

COLLATERAL LIGAMENT (MCL PC) RECONSTRUCTION

PT Protocol: Dr. Salvatore Frangiamore

****YOU NEED TO HAVE YOUR PHYSICAL THERAPY SCHEDULED TO START WITHIN ONE WEEK OF SURGERY. THIS IS EXTREMELY IMPORTANT.****

Rehabilitation exercises are essential for full recovery from your injury and subsequent surgical procedure. Following the guidelines and principles described below will minimize your recovery time and maximize return to full activity.

Immediate Post op Goals:

- **Full knee extension ROM (equal to uninjured knee)**
- **Active control of quadriceps muscle**
- Swelling controlled
- Knee flexion ROM 0-90°

Anticipate approximately 24-36 post-operative PT appointments (3x/week for the first month, 2x/week for second month, 1x-2x/week thereafter)

Walking without crutches by approximately 2 weeks after surgery

Back to desk type work/school within 1 week following surgery

Manage stairs normally by approximately 6 weeks after surgery

Begin running approximately 12 weeks after surgery

Progress back to sports 5-6 months after surgery if you have met the goals below

- **Please keep in mind- these are guidelines only.**
- **Other than specifics regarding bracing and early limitations, I trust your expertise to provide the best treatment strategy for my patients.**
- **if there are any questions don't hesitate to contact myself or my team**

Phase 1 (Weeks 0 to 6)

- 3 visits/week, everyday HEP
- Knee is kept in ROM brace at all times except for shower (including sleep, exercises, no exceptions)
- Quad sets→ may use e-stim and biofeedback to assist with quad control; increase # visit/week if quad inhibited
- Patellar mobilizations, especially superiorly
- Straight leg raises, 3 sets, 20-30 reps, 5x a day
- All passive knee flexion over edge of table or chair/prone knee flexion (using gravity or therapist) to be performed 5x/day
- Cryotherapy protocol continuously or icing program, 5x/day and 30 minutes each after exercises
- The patient may PWB with crutches brace locked in extension for 4 weeks, 2 weeks of weaning off crutches (6 total)
- Brace is to remain locked in extension for a minimum of 4-6 weeks
- ROM limited to 90° of knee flexion for first 4 weeks. OK to progress as tolerated after 4 weeks

Phase 2 (6 Weeks to 3 Months)

- 3 visits/week, 5x/week home program
- Continue all exercises in previous phase (as described above)
- Brace can be unlocked at all times (MUST REMAIN IN PLACE AT ALL TIMES INCLUDING SLEEP, EXERCISES)
- WBAT to begin with crutches, and the patient is expected to be off crutches by 8 to 12 weeks, provided the patient has full extension, can perform a SLR without an extension lag, and ambulates without a limp
- Patients may be weaned to one crutch (opposite arm, after 8 weeks) in order to normalize gait (no limp) and as long as full extension and no extension lag with SLR is obtained
- Begin quad exercises including mini-squats (0-45°), wall slide mini-squats (0-45°), and partial arc quads (45-90°), no weights
- Continue passive and active-assisted knee flexion to regain full flexion
- Stationary bike with no resistance, within flexion range, quadriceps only (NO TOE STRAPS)
- Toe raises with weights, step-ups (begin with 2" and progress to a full step)
- Crutches should be weaned off by the end of 3 months and gait should be normal.

ROM should be full by 3 months. If any extension lag is present (compared with contralateral knee) or less than 125° of flexion contact us

Phase 3 (3 to 5 Months)

- 1-2 visits/week, mostly a home program 5x/week
- Continue exercises in previous phases (as described above)
- Focus rehabilitation towards more closed-chain exercises including leg presses (0-60°), step-ups, mini-squats (0-60°), short arc quads (30-90°), and hamstring curls with light weights, high repetitions
- Endurance closed-chain quadriceps exercises should begin such as Stairmaster, stationary bike, elliptical trainer, Nordic trac, etc. Focus on increasing endurance and should be performed 3-4x/week
- Initiate proprioception/balance exercises including single-leg balance progression/wobble board
- Continue gait training, including progression to fast walking on a treadmill or even ground
- If a pool is available, swimming may start but frog-kick and breaststroke should be avoided
- Gait and ROM should be normal by this phase.

Phase 4 (5 to 7 Months)

- 4-5x/week home program, may also have 2 visits per month to review home program
- Continue exercises in previous phases (as described above)

- Begin slow jogging and progress to slow running on even ground or treadmill. No cutting, jumping, or pivoting
- Advance strengthening with weights including leg presses, step-ups, mini-squats, leg extensions, and leg curls (full motion). Repetitions should be smooth and slow and NOT explosive. May begin jump rope exercises. May advance swimming (no frog-kick or breaststroke)

Phase 5 (7 to 10 Months)

- 3-5x/week home program, may need physical therapy supervision for functional training
- Begin advanced strengthening with weights including leg presses, squats, leg curls, and lunges
- Initiate plyometric program as appropriate for patient's functional goals
- May begin functional training exercises including fast straight running, backward running, cutting, cross-overs, carioca, etc
- Begin gradual return to previous sports/activities/work duties under controlled conditions
- Full return to sports/activities/full work duties upon the following criteria:

Progression for Return to Sports/Full Activities:

1. Progress from physical therapy exercises to cardiovascular conditioning/strength training and then sport-specific activities
2. Progress from straight-ahead running to cutting and changes of direction
3. Progress to jumping/plyometric exercises as needed
4. Progress from controlled to uncontrolled situations
5. Progress from participating in limited practice ("safe" drills, limited repetitions), to full practice, and finally competition

Return to Sport Criteria→ your physician or physical therapist will "clear" you to return-to-sport when you have accomplished the following goals:

Final Criteria for Return to Sports/Full Activity

- Quadriceps and hamstring strength at least 90% of opposite leg
- One-leg hop test and vertical jump at least 90% of opposite leg
- Jog, full speed run, shuttle run, and figure 8 running without a limp
- Squat and rise from a full squat
- No effusion or quadriceps atrophy
- Satisfactory clinical examination