercises (all muscle groups)
- Stair stepper or seated Kinitron if no anterior knee pain
  - Begin for 1-5 minutes
  - Short steps (4-6") Can gradually increase time to 15 minutes

## POST-OP WEEKS 12-16

- Program
  - Increase intensity and resistance for exercises above
  - Heel taps

# Medial Patellofemoral Ligament Reconstruction

POST-OPERATIVE INSTRUCTIONS

---

- Start light agility drills, Carioca, Single-leg hopping on total gym
- Slow lunges with tubing

## POST-OP WEEKS 16-20

- Exercises
  - Perform isokinetic testing (180deg/sec) or single leg hop multiple for distance
  - Begin light jogging on treadmill
  - Lunges and side-to-side and front-back agility work
  - Side-to-side jumps and hops
  - Side-to-side steps
  - Single leg hopping off total gym
  - Braiding vi. Jumping rope
- Weight machines
  - Increase weight and intensity for all lower extremity muscle groups
  - 10% increases weekly
- Open and closed chain exercises
- Plyometrics
- HEP