

MPFL RECONSTRUCTION WITH TIBIAL TUBERCLE OSTEOTOMY

## Physical Therapy, Strength and Conditioning

### PHASE I: MAXIMUM PROTECTION (WEEKS 0 TO 2)

- Touch down weighting bearing on operative leg for 6 weeks
- Brace locked in extension for six weeks when upright and mobilizing

#### Weeks 0-2

- Reduce inflammation
- Normalize patella mobility with manual mobilizations
- Begin submaximal quadriceps activation
- Keep knee at 0 degrees flexion

#### Weeks 2-4

- Reduce inflammation
- Continue patellar mobilizations
- Range of motion 0-60 degrees
- Continue submaximal quadriceps activation
- Isometric hamstring/groin exercises

#### Weeks 4-6

- Range of motion 0-90 degrees
- Begin straight leg raises
- Continue hamstring/groin exercises

### PHASE II: PROGRESSIVE RANGE OF MOTION AND EARLY STRENGTHENING (WEEKS 6-12)

#### Weeks 6-8

- Full weight bearing
- Open brace to 60° of flexion with weight bearing during week 6, 90° at week 7
- Continue with swelling control and patella mobility
- Gradually progress to full range of motion
- Normalize gait pattern
- Multi-plane straight leg raising and closed kinetic chain strengthening program
- Gradual bilateral closed chain progression
- Gradual step up progression
- Begin stationary bike
- Initiate shallow and deep water pool program

**Weeks 8-10**

- Wean out of brace
- Normalize gait pattern
- Restore full ROM
- Add light gym strengthening (leg press and hamstring curls)

**Weeks 10-12**

- Full ROM
- Terminal quadriceps stretching
- Advance closed chain and gym strengthening program
- Add treadmill walking and elliptical trainer

**PHASE III: PROGRESSIVE STRENGTHENING (WEEKS 12 TO 16)**

- Full ROM
- Advance closed chain and gym strengthening
- Increase intensity on bike, treadmill, and elliptical trainer
- Initiate shallow water pool running program

**PHASE IV: ADVANCE STRENGTHENING, FUNCTIONAL DRILLS (WEEKS 16 TO 20)**

- Begin linear land based running program
- Advance to lateral and rotational drills as tolerated

**PHASE V: PLYOMETRIC DRILLS, RETURN TO SPORT (WEEKS 20 TO 24)**

- Advance gym strengthening
- Progress running/sprinting program
- Begin multi-directional field/court drills
- Begin bilateral progressing to unilateral plyometric drills
- Follow-up appointment with physician
- Sports test for return to competition **6 months post-op** per physician's release