

## **Medial Patellofemoral Ligament Reconstruction Rehabilitation Protocol**

Rehab Considerations: Patients will utilize a brace that will be locked at 0° during all weight bearing 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 pain free 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 weight bearing 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 isotonics, 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, heel raises, 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

### **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.