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## **Post-Operative Rehabilitation Guidelines for MPFL Reconstruction**

### **Week 1-2:**

25% Weight bearing, brace locked in extension at all times, sleep with brace locked straight

### **Weeks 2-4:**

Wean out of crutches after 2 weeks and good quadriceps control

WBAT in brace, unlock for ambulation (30°-progress to fully open by 4 weeks)

Sleep with brace locked in full extension until the end of week 2

Continue muscle activation if necessary (NMES with Quad setting or FES)

Promote knee flexion:

- Goal 90° by end of week 2
- Goal 120-130° by end of week 4

#### **Exercises:**

Medial patellar mobilization

Stationary bike for ROM, ITB stretching

Proprioceptive neuromuscular facilitation

Progressive resistive exercises

Balance/ Proprioception

Manual/ Machine resisted leg press

Isometric knee extension 30°

Mini-squats progress up to 90°

Retro Treadmill/ Stairmaster

Hip abduction/ external rotation

Calf raises

Core

### **Weeks 4-12:**

Discontinue brace after 6 weeks or when ROM  $\geq 100^\circ$  and good quad control

Full ROM

Enhance strength

Enhance Balance/ Proprioception

Improve local muscular endurance

Initiate cardiovascular training

#### **Exercises:**

As previous

Scar massage

Functional strengthening (single leg squats, lunges, side lunges, hamstring bridging)

**8 weeks:**

Initiate open chain knee extension through full range

May begin squatting and lunging past 90° knee flexion

**Weeks 12-16:**

May begin straight ahead running at 12 weeks if following criteria are met:

- Stable patella- asymptomatic with all activity
- Isokinetic test- Quad Peak Torque Deficit  $\leq 25\%$  at 180°/sec and 300°/sec

**Exercises:**

Continue strength, endurance, proprioception progression

Begin bilateral low level plyometrics and progress as able

Begin agility drills and sport specific activities as able

**Weeks 16-24:**

Gradual return to unrestricted sports at 24 weeks if following criteria are met:

- Pain free running
- Functional tests ( $\geq 90\%$  and pain free with good neuromuscular control)
- Isokinetic test- Quad Peak Torque Deficit  $\leq 15\%$
- Cardiovascular endurance subjective to pre-morbid level

**Exercises:**

Single leg plyometrics

Cutting/ Pivoting drills with stutter step pattern

High intensity aerobic/anaerobic sport specific training

Advanced lower extremity strengthening

**RETURN TO SPORTS CRITERIA:**

- 90% functional tests
- $\geq 85\%$  Isokinetic test at 180°/sec and 300°/sec
- Full knee ROM
- 6 months post-op