

## Medial Patellofemoral Ligament Reconstruction Rehabilitation Protocol

### General Considerations

Patients are weight bearing as tolerated with brace locked in extension or 0-30 per Dr. Lucas' discretion. Crutch use as needed post operatively, advancing to no assistive device once able to walk with normal gait pattern, confidence, and safety.

In therapy progression of flexion in week one is 0-30, week two 30-60, and advancing flexion to 90 by week four. Advancement past 90 begins at week four. Attention to VMO strength and knee mechanics is crucial with no patellar mobilization exercises until week four.

### Phase I: Weeks 0-6

#### Brace

Brace locked at 0 for sleep to aid extension. 0-30 with weight bearing, unlocked for non-weight bearing.

#### Exercises

Passive ROM for extension and flexion within the guidelines established (0-30, 0-60, 0-90). Teach and encourage home exercise program for motion. 3 times per day. Must achieve and maintain extension. Progress mobility and function as tolerated.

Heel slides, heel props, prone hangs, wall slides, straight leg raises, hamstring isometrics, and quad sets. Can start high seat stationary cycling without resistance at week 4-5.

Quad sets in full extension if possible

Hip, ankle, and calf strengthening

Gait training, edema control, hamstring and calf stretching to aide extension

Balance and proprioception. Patellar mobilization can start at week 4.

Scar mobilization and soft tissue mobilization

## **Phase II: weeks 6-12**

### Brace

Brace unlocked for full ROM. Wean brace as tolerated. Perform most therapy without brace and focus on mechanics and technique.

### Exercises

Teach and encourage home exercise program to be performed daily. Progress knee bending with manual stretching and self-assisted exercises. Progress to full active ROM

Stationary bike with no resistance and normal seat height.

Treadmill and elliptical machine with short durations.

Continue all previous phase exercises for motion as needed.

Hamstring curls, toe raises, and elastic resistant cord exercises. Light resistance leg press with less than 90 degrees of knee bend. Weight shifts, short arcs, and proprioceptive exercises. Functional exercises with eccentrics of the quad group.

Closed chain exercises for lower extremity. Avoid greater than 90 degrees until week 6-8. Can consider aquatic exercise.

Add lateral exercises at week 8 and advance closed chain activity. Increase resistance as tolerated.

## **Phase III: 12-16**

### Exercises

Teach and encourage home exercise program. Can continue any previous exercise and stretches as needed, consider progressive resistance.

Begin light running program week 12 and functional running at week 16.

Sport specific exercises with focus on mechanics and technique.

## **Phase IV: weeks 16 +**

### Exercises

Likely transition to home exercise program with progressive resistance.

Continue to increase resistance, build endurance, and strength.

Advance running program, and possible plan for return to sport.

Begin agility and plyometric exercises.