

Patellar Tendonitis

(Jumper's Knee)

What is patellar tendonitis?

Patellar tendonitis, also called jumper's knee, is pain in the band of tissue (the patellar tendon) that connects the kneecap (patella) to the shin bone (tibia).

How does it occur?

The most common activity causing patellar tendonitis is too much jumping. Other repeated activities such as running, walking, or bicycling may lead to patellar tendonitis. All of these activities put repeated stress on the patellar tendon, causing it to be inflamed.

Patellar tendonitis can also happen to people who have problems with the way their hips, legs, knees, or feet are aligned. This alignment problem can result from having wide hips, being knock-kneed, or having feet with arches that collapse when you walk or run, a condition called over-pronation.

What are the symptoms?

Symptoms may include:

- pain and tenderness around the patellar tendon
- swelling in your knee joint or swelling where the patellar tendon attaches to the shin bone

- pain with jumping, running, or walking, especially downhill or downstairs
- pain with bending or straightening the leg
- tenderness behind the kneecap.

How is it diagnosed?

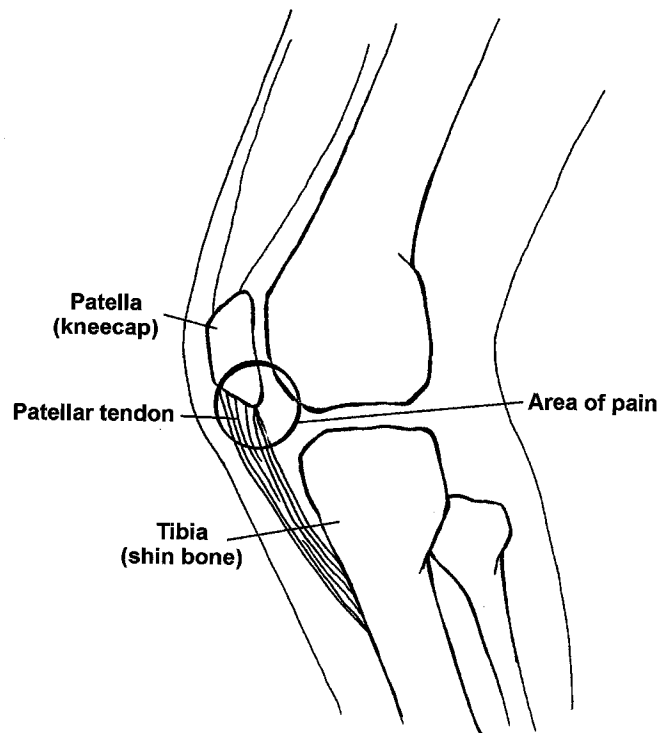
Your doctor will examine your knee to see if you have tenderness at the patellar tendon. He or she will also have you run, jump, or squat to see if this

causes pain. Your feet will be examined to see if you have a problem with over-pronation. Your doctor may take x-rays of your knee.

How is it treated?

In the early stages you should apply ice packs for 20 to 30 minutes every 3 to 4 hours for 2 to 3 days or until the pain goes away. Your doctor may prescribe an anti-inflammatory medication. He or she

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Side view of knee

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may also prescribe a band to wear across the patellar tendon, called an infra-patellar strap, or prescribe a special knee brace. The strap or brace will support your patellar tendon, preventing it from becoming overused or painful. If you have a problem with over-pronation, your doctor may prescribe custom-made arch supports called orthotics. You will be given rehabilitation exercises to help you return to your sport or activity.

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 play basketball.

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:

- 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.
- 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.

How can I prevent patellar tendonitis?

Patellar tendonitis is usually caused by overuse during activities such as jumping or running. It can best be prevented by having strong thigh muscles.

Patellar Tendonitis (Jumper's Knee) Rehabilitation Exercises

You can start doing exercise 1 as soon as it is not too painful to move your kneecap. You can do the hamstring stretch (exercise 2) right away. When the pain in your knee has decreased, you can do the quadriceps stretch and start strengthening the thigh muscles using exercises 4 through 6.

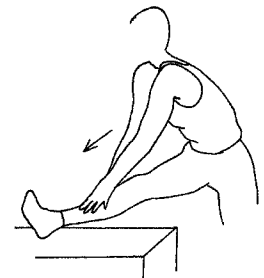
1. **Patellar mobility:** Sit with your injured leg outstretched in front of you and the muscles on the top of your thigh relaxed. Take your index finger and thumb and gently press your kneecap down toward your foot. Hold this position for 10 seconds.



Patellar mobility

Return to the starting position. Next, pull your kneecap up toward your waist and hold it for 10 seconds. Return to the starting position. Then, try to gently push your kneecap inward toward your other leg and hold for 10 seconds. Repeat these for approximately 5 minutes.

2. **Hamstring stretch:** Stand with the heel of your injured leg resting on a stool that is about 15 inches high. Keep your knee straight. Gently lean forward from your hips, keeping your shoulders in line with your trunk, until you feel a stretch in the back of your thigh. Hold this position for 30 to 60 seconds. Return to the starting position. Do not round your shoulders and bring your head toward your toe. This will only stretch your low back and not your hamstrings. Repeat 3 times.

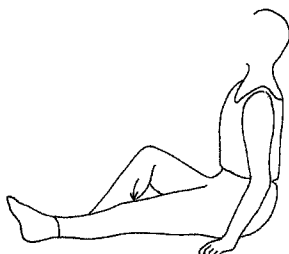


Hamstring stretch

3. **Quadriceps stretch:** Stand an arm's length away from a wall, facing straight ahead. Brace yourself by keeping the hand on the uninjured side against the wall. With your other hand, grasp the ankle of the injured leg and pull your heel up toward your buttocks. Don't arch or twist your back. Hold this position for 30 seconds. Repeat 3 times.



Quadriceps stretch

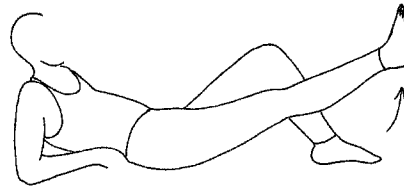


Quadriceps set

4. **Quadriceps set:** Sit on the floor with your injured leg straight out in front of you. Try to tighten the muscles at the top of your thigh by pushing the back of your knee down into the floor. Concentrate your contraction on the inside part of your thigh. Hold this position for 5 seconds. Repeat 10 times. Do 3 sets of 10.

Patellar Tendonitis (Jumper's Knee) Rehabilitation Exercises

5. **Straight leg raise:** Sit on the floor with your injured leg straight and the other leg bent so the foot is flat on the floor. Move the toes of your injured leg toward you as far as you can comfortably while tightening the muscles on the top of your thigh. Raise your leg 6 to 8 inches off the floor. Hold this position for 3 to 5 seconds and then slowly lower your leg. Repeat 10 times. Do 3 sets of 10.



Straight leg raise

6. **Weight lifting - leg extension:** Do these if you have access to a weight lifting bench with a leg extension attachment. Sit on the bench with the weight attachment in front of your lower legs. Extend your knees by straightening your legs. Be sure your legs straighten completely. The last 15 degrees of extension are the most important. Use enough weight to cause fatigue but not pain. Do three sets of 10.