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## Patellar Tendonitis - Jumper's Knee

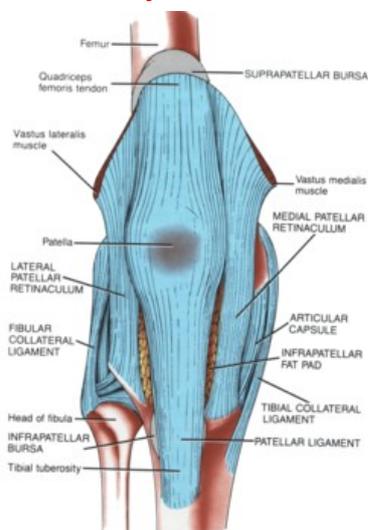
Knee pain and knee injuries, as a result of Patellar Tendonitis, can be an extremely painful and frustrating injury that puts a big strain on both the knee and hip joints.

Knee injuries like patellar tendonitis are very common among runners and cyclists, however it doesn't usually occur in an instant like a hamstring strain or groin pull, but commonly starts off as a twinge or niggle, and progresses quickly to a debilitating sports injury that can sideline the best of us.

### What is Patellar Tendonitis?

As with all cases of tendonitis, patella tendonitis is simply the inflammation, degeneration or rupture of the patellar ligament and the tissue that surround it, leading to pain and discomfort in the area just below the knee cap.

### Anatomy of the Knee



The picture to the right is a front-on view of the bones, tendons and ligaments that make up the knee joint. In the very center of the picture is the patella, or kneecap. The blue structure that runs downward from the patella to the tibia (shinbone) is the patella ligament.

On occasion you may hear of this structure being referred to as the patellar tendon, but for the purposes of anatomy and physiology this structure is a ligament, as it attaches the patella (knee cap) to the tibia (shin bone). Ligaments

attach bone to bone, while tendons attach muscle to bone.

## What causes Patellar Tendonitis?

Overuse is the major cause of patellar tendonitis. Activities that involve a lot of jumping or rapid change of direction are particularly stressful to the patellar ligament.

Participants of basketball, volleyball, soccer, and other running related sports are particularly vulnerable to patellar tendonitis.

Patellar tendonitis can also be caused by a sudden, unexpected injury like a fall. Landing heavily on your knees can damage the patellar ligament, which can lead to patellar tendonitis.

## What are the Signs & Symptoms of Patellar Tendonitis?

The major symptom of patellar tendonitis is pain in the area just below the kneecap. Activities like walking, running and especially squatting, kneeling or jumping will cause increased pain and discomfort. Swelling is also commonly associated with patellar tendonitis.

## Patellar Tendonitis Prevention

Although it is important to be able to treat patellar tendonitis, prevention should be your first priority. So what are some of the things you can do to help prevent patellar tendonitis?

1. **Warm Up properly**

A good warm up is essential in getting the body ready for any activity. A well-structured warm up will prepare your heart, lungs, muscles, joints and your mind for strenuous activity. **Avoid activities that cause pain**

This is self-explanatory, but try to be aware of activities that cause pain or discomfort, and either avoid them or modify them.

2. **Rest and Recovery**

Rest is very important in helping the soft tissues of the body recover from strenuous activity. Be sure to allow adequate recovery time between workouts or training sessions.

3. **Balancing Exercises**

Any activity that challenges your ability to balance, and keep your balance, will help what is called, proprioception: - your body's ability to know where its limbs are at any given time.

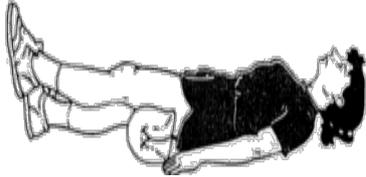
4. **Stretching**

To prevent patellar tendonitis, it is important that the muscles around the knee be

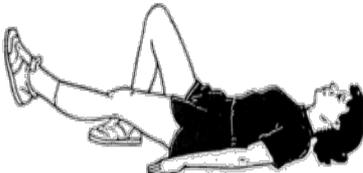
in top condition. Be sure to work on the flexibility of all the muscle groups in the leg.

## 5. Strengthening

**Short-arc extensions** are done sitting up or lying down. Use a rolled-up towel to support your thigh while you keep your leg and foot in the air for 5 seconds. Lower your foot as you bend your knee slowly. Repeat 10 times for each leg, twice a day.



**Straight-leg raises** are done lying down. Lift your whole lower limb at the hip with the knee extended, and keep it up in the air for 5 seconds. Then lower slowly. Repeat 10 times for each leg, twice a day.



**Quadriceps isometric exercises** are done sitting up, with your legs extended in front of you. Tighten your quadriceps muscles by pushing the knees down onto the floor. Hold for 5 seconds. Repeat 10 times each leg, twice a day.



**Stationary bicycling** on low tension setting improves your exercise tolerance without stressing your knee. Adjust your seat high enough so that your leg is straight on the down stroke. Start with 15 minutes a day and work up to 30 minutes a day.



## 6. Footwear

Be aware of the importance of good footwear. A good pair of shoes will help to keep your knees stable, provide adequate cushioning, and support your knees and lower leg during the running or walking motion.

## 7. **Strapping**

Strapping, or taping can provide an added level of support and stability to weak or injured knees.