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**CENTRAL INDIANA  
ORTHOPEDICS**

## **Knee MCL Reconstruction Rehabilitation Protocol**

The intent of this protocol is to provide the clinician with a guideline of the post-operative rehabilitation course of a patient that has undergone a repair or reconstruction of the medial collateral ligament of the knee. It is by no means intended to be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam/findings, individual progress, and/or the presence of post-operative complications. If a clinician requires assistance in the progression of a post-operative patient please consult with Dr. Camilleri.

Please reference the exercise progression sheet for timelines and use the following precautions during your treatments. Thank you for progressing all patients appropriately and please fax all progress notes to Dr. Camilleri's office or hand deliver with the patient. Successful treatment requires a team approach and we value your care for the patient as well as your input. Please contact Dr. Camilleri at any time with your input on how to improve the therapy protocol.



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### **Week 1-2**

- Ankle pumps every hour
- Post -op brace to maintain full extension.
- Quad sets & SLR (Brace on) with no lag
- TTWB with crutches
- Ice or Cryocuff Unit on knee for 20-30 minutes every hour
- Passive ROM exercises: Limits: 0 to 40 degrees.
- NO Hip adductor strengthening

### **Week 3-4 (ROM 0-75deg, TTWB)**

- Supervised PT 2- 3 times a week (may need to adjust based on insurance)
- Continue SLR's in brace with foot straight up, quad isometric sets, ankle pumps
- No weight bearing with knee in flexed position, TTWB with brace locked in full extension
- Patellar mobilization exercises
- Brace locked in full extension for ambulation and sleeping, and may unlock for sitting with limit 0-75deg.
- May **not** remove brace for HEP
- NO Hip adductor strengthening

### **Week 5 (ROM as tolerated, TTWB)**

- Continue with above exercises/ice treatments
- Advance ROM as tolerated with no limits with brace on
- Stationary bike for range of motion (short crank or high seat, no resistance) Ok to remove brace for bike here
- No weight bearing with knee in flexed position, continue TTWB with brace locked in full extension
- Perform scar massage aggressively
- Progressive SLR program for quad strength with brace on - start with 1 lb, progress 1 -2 lbs per week
- Hamstring and hip PREs
- Seated leg extension (90 to 40 degrees) against gravity with no weight
- NO side lying Hip adductor strengthening



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#### **Week 6 (TTWB)**

- Continue all exercises
- No weight bearing with knee in flexed position, TTWB with brace locked in full extension
- Flexion exercises seated AAROM
- AAROM (using good leg to assist) exercises (4-5x/ day) with brace on
- Continue ROM stretching and overpressure into extension
- SLR's - with brace on
- NO side lying Hip adductor strengthening
- Leg press 0-70 arc of motion

#### **Week 7 (WBAT)**

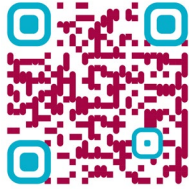
- Continue above exercises
- Start WBAT with brace on in full extension and D/C crutches when stable
- Hamstring and calf stretching
- Self ROM 4-5x/day using other leg to provide ROM
- Advance ROM as tolerated - no limits, may remove brace for ROM
- Regular stationary bike if Flexion > 115
- Heel raises with brace on
- Hip strengthening No side lying hip adduction

#### **Week 8**

- Continue above exercises
- Unlock brace for ambulation when quad control adequate
- Mini squats (0-60 degrees)
- 4 inch step ups
- Isotonic leg press (0 - 90 degrees)
- Lateral step out with therabands
- Hip strengthening

#### **Week 9**

- D/C brace if quad control adequate  
Advance ROM, Goal: 0 to 115 degrees, walking with no limp
- Add ball squats
- Initiate retro treadmill with 3% incline (for quad control)
- Increase resistance on stationary bike
- Mini-squats and weight shifts
- Sport cord (bungee) walking
- 8 inch step ups
- 4 inch step downs



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#### **Week 10**

- Begin resistance for open chain knee extension
- Swimming allowed, flutter kick only
- Bike outdoors, level surfaces only
- Progress balance and board throws
- Plyometric leg press
- 6-8 inch step downs
- Start slide board
- Jump down's (double stance landing)
- Progress to light running program and light sport specific drills if:
  - Quad strength > 75% contralateral side
  - Active ROM 0 to > 125 degrees
  - Functional hop test >70% contralateral side
  - Swelling < 1cm at joint line
  - No pain
  - Demonstrates good control on step down

#### **Week 11-22**

- Stairmaster machine
- If full ROM, quad strength > 80% contralateral side, functional hop test >85% contralateral side, satisfactory clinical exam:
  - Progress to home program for running. Progress to hops, jumps, cuts and sports specific drills. Begin to wean from supervised therapy.

#### **4-5 months**

- Criteria to return to sports
  - Full Active ROM
  - Quadriceps >90% contralateral side
  - Satisfactory clinical exam
  - Functional hop test > 90% contralateral side
  - Completion of a running program