

# Postoperative Rehabilitation Protocol for MPFL Reconstruction with TTO and/or Trochleoplasty



Dr. MacLean

Physical therapy should be started within a few days after surgery

## Postoperative weeks 0-6

### PRECAUTIONS/RESTRICTIONS

- Weight-bearing
  - 0-6 weeks: 50% weight bearing. Avoid full weight bearing for first 6 weeks
- Brace:
  - 0-2 weeks: 0-70 degrees
  - 2-4 weeks: 0-90 degrees
  - Unlock brace after week 4
  - Leave brace unlocked at all times following nerve block resolution
  - Brace may be removed while sleeping, for hygiene and therapy
  - Avoid ambulation without brace for first 6 weeks
- Avoid lateralization of patella

### RANGE OF MOTION

- AAROM and PROM with flexion and extension
- ROM criteria as above (under brace settings)

### STRENGTHENING

- Restore quadriceps recruitment
- Hip progressive resistive exercises: pain-free SLR with brace if lag is present
- Ankle pumps
- Quad sets (consider NMES for poor quad sets), Glute sets
- SLR – 4 way
- Hamstring activation – heel slides, hamstring sets, bridges

### MODALITIES PRN

## Postoperative weeks 7-10

### PRECAUTIONS/RESTRICTIONS

- Be aware of concomitant procedures and restrictions they pose to rehabilitation (ie. Tibial tubercle osteotomy or articular cartilage procedure)
- Avoid lateralization of patella
- Normalize gait pattern with fully extended knee in effort to fight quadriceps avoidance

### RANGE OF MOTION

- Knee extension: full PROM and AAROM to full knee extension
- Limit ROM 0-110 degrees (until 8 weeks)
- ROM 0-120 degrees by 10 weeks
- ROM to full flexion by 10+ weeks

### STRENGTHENING

- Progress quadriceps strengthening
- Advance proximal strength and core training
- Initiate balance and proprioceptive training
- Suggested exercises
  - Continue phase 1 exercises as appropriate
  - Gait training: heel toe gait pattern [with adequate quad control (SLR without a lag, ability to achieve terminal knee extension) and knee ROM] to ensure normal loading response
  - Underwater treadmill (adequate wound healing) or anti-gravity treadmill for gait: Low grade elevation or retro-walking
  - Progress pain-free arc of motion, close chain preferred
  - Submaximal multi angle isometrics
  - Leg press: monitor arc of motion (bilateral, eccentric)
  - Initiate forward step up (FSU) progression, 6" step with adequate strength
  - Stationary Bike – progress seat height and resistance as tolerated

*If you have any problems or questions, please call your doctor's office (8am-5pm).*

*Answering service for after hours.*

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- Hip extension with knee flexion, side planks, bridge
- Balance and proprioceptive training: double limb support on progressively challenging surfaces to single limb support on level surface only with demonstration of good alignment, stability, and control

#### MODALITIES PRN

## Postoperative weeks 11-18+

#### PRECAUTIONS

- Avoid symptom provocation
- Correct any gait deviations in ROM or patellar tracking

#### RANGE OF MOTION

- Maintain full ROM

#### STRENGTHENING

- Advance proximal strength through functional activities
- Balance progression with postural alignment and N-M control
- Suggested Exercises
  - Balance progression with postural alignment and N-M control (static to dynamic, introduce different planes of motion, challenging surfaces)
  - Address muscle imbalances
  - Promote cross training: elliptical, stationary bike, swimming
  - Initiate running progression (late phase)
  - Initiate bilateral leg plyometric program with MD clearance and evidence of good eccentric quadriceps control

## Postoperative weeks 19-24 (advanced strengthening and function)

#### GOALS

- If isokinetic testing available, aim for 85% limb symmetry index (LSI) at 180° / sec and 300° / sec
- Cardiovascular fitness to meet demands of sport

#### PRECAUTIONS

- Pain with therapeutic exercise & functional activities
- Inadequate strength, functional strength, ROM, flexibility, fitness when returning to sport

#### RANGE OF MOTION

- Maintain full ROM

#### STRENGTHENING

- Continue to advance LE strengthening, flexibility, dynamic single limb stability & agility programs
- Suggested Exercises
  - Continue to advance LE strengthening, flexibility, dynamic single limb stability & agility programs
  - Address muscle imbalances – evaluation-based
  - Advance core stability
  - Continue cross training
  - Advance plyometric program with MD clearance and evidence of good eccentric quadriceps control
  - Vertical jumping progression: Jump down
  - Horizontal jumping progression: Broad jump, single leg landings
  - Progress running program
  - Cutting, deceleration, change or direction with MD clearance and dynamic single limb stability

## Criteria for discharge/return to sport

#### GOALS

- If available - Isokinetic test at 180° / sec and 300° / sec: 85% limb symmetry index (LSI)
- Demonstrate symmetry, quality, and alignment during selected movement patterns
- Medical clearance by surgeon for return to play progression
- Lack of apprehension with sport specific movements
- Hop Test > 85% limb symmetry
- Demonstrate quality of movement with required sports specific activities