

# Medial Patellofemoral Ligament Reconstruction

**Brian Bjerke, MD**  
Post-Operative Protocol

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## **Phase I – Maximum Protection (Weeks 0 to 6):**

- Weeks 0 to 2:**
  - Brace – six weeks (locked in full extension for 1<sup>st</sup> two weeks)
  - Use crutches weight 50% bearing x 2-4 weeks
  - Goals
    - Reduce inflammation
    - Normalize superior/inferior patella mobility with manual mobilizations
    - full extension
  - No Knee Range of Motion
  - Exercise progression
    - Quadriceps setting using NMES as needed
    - Gait training
  
- Weeks 2 to 4:**
  - Goals
    - Reduce inflammation
    - Full knee extension/hyperextension
  - 30 of knee flexion, progressing 30 degrees of motion/wk with goal of 90 degrees at week 6
  - Knee brace locked in full extension while ambulating
  - Progress off crutches
  
- Weeks 4 to 6:**
  - Exercise Progression
    - Quadriceps Setting
    - Straight Leg Raises
    - Multi-plane open chain hip strengthening
    - Bridge with knee extension (ball)
    - Lower extremity stretching (hamstring, calf, ITB)
    - Calf Raises

## **Phase II – Progressive ROM and Early Strengthening (Weeks 6 to 10):**

- Weeks 6 to 8:**
  - Goals
    - Progress out of brace over 2 weeks
    - Full knee extension/hyperextension
    - Knee flexion to 120 (progress as tolerated)
    - Normalize gait mechanics
    - Normalize patellofemoral joint and scar mobility
  - Exercise progression
    - Multi-plane open and closed kinetic chain hip strengthening
    - Step-up progression
    - Stationary biking and treadmill/outdoor walking
    - Deep water pool program when incisions healed; focus on ROM
    - Proprioception drills
  
- Weeks 8 to 10:**
  - Goals
    - Reduce inflammation
    - Full ROM
    - Normal gait
  - Exercise progression
    - Begin closed chain squat progression (mini-squat, etc)
    - Increase intensity of stationary bike program, may add elevation to treadmill walking and elliptical
    - Advance intensity of deep water pool program; focus on endurance training

## **Phase III – Advanced Strengthening and Endurance Training (Weeks 10 to 16):**

- Weeks 10 to 12:**
  - Goals
    - Full knee flexion and extension with terminal stretch
    - Progressive strengthening
    - Increase muscular endurance
  - Exercise progression
    - Squat progression: progress as tolerated with focus on swelling and pain
    - Controlled movement series
    - Focus on increased lower extremity flexibility

- **Weeks 12 to 16:**
  - Exercise progression
    - Conservative Gym Program (avoid leg extension and lunge due to stress on patella-femoral joint)
    - Outdoor biking – week 12
    - Lateral lunge progression – week 16
    - Shallow water pool running – week 16
    - Swimming free style – week 12
    - Backward elevated treadmill walking - week 12-16
    - Basic ladder series – 4+months

**Phase IV – Advance Strengthening and Running progression (Weeks 16 to 24):**

- **Exercise progression – (Weeks 16-20)**
  - Progress resistance with squat program
  - Linear running progression
  - Advanced ladder series
  - Basic plyometric box progression
  
- **Return to Sport and Functional Drills Phase (Weeks 20 to 24)**
  - Interval golf program
  - Advance ladder, hurdle, and plyo box progressions
  - Sport specific field/court drills with brace on
  - Non-contact drills
  - Follow-up examination with the physician
  - Sports test for return to competition at 6 months

**Please have the physical therapist call Dr. Bjerke at 952-456-7000 with any questions in regards to rehab protocol.**