

# Meniscal (Cartilage) Tear

## What is a meniscal (cartilage) tear?

The meniscus is a piece of cartilage in the middle of your knee. Cartilage is tough, smooth, rubbery tissue that lines and cushions the surface of the joints. There is a meniscus on the inner side of your knee (the medial meniscus) and a meniscus on the outer side (the lateral meniscus). They attach to the top of the shin bone (tibia), make contact with the thigh bone (femur), and act as shock absorbers during weight-bearing activities.

## How does it occur?

A meniscal tear can occur when the knee is forcefully twisted or occasionally with minimal or no trauma, such as when you are squatting.

## What are the symptoms?

You may have pain in your knee joint. You may have immediate swelling with fluid in the joint, called an effusion. You may be unable to fully bend or straighten your leg. Your knee may lock or get stuck in one place. You may hear a snap or pop at the time of the injury.

A chronic (old) meniscal tear may give you pain on and off during activities, with or without swelling. Your knee

may occasionally lock and you may have stiffness in the knee.

## How is it diagnosed?

Your doctor will examine your knee and find that you have tenderness along the joint line. Your doctor will move your knee in several ways that may cause pain along the injured meniscal surface. Your doctor may order x-rays to see if there are injuries to the bones in

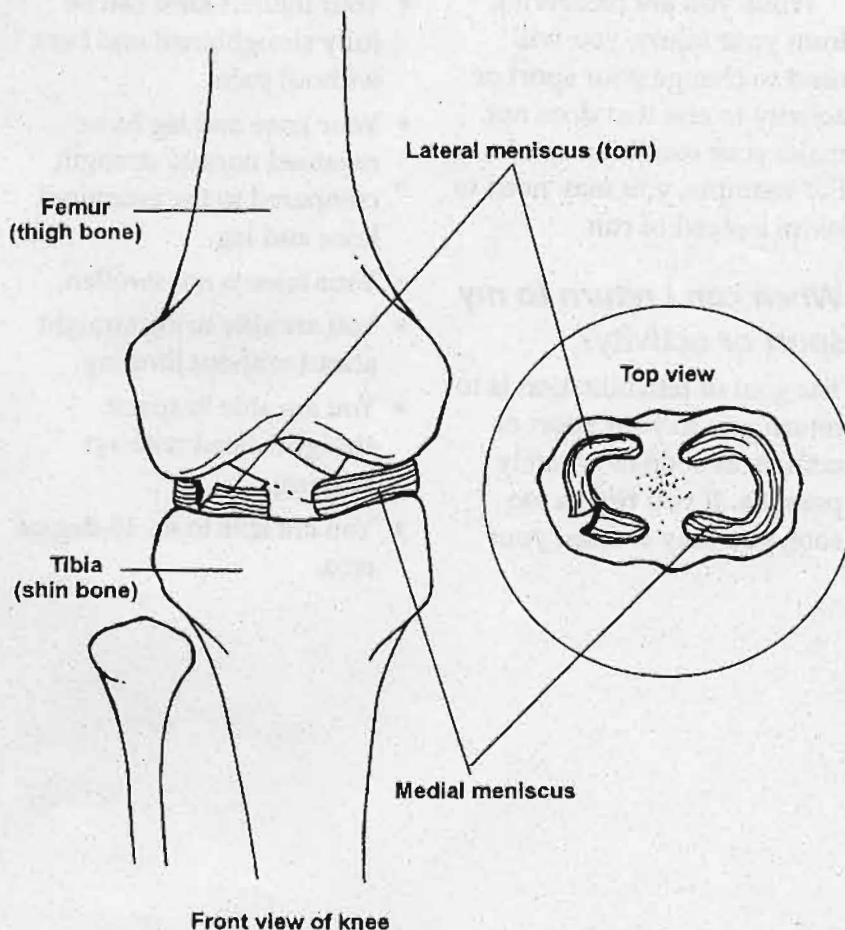
your knee, but a meniscal tear will not show up on a x-ray. An MRI (magnetic resonance imaging) is sometimes useful in diagnosing a meniscal tear.

## How is it treated?

Treatment may include:

- applying ice to your knee for 20 to 30 minutes every 3 to 4 hours for 2 or 3 days or until the pain and swelling are gone

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- elevating your knee by placing a pillow underneath your leg
- wrapping an elastic bandage around your knee to keep the swelling from getting worse
- wearing a knee immobilizer or other brace to prevent further injury
- using crutches
- taking anti-inflammatory or pain medication prescribed by your doctor.

Surgery is needed to repair or remove large torn pieces of cartilage.

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 a meniscal tear be prevented?***

Unfortunately, most injuries to knee cartilage 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. When skiing, be sure that your ski bindings are set correctly by a trained professional so that your skis will release when you fall.

## Meniscal (Cartilage) Tear Rehabilitation Exercises

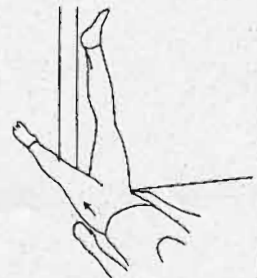
You may do exercises 1 through 3 right away. You may do exercises 4 through 6 when the pain in your knee has decreased.

1. **Standing calf stretch:** Facing a wall, put your hands against the wall at about eye level. Keep your injured leg back, your uninjured leg forward, and the heel of your injured leg on the floor. Turn your the foot of your injured leg slightly inward (as if you were pigeon-toed) as you slowly lean into the wall until you feel a stretch in the back of your calf. Hold for 30 seconds. Repeat 3 times.

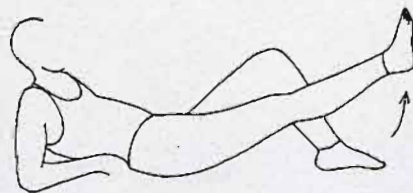


Standing calf stretch

2. **Hamstring stretch:** Lie on your back with your buttocks close to a doorway and extend your legs straight out in front of you along the floor. Raise your injured leg and rest it against the wall next to the door frame. Hold this position for 30 to 60 seconds. You will feel a stretch in the back of your thigh. Repeat 3 times.

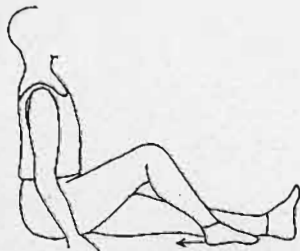


Hamstring stretch



Straight leg raise

3. **Straight leg raise:** Sit on the floor with your injured leg straight, your other leg bent, and 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.



Heel slide

4. **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 buttock by pulling your knee to your chest as you slide. Return to the starting position. Repeat 20 times.

5. **Wall squat with a ball:** 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. Place a rolled up pillow or a nerf ball between your thighs. Keeping your head against the wall, slowly squat while squeezing the pillow or ball at the same time. Squat down until your thighs are parallel to the floor. Hold this position for 10 seconds. Slowly stand back up. Make sure you keep squeezing the pillow or ball throughout this exercise. Repeat 20 times.



Wall squat with a ball

## Meniscal (Cartilage) Tear Rehabilitation Exercises

6. Step-up: Stand with the foot of your injured leg on a support (like a block of wood) 3 to 5 inches high. Keep your other foot flat on the floor. Shift your weight onto the injured leg and straighten the knee as the uninjured leg comes off the floor. Lower your uninjured leg to the floor slowly. Repeat 10 times.

