

Multi-ligamentous Knee Reconstruction ACL, PCL, MCL Postop Protocol

Core Rehabilitation Guidelines

- Brace at all times for 8 weeks, including sleep
- Immediately remove brace when in a safe environment to work on getting the knee to 90 degrees by 2 weeks – as early as postoperative day 1
- Remove the bandages wrapped around your leg on the third postoperative day
 - Keep the sticky dressings over your incision on until follow-up
 - Ok to shower thereafter as long as dressings are covered (Saran wrap, garbage bag)
- Toe touch weight bearing for 4 weeks, then wean off crutches and progress to full weight bearing by 6 weeks

Specific Timeline: 0-4 Weeks

- **Emphasize**
 - Aggressive patella mobilizations
 - Full knee extension with brace compliance
 - Range of motion
 - Improving quadriceps contraction
 - Controlling pain/effusion
- GOALS:
 - ROM:
 - Full passive extension by 2 weeks
 - Active flexion to 90 by 2 weeks
 - Normalize patella mobility
 - Weightbearing:
 - Toe- touch weight bearing
 - Control post-operative pain / swelling
 - Prevent quadriceps inhibition
 - Initiate BFR after first postop appointment (POD15)
 - Promote independence in home therapeutic exercise program
- BRACE INSTRUCTIONS:
 - Ambulate with brace locked in extension
- PRECAUTIONS:
 - Avoid heat application
 - Avoid prolonged standing/walking
- TREATMENT RECOMMENDATIONS:
 - Towel under heel for knee extension, patella mobilization, quadriceps re-education (NMES and /or EMG), hip progressive resisted exercises, proprioception training, SLR all planes (with brace), cryotherapy for pain and edema

- Emphasize patient compliance to HEP and weight bearing precautions/progression
- MINIMUM CRITERIA FOR ADVANCEMENT TO NEXT PHASE:
 - Able to SLR without quadriceps lag
 - 0° knee extension, 90 flexion by week 2

Specific Timeline: 4-6 Weeks

- GOALS:
 - Normalize ROM 0° - 125°, progressing to full ROM
 - Good patella mobility
 - Minimal swelling
 - Restore normal gait (non-antalgic) without assistive device
 - Ascend 8" stairs with good control, without pain
 - Stationary bike without resistance
- BRACE INSTRUCTIONS:
 - Continue wearing brace until 8 weeks
 - Unlock brace to 90° from 4-6 weeks
- TREATMENT RECOMMENDATIONS:
 - Progress R.O.M.
 - Quadriceps re-education (electrical stim, biofeedback).
 - Hamstring and hip progressive resistance exercises.
 - Straight leg raises.
 - Patellar mobilization.
 - Game Ready Icing Modality.
 - Gait Training
 - Discontinue crutches when gait is normal.
 - Continue home exercises
 - No lunges, elliptical, or stair master!
- PHYSICAL THERAPY FREQUENCY
 - Two to three times a week for 8 weeks
- MINIMUM CRITERIA FOR ADVANCEMENT:
 - ROM 0-125°
 - Normal gait pattern
 - Demonstrate ability to ascend 8" step
 - Good patella mobility
 - Functional progression pending functional assessment

Specific Timeline: 6-14 Weeks

- GOALS:
 - Restore Full ROM
 - Discontinue brace by 8 weeks if good quad control
 - Able to descend 8" stairs with good leg control & no pain
 - Improve ADL endurance
 - Improve lower extremity flexibility
 - Protect patellofemoral joint

- BRACE INSTRUCTIONS:
 - Continue wearing brace until 8 weeks minimum
 - **Unlock brace fully from 6 to 8 weeks**
 - DC brace after 8 weeks post-op
- TREATMENT RECOMMENDATIONS:
 - Progress shallow squat/leg press program, initiate step down program, advance proprioceptive training, agility exercises, retrograde treadmill ambulation/running, quadriceps stretching
 - Emphasize patient compliance to both home and gym exercise program
- PRECAUTIONS:
 - Avoid pain with therapeutic exercise & functional activities
 - Avoid running and sport activity till adequate strength development and MD clearance
- PHYSICAL THERAPY FREQUENCY
 - Two to three times a week for 8 weeks
- MINIMUM CRITERIA FOR ADVANCEMENT:
 - ROM to WNL
 - Ability to descend 8" stairs with good leg control without pain
 - Functional progression pending functional assessment
 - Emphasize
 - Improving quadriceps strength
 - Eccentric quadriceps control
 - Normalizing knee ROM and patella mobility
 - Minimizing knee effusion
 - Normal gait pattern

Specific Timeline: 13-24 Weeks

- TREATMENT RECOMMENDATIONS:
 - Quadriceps isotonics- full arc for closed chain strengthening
 - No open chain or active knee extension
 - Begin functional exercise program
 - Begin running program at 18 weeks – only if step down from 9-inch height is symmetrical
 - No deep squats or lunges or stair master
 - Elliptical is ok
- PRECAUTIONS:
 - Avoid pain with therapeutic exercise & functional activities
 - Avoid sport activity till adequate strength development and clearance from Dr Ramkumar
- PHYSICAL THERAPY FREQUENCY
 - Two to three times a week for 8 weeks

Specific Timeline: 25-36 Weeks

- TREATMENT RECOMMENDATIONS:

- Quadriceps isotonics- full arc for closed chain strengthening and progressive resistance
 - Advance functional exercise program
 - Progress running program
- PRECAUTIONS:
 - Avoid pain with therapeutic exercise & functional activities
- CRITERIA FOR DISCHARGE:
 - Quadricep LSI > 90% limb symmetry
 - Lack of apprehension with movements for activities of daily living
 - Flexibility to accepted levels of sport performance
 - Independence with gym program for maintenance and progression of therapeutic exercise program at discharge
- PHYSICAL THERAPY FREQUENCY
 - Two to three times a week for 8 weeks