

## Medial Patellofemoral Ligament Reconstruction Rehabilitation Protocol

\*It is important to understand that all time frames are approximate and that progressions should be based on individual monitoring as well as type of surgery.

MPFL Reconstruction is an operation to correct for lateral patellar instability. These patients are often chronic/recurrent lateral patellar dislocators. Often times traumatic injuries lead to tears or avulsion injuries of the MPFL.

Rehab Considerations: Patients will utilize a brace that will be locked at 0 deg during all weightbearing activities for the first 2-4 weeks depending on quadriceps strength. ROM will be progressed as follows:

Week 0-1: 0°

Weeks 1-3: 0°→90°

Weeks 3-4: 0°→100°

Weeks 4-5: 0°→110°

Weeks 5-6: 0°→120°

Weeks 6-8: Full painfree ROM

### Phase I (0-4 weeks)

- Weight Bearing: Brace locked when ambulating. Unlock brace for weight bearing depending on quad control (2-4 weeks)
- Recommended Treatment:
  - Active warm-up: Nu-step, ¼-½ revolutions on bicycle (**per ROM precautions**)
  - Flexibility: hamstrings, gastroc-soleus complex, hip flexor.
  - Strength: quad sets, SLR 4-ways, TKE against T-band, NMES for quad/vmo reeducation
  - Gait training with cups (wks 2-4) to facilitate improved knee flexion in swing phase.
  - Balance/Proprioception exercises per weightbearing status.
  - Pain control: IFC and cryotherapy. Instruct patient to ice 4-5 times per day.

### Phase II (4-6 weeks)

- Weight Bearing: 100% weight-bearing without crutches (depending on quad control).  
: D/C Brace (week 6)
- Recommended Treatment:
  - Active warm-up: Bike, elliptical
  - Manual therapy: scar mobilization, patellar mobilizations (**avoid lateral glides**)
  - Flexibility: Hamstrings, gastroc/soleus, hip flexor, ITB.
  - Strength: wall slides, hamstring isotonic, heelraises, SLR 4 ways, total gym. Open kinetic chain knee extension from 0°→45° (**6 weeks**). Treadmill walking program.
  - Gait training: with small cones if continued lack of knee flexion in swing phase.
  - Balance/Proprioception: Double limb BOSU, single leg stance on solid surface progressing to conforming surfaces.
  - Pain control: IFC and cryotherapy for pain control as needed.

### Phase III (6-12 weeks)

- Weight Bearing: No restriction

- Recommended Treatment:
  - Active warm-up: Bike, elliptical, stepper
  - Flexibility exercises: hamstring, gastroc/soleus complex, hip flexor, ITB
  - Strength: OKC knee extension (**progress 0°→90° at week 8**), hip strengthening, heelraises, step-ups, step downs (eccentrics), lunges, squats, leg press, ambulate against resistance.
  - Balance/Proprioception: Continue with progressions double limb→single limb, solid surface→conforming surfaces, eyes open→eyes closed, predictable→unpredictable (perturbations).
  - Initiate Treadmill jogging program. (**week 12-16**)
    - Running progression
      1. Treadmill walking
      2. Treadmill walk/run interval
      3. Treadmill run
      4. Track: run straits, walk turns
      5. Track: run straits and turns
      6. Run on road

\*Progress to the next level when patient is able to perform activity for 2 miles without increased pain or effusion. Perform no more frequently than every other day. Do not progress more than 2 levels in a day period.

#### **Phase IV (months 4-6)**

- Agility drills/plyometrics
- Transition to home gym program
- Progress running program in regards to distance and speed.
- Anticipate return to sport at 5-6 months.

\*Developed and reviewed by Rolando Izquierdo, M.D. (Updated March 2016)