

Postoperative Rehabilitation Protocol for **MPFL Reconstruction**

**Physical Therapy should be started within a week after surgery*

Postoperative weeks 0-6

- Precautions / Restrictions
 - Weight bearing
 - 0-2 weeks: 50% weight bearing
 - 2-4 weeks: weight-bearing as tolerated in brace with appropriate assistive device on level surfaces and stairs
 - Brace:
 - 0-4 weeks: 0-90 degrees
 - Leave brace unlocked at all times following nerve block resolution
 - Brace may be removed for hygiene and therapy
 - Avoid ambulation without brace for first 4 weeks
 - Avoid lateralization of patella
- Range of Motion
 - AAROM and PROM: 0-90 degrees with no forced flexion
- Strengthening
 - Restore quadriceps recruitment
 - Ankle pumps
 - Quad sets (consider NMES for poor quad sets), Glute sets
 - SLR – 4 way
 - Hamstring activation – heel slides, hamstring sets, bridges
 - Balance / proprioception as tolerated
- Modalities PRN

Postoperative weeks 7-10

- Precautions / Restrictions
 - 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 0 to full flexion by 10+ weeks
- Strengthening
 - Progress quadriceps strengthening
 - Advance proximal strength and core training
 - Initiate balance and proprioceptive training
- Suggested exercises

- 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
- 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
- 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
- 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:

- 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