

Multiligament Knee Reconstruction:
ACL and MCL Reconstruction
Physical Therapy Protocol

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Patient Name: _____

Date of Surgery: _____

Procedure: Right / Left ACL and MCL Reconstruction

Associated Procedure (checked if performed):

- Partial Meniscectomy
- Meniscus Repair

Frequency: 2x per week for _____ weeks

Key Features of protocol:

- Please prioritize range of motion with daily stretching, CPM use and physical therapy.
- Weight Bearing: NWB x 6 weeks. Increase weight bearing 25% per week afterwards for full weight bearing by 10 weeks.
- Brace use: Wean after 10 weeks. Locked in extension for walking and sleeping.
- Continuous Passive Motion (CPM) Machine: Starts POD 7. Start at 0-40°. Progress 5-10° per day as tolerated. 6 hours per day in 2 hour increments.
- Return to Sport: 9-10 months.

Phase I (0-6 weeks): *Period of protection*

- **Weightbearing:** Non-weight-bearing. Touch down weight-bearing permitted for transfers only.
- **Brace:** Locked in extension during ambulation and sleeping. Unlocked for PT, ROM exercises, and hygiene.
- **ROM:**
 - Progress PROM/AAROM/AROM. Goal: full extension and 90° of flexion by 2 weeks; >120° by 6 weeks.
 - Extension board and prone leg hangs out of brace with ankle weights (up to 10 lbs) recommended if difficulty obtaining full extension after 2 weeks.
 - Passive leg hangs out of brace to 90°
- **Therapeutic exercises:**
 - Patellar mobilization 5-10 minutes daily.

- Quad sets
- Straight leg raises with knee brace locked in extension.
- No restrictions to ankle/hip strengthening.
- No hamstring exercises

Phase II (6-12 weeks):

- **Weightbearing:** Gradually progression with brace progressively unlocked:
 - Week 6-7: 25% with brace locked in extension
 - Week 7-8: 50% with brace locked in extension
 - Week 8-9: 75% with brace unlocked from 0-30°
 - Week 9-10: Full weight-bearing with brace unlocked from 0-90°;
- **Brace:** Unlocked or removed unless walking or sleeping. Discontinued after week 10 if good quadriceps control.
- **ROM:** Advance active and passive ROM as tolerated. End range stretching may be accompanied by weighted prone heel hangs if full extension not yet achieved.
 - **Goal:** Full motion by 10 weeks.
- **Therapeutic exercises as above plus:**
 - As above
 - Begin toe raises
 - Isometric quad and hamstring strengthening
 - Advance core and hip
 - 8 weeks: Initiate stationary bike. The goal of this exercise is to work on fluid motion rather than an increase in strength. The patient should first start out with a total of 5 minutes on the exercise bike every other day. They may increase their time on the exercise bike as well as work up to 20 minutes daily based on their knee response to this activity. If there is any significant soreness or effusions (swelling) developing, the patient should decrease the total minutes and days utilizing the exercise bike.
 - 10 weeks: Begin and advance closed-chain strengthening between 0-90°

Phase III (>12 weeks):

- **Weightbearing:** Full weightbearing with normal gait.
- **ROM:** Full and painless. May perform aggressive end-range stretching if full ROM not yet achieved.
- **Therapeutic exercises:**
 - Advance closed chain strengthening as tolerated
 - Continue with stationary biking
 - Stairmaster and elliptical at 4 months
 - Walk-Jog Program initiated at 5 months
 - Initiation of impact may occur if the involved leg has at least 80% of the strength of the uninvolved leg when measured using a single leg squat test.
- **Progression Criteria to Functional Sports Assessment:** Dynamic neuromuscular control with multi-plane activities without instability, pain or swelling; ability to land from a sagittal, frontal and transverse plan; leap and jump with good control and balance.