

# Medial Collateral Ligament Sprain

## What is a medial collateral ligament sprain?

A sprain is a joint injury that causes a stretch or a tear in a ligament, a strong band of tissue connecting one bone to the other. The medial collateral ligament is located on the inner side of the knee. It attaches the thigh bone (femur) to the shin bone (tibia).

Sprains are graded I, II, or III, depending upon the severity of the sprain:

- grade I sprain: pain with minimal damage to the ligaments
- grade II sprain: more ligament damage and mild looseness of the joint
- grade III sprain: complete tearing of the ligament and the joint is very loose or unstable.

## How does it occur?

This injury usually occurs when a blow to the outer side of the knee causes stretching or tearing of the medial collateral ligament. It can also be caused by a twisting injury to the knee.

## What are the symptoms?

You will have pain on the innermost side of your knee. Your knee may be swollen and

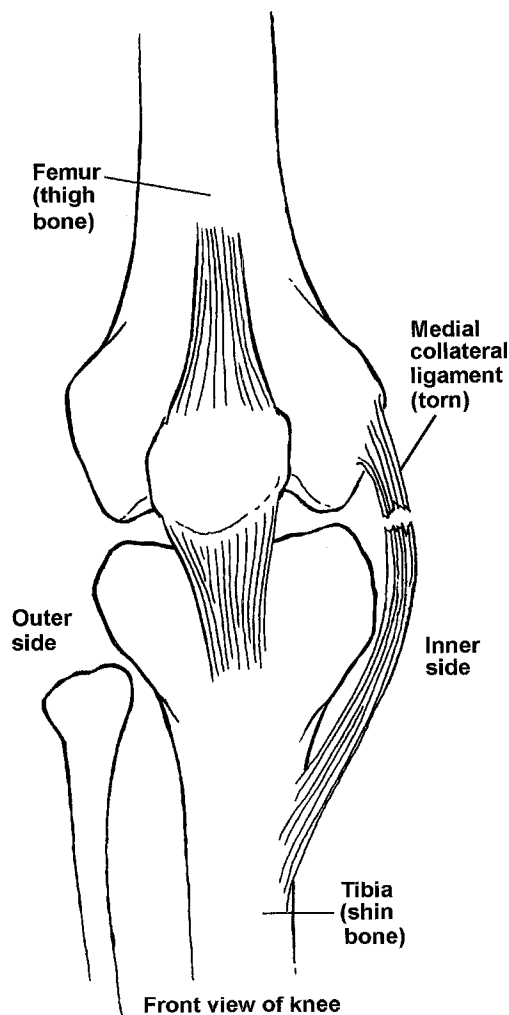
tender. You may have the feeling of the knee giving way. You might hear or feel a pop or snap at the time of injury.

## How is it diagnosed?

Your doctor will examine your

knee. Your doctor will gently move your knee around to see if the joint is stable and if the ligament is stretched or torn. He or she may order x-rays or a magnetic resonance image (MRI) of your knee.

## Medial Collateral Ligament Tear



## **Medial Collateral Ligament Sprain**

### **How is it treated?**

Treatment may include:

- applying ice to your knee for 20 to 30 minutes every 3 to 4 hours for 2 to 3 days or until the pain and swelling go away
- elevating your knee by placing a pillow underneath it
- taking an anti-inflammatory medication or other drugs prescribed by your doctor
- wearing a knee immobilizer or knee brace to keep you from moving and further injuring your knee and to minimize the pain of moving your knee
- using crutches
- doing rehabilitation exercises.

While you are recovering from your injury, you will need to change your sport or activity to one that does not make your condition worse. For example, you may need to swim instead of run.

### **When can I return to my sport or activity?**

The goal of rehabilitation is to return you to your sport or activity as soon as is safely possible. If you return too soon you may worsen your injury, which could lead to permanent damage. Everyone recovers from injury at a different rate. Return to your sport or activity will be determined by how soon your knee recovers, not by how many days or weeks it has been since your injury occurred. In general, the longer you have symptoms before you start treatment, the longer it will take to get better.

You may safely return to your sport or activity when, starting from the top of the list and progressing to the end, each of the following is true:

- Your injured knee can be fully straightened and bent without pain.
- Your knee and leg have regained normal strength compared to the uninjured knee and leg.
- Your knee is not swollen.
- You are able to jog straight ahead without limping.

- You are able to sprint straight ahead without limping.
- You are able to do 45-degree cuts.
- You are able to do 90-degree cuts.
- You are able to do 20-yard figure-of-eight runs.
- You are able to do 10-yard figure-of-eight runs.
- You are able to jump on both legs without pain and jump on the injured leg without pain.

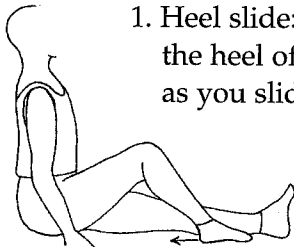
If you feel that your knee is giving way or if you develop pain or have swelling in your knee, you should see your doctor.

### **How can I prevent a medial collateral ligament sprain?**

Unfortunately, most injuries to the medial collateral ligament occur during accidents that are not preventable. However, you may be able to avoid these injuries by having strong thigh and hamstring muscles, as well as by maintaining a good leg stretching routine. In activities such as skiing, be sure your ski bindings are set correctly by a trained professional so that your skis will release when you fall.

## Medial Collateral Ligament Sprain Rehabilitation Exercises

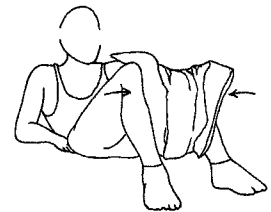
You may do exercises 1 through 5 right away. You may do exercises 6 and 7 when the pain in your knee has decreased.



Heel slide

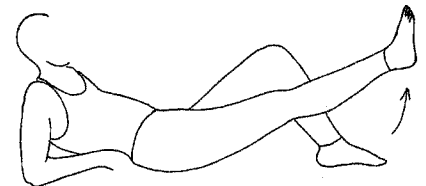
1. Heel slide: Sit on a firm surface with your legs straight in front of you, slowly slide the heel of your injured leg toward your buttocks by pulling your knee to your chest as you slide. Return to the starting position. Repeat 20 times.

2. Sitting hip adduction isometrics: Sit with your knees bent 90 degrees, a pillow placed between your knees, and your feet flat on the floor. Squeeze the pillow for 5 seconds and then relax. Repeat 20 times.



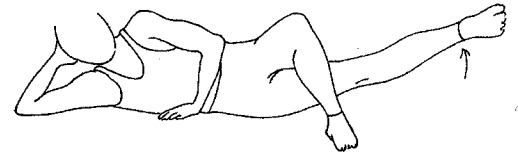
Sitting hip adduction isometrics

3. Straight leg raise: Sit on the floor with the injured leg straight and your other leg bent with your foot flat on the floor. Move the toes of your injured leg toward you as far as you can, while pressing the back of your knee down and tightening the muscles on the top of your thigh. Raise your leg 6 to 8 inches off the floor and hold for 5 seconds. Slowly lower it back to the floor. Repeat 20 times.

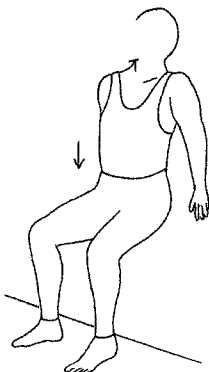


Straight leg raise

4. Hip adduction, sidelying: Lie on your injured side. Keep your injured leg straight. Bend your uninjured leg and place your foot in front of your injured leg. Raise your injured leg as far as you can comfortably and hold it for 5 seconds. Keep your hips still while you are lifting your leg. Hold this position for 5 seconds and then slowly lower your leg. Repeat 20 times.

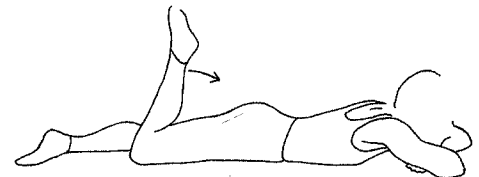


Hip adduction, sidelying



Wall slide

5. Prone knee flexion: Lie on your stomach. Bend your injured knee and try to touch your buttock with your heel. Return to the starting position. Repeat 20 times.



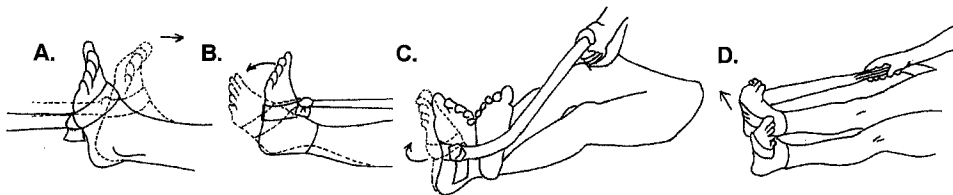
Prone knee flexion

6. Wall slide: Stand with your back, shoulders, and head against a wall and look straight ahead. Keep your shoulders relaxed and your feet 1 foot away from the wall and a shoulder's width apart. Keeping your head against the wall, slowly squat. Hold this position for 10 seconds. Slowly slide back up. Repeat 20 times.

## **Medial Collateral Ligament Sprain Rehabilitation Exercises**

### 7. Resisted Thera-Band exercises for the lower leg:

- A. **Resisted dorsiflexion:** Sit with your injured leg out straight and your foot facing a doorway. Tie a loop in one end of the Thera-Band. Put your foot through the loop so that the tubing goes around the arch of your foot. Tie a knot in the other end of the Thera-Band and shut the knot in the door. Move backward until there is tension in the tubing. Keeping your knee straight, pull your foot toward your face, stretching the tubing. Slowly return to the starting position. Repeat 10 times. Do 3 sets of 10.
- B. **Resisted plantar flexion.** Sit with your injured leg outstretched and loop the middle section of the tubing around the ball of your foot. Hold the ends of the tubing in both hands. Gently press the ball of your foot down and point your toes, stretching the Thera-Band. Return to the starting position. Repeat 10 times. Do 3 sets of 10.
- C. **Resisted inversion:** Sit with your legs out straight and cross your uninjured leg over your injured leg. Wrap the tubing around the ball of the foot on your injured leg and then loop it around your other foot so that the Thera-Band is anchored there at one end. Hold the other end of the Thera-Band in your hand. Turn your foot on your injured leg inward and upward. This will stretch the tubing. Return to the starting position. Repeat 10 times. Do 3 sets of 10.
- D. **Resisted eversion:** Sit with both legs stretched out in front of you, with your feet about a shoulder's width apart. Tie a loop in one end of the Thera-Band. Put the foot of your injured leg through the loop so that the tubing goes around the arch of that foot and the Thera-Band wraps around the outside of the foot on your uninjured leg. Hold onto the other end of the tubing with your hand to provide tension. Turn your injured foot up and out. Make sure you keep your other foot still so that it will allow the tubing to stretch as you move your injured foot. Return to the starting position. Repeat 10 times. Do 3 sets of 10.



**Resisted Theraband exercises for the lower leg**