

Medial Patellofemoral Ligament Reconstruction Protocol

Week 1: Visit #1 scheduled to begin within 2 weeks of surgery date

- Goals
 - Crutch Use: PWB
 - Brace Use/Ambulation: Keep post-op brace locked in full extension for ambulation PWB
 - Sleep with brace locked in full extension
 - Minimize Pain and Effusion-Compression wrap, elevation, ice
 - Maintain Full Knee Extension
 - Restore Quad Activation
 - Increase knee flexion – 10 degrees per day
- Exercises
 - PROM/Flexibility
 - Wall Slides
 - Seated Active Assistive Knee Flexion
 - Prone Dangle
 - Passive resting extension with heel prop
 - Hamstring/Calf Stretches
 - Manual Therapy
 - Patellar Mobilizations: medial, superior, inferior (avoid lateral glide)
 - Soft tissue mobilization of distal IT Band and lateral retinaculum
 - Strength
 - Promote Muscle Activation (NMES w/ Quad setting and/or Biofeedback)
 - Isometrics
 - SLR x 3 (Flexion, Adduction, Abduction)
 - Theraband Ankle Plantarflexion
 - Home Exercise Program

Weeks 2 – 4:

- Goals
 - Crutch use: Wean, discontinue crutches after 2 weeks
 - Brace Use/Ambulation: WBAT, Unlock post-op brace for ambulation (30 degrees – progress to open @4 weeks) if following criteria are met:
 - SLR without quadriceps lag (10 repetitions)
 - Active knee flexion range to greater than angle of brace

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

- Continue Muscle Activation if necessary (NMES with Quad Setting or FES)
 - Minimize Effusion and Pain
 - Promote Knee Flexion:
 - 90 degrees by end of week 2
 - 130 degrees by end of week 4
 - Good patellar mobility; medial patella mobilization (avoid lateral glide)
- Exercises
 - As previous

- Stationary Bike for ROM
- ITB stretching
- Proprioceptive Neuromuscular Facilitation, Progressive Resistive Exercises
- Balance/Proprioception
- Manual/Machine resisted leg press
- Isometric Knee extension 30 degrees
- Step Ups
- Mini-squats progress up to 90 degrees
- Retro Treadmill/stairmaster
- Hip abduction/external rotation
- Calf Raises
- Core

Weeks 4-12

- Goals
 - Wean, discontinue post-op brace **after 6 weeks** if following criteria are met
 - ROM greater than or equal to 100 degrees
 - Single Leg Squat 30 degrees with good knee control
 - Full ROM
 - Enhance Strength
 - Enhance Proprioception/Balance
 - 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 chair knee extension through full range
- May begin squatting and lunging past 90 degree knee flexion

Weeks 12-16

- Goals
 - May begin straight ahead running at 12 weeks if the following criteria are met:
 - Stable patella; asymptomatic with all activity
 - Isokinetic Test- Quad Peak Torque Deficit less than or equal to 25% at 180 degrees /sec and 300 degrees/ 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

- Goals
 - Gradual return to unrestricted sports at 24 weeks if the following criteria are met:
 - Pain free running
 - Functional Tests (greater than or equal to 90%) and Pain free with good neuromuscular control
 - Isokinetic test
 - Quadriceps Peak Torque Deficit less than or equal to 15%
 - Cardiovascular endurance to subjective 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
 - Greater than equal to 85% Isokinetic Test at 180 degree/sec, and 300 degree/sec
 - Full knee ROM
 - 6 months post-op
 - Recommended Functional Hop Test
 - Triple Hop for distance
 - Single Hop for distance
 - Lateral Hop (12"x12" squares separated by 12"-# of hops IN BOX_in 20 seconds)
 - Unilateral Vertical Jump