

# MPFL Reconstruction Post-op Protocol

## General Goals:

1. Restore normal joint function
  - a. Control pain and inflammation
  - b. Restore range of motion
  - c. Restore muscle strength
  - d. Improve proprioception and agility
  - e. Restore endurance
  
2. Return to pre-injury unrestricted and sporting activity
  - a. 90% muscle strength and endurance as determined by hop test  
(3 consecutive SLH for distance at 90% of contralateral normal)

## Post-op Phases:

1. **Phase I** ( 0-4 weeks )
  - a. Brace: TROM locked in extension (*with PWB for Dr. Loughran's patients and WBAT for Dr. Cheatham's patients*), SLR with no extension lag, and good quad control
  - b. Exercises:
    - Quad sets (SLR's) hourly +/- e-stim in 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 and PROM exercises from 0-90 degrees
    - Hip flexor exercises, hip abductor exercises



2. **Phase II** ( 5-8 weeks )

a. Criteria to progress to phase II

- Minimal swelling
- Gait with full extension
- Ability to lock knee while weight bearing

b. Can discontinue brace beginning week 5 – (*Dr. Loughran's patients will advance to FWB without crutches in this phase*)

c. Exercises

- Increase AROM/PROM beyond 90 degrees – no limits
- Stationary bike – no resistance. Advance duration as tolerated
- Resisted gastroc/soleus exercises with theraband only
- Progress to bilateral toe raises and then unilateral toe raises
- Resisted hamstring curls with therabands
- Step-ups (lateral and forward) on 2-4 inch steps. Increase as tolerated.
- Forward and backward walking with theraband around thighs
- Ankle weights to SLR if no extension lag

3. **Phase III** ( 9-12 weeks )

a. 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

b. Program

- Stationary cycle with light resistance with RPM >80, progress to 20 minutes per day
- Leg Press or Total Gym with 40-45 degrees of knee flexion toward full extension
- Calf Raises using leg machine to add resistance
- Proprioception exercises: Balance board/ BABS
  - Theraband kicks (WB on operative leg)
  - Pool program if available
  - Resistance Walking forward/backward
  - Hip exercises with all muscle groups
- Stairstepper or seated Kinitron if no anterior knee pain : begin with 1-5 minutes with short steps ( 4"-6" ) and gradually increase to 15 minutes

4. **Phase IV** ( 12 weeks + )

a. Criteria to progress to phase IV

- Full AROM
- Normal gait
- No swelling, no pain

b. Program

- Increase intensity and resistance for exercises above
- Heel taps
- Start light agility drills with carioca and single-leg hopping on total gym
- Slow lunges with tubing

c. Exercises at 16 weeks

- Perform isokinetic testing (180deg/sec) or single leg hop 3 consecutive for distance
- Begin light jogging on treadmill
- Lunges and side-to-side and front-back agility work including side to side jumps, hops, and steps
- Single leg hopping off total gym
- Braiding
- Jumping rope
- Weight machines: increase weight and intensity for all lower extremity muscle groups, 10% increases every week, open and closed chain exercises, plyometrics
- HEP