

Rehabilitation after Injury to the Medial Collateral Ligament of the Knee

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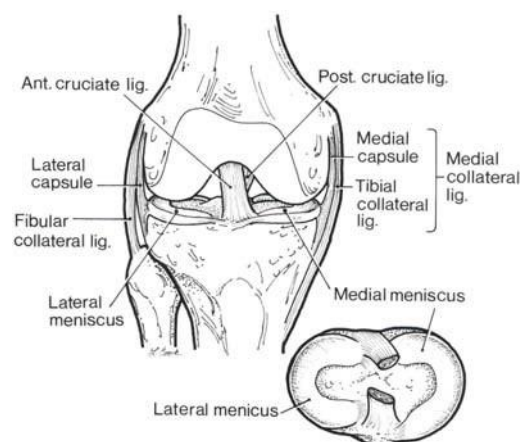
PHASE 1: THE 1ST 6 WEEKS AFTER INJURY, 3 WEEKS AFTER INJURY

The knee should be protected with a short-hinged brace for 3 to 6 weeks, depending upon the severity of the injury. Crutches and restricted weight bearing may be needed, as instructed by your doctor. Apply ice to control swelling.

Elevate the leg and use elastic stockings if the leg is swollen. As the pain lessens and the swelling decreases, try to gradually regain knee motion. Avoid pivoting or twisting the knee because it might be unstable and give out. Be careful getting out of cars, or catching your toe on a rug. When walking, bear weight according to your doctor's instructions.

Progress to no crutch(es) or brace when you can walk without a limp and there is no pain (per doctor instructions). Ice the knee if there is pain and swelling. Place a towel or cloth between the skin and the ice to prevent skin injury. Ice for 20 minutes, three times a day. At about two or three weeks following injury, the pain is usually subsiding and the swelling is lessened. You can now try to stretch the knee to regain motion.

Stationary cycle, swimming (flutter kick only) and the following exercise program are recommended.



EXERCISE PROGRAM

Stationary Bicycle

Days per week: 5-7

Times per day: 1-2

Utilize a stationary bicycle to move the knee joint and increase knee flexion. If you cannot pedal all the way around, then keep the foot of your injured leg on the pedal, and pedal back and forth until your knee will bend far enough to allow a full cycle. Most people are able to achieve a full cycle revolution backwards first, followed by forward. You may ride the cycle with no resistance for up to 10-15 minutes, 1 to 2 times a day. Set the seat height so that when you are seated on the bicycle seat, your knee is fully extended with the heel resting on the pedal in the fully bottom position. You should then actually ride the bicycle with your forefoot resting on the pedal.



Range of Motion and Strengthening Exercises (brace off)

Days per Week: 5-7

Times per Day: 1-2

Quadriceps setting	1-2 sets of 15-20 reps
Heel prop	5 minutes
Heel slides with towel assist	1 set of 5 to 15 minutes
Straight Leg Raises	3 sets of 10 reps
Short-Arc Lift	3 sets of 10 reps
Standing hamstring curl	3 sets of 10 reps
Standing toe-raises	3 sets of 10 reps
Hip abduction	3 sets of 10 reps
Partial squats	3 sets 15 reps
Wall slides	3 sets of 15 reps

You can obtain further information on exactly how these exercises should be performed by consultation and visits with one of our physical therapists. We have physical therapy at many locations for your convenience. For scheduling please call ***

We generally recommend formal physical therapy during treatment of a Medial Collateral Ligament due to an associated risk of permanent knee stiffness and also to help you return to activities as soon as possible.

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PHASE 2: SIX WEEKS AFTER INJURY ONWARD, 3 WEEKS AFTER INJURY

This handout is to help you rebuild the strength of the knee muscles after injury to the MCL of the knee. It is intended as a guideline to help you organize a structured approach to strengthen the knee.

EXERCISE PROGRAM

Range of Motion and Strengthening Exercises

Days per week: 3 Times per day: 1

Quadriceps setting	1-2 sets of 15-20 reps
Heel prop	5 minutes
Prone hang	5 minutes
Heel slides with towel assist	1 set of 5 to 15 minutes
Straight leg raises	3 sets of 10 reps
Short-Arc Lift	3 sets of 10 reps
Standing hamstring curl	3 sets of 10 reps
Standing toe-raises- single leg	3 sets of 10 reps
Hip abduction	3 sets of 10 reps
Squat to chair	3 sets 15 reps
Wall slides	3 sets of 15 reps
Single leg strengthening progression	see timeline

Stretching Exercises

Days per week: 5-7 Times per day: 1-2

Hamstring stretch	3-5 reps holding 15 to 30 seconds
Quadriceps stretch	3-5 reps holding 15 to 30 seconds
Calf Stretch	3-5 reps holding 15 to 30 seconds

Optional Additional Weight Training

Days per week: 2-3 Times per day: 1 3 sets of 20 repetitions

The following exercises may be added to your exercise program about 6 weeks after surgery:

Seated Leg Press (short-arc)	Roman Chair	Knee Extension machine
Hamstring Curl	Calf Raise Machine	Hip Flexor Machine
HIP abductor/Adductor Machine		

Cardiovascular Conditioning

Days per week: 1-2 Times per day: 1 Duration: 20-30 minutes

The following can be performed for conditioning: stationary bicycle, walking, rowing, elliptical trainer, and water workout

Single-Leg Strengthening Progression

At this time, it is important to begin the development of single-leg strength. Begin to follow the “Progression for Single Leg Strengthening” included in this packet.

PHASE 2 EXERCISE PROGRAM SUMMARY:

Frequency: 3 times a week

3 sets of 10-15 repetitions

- Leg Press
- Hamstring Curl
- Wall Slides
- Roman Chair
- Chair Squat
- Calf Raises or Calf Raise machine
- Knee Extension machine (short-arc)
- Hip Abductor/Adductor machine
- Hip Flexor machine
- Single leg strengthening progression
- Hamstring, Calf and Quadriceps stretching
- Quadriceps setting 20 repetitions, 3 times a day with heel prop

If you do not have access to gym equipment, the following exercises from Phase 1 can be substituted using ankle weights (Start with one pound and add one pound a week until 5 pounds): Straight leg raise, Short-arc lift, Side lying abduction, and Standing hamstring curl

PRECAUTIONS WHEN EXERCISING

- Avoid pain at the patellar tendon site
- Avoid pain and/or crepitus at the patella
- Build up resistance and repetitions gradually
- Perform exercises slowly avoiding quick direction change and impact loading
- Exercise frequency should be 2 to 3 times a week for strength building
- Be consistent and regular with the exercise schedule

Principles of Strength Training

- Warm-up prior to exercising by stationary cycling or other means
- You are “warmed –up” when you have started sweating
- Gently stretch all muscle groups next
- Do exercises involving multiple muscle groups first and individual muscle groups last
- Do aerobic workouts *after* strength workouts
- Cool-down by stretching after finishing exercise