

Patellar Tendinopathy (Jumpers Knee)

Knee pain arising in the absence of a traumatic incident is a common complaint among athletes involved in several different sports. There are various potential causes of knee pain one of which is patellar tendinopathy (sometimes called patella tendonitis or 'jumpers knee').

Symptoms

Pain can be felt anywhere over the front of the knee but the bottom part of the kneecap (patella) is generally tender to pressure. Pain is aggravated by jumping, bounding or hopping and there may be some discomfort associated with running or descending stairs. Symptoms usually come on gradually and patients describe a worsening of pain and increasing difficulty with their sport as the condition progresses.

In the initial stages, pain that is present at the start of an activity may ease as the player warms up and return again after the game stops. As the condition progresses pain will not ease during the game and becomes increasingly more constant during periods of rest.

How does it occur?

Patella tendinopathy refers to the pain associated with damage to the patella tendon. The patella tendon is responsible for transfer of force from the quadriceps to straighten the knee and overload can occur due to repeated forceful quadriceps contractions for example when jumping, fast squats or kicking. The tendon also acts as part of the shock absorption mechanism to protect the knee joint during weight bearing when landing for example when jumping or running. A sudden increase in these type of activities subjects the tendon to forces to which it is not accustomed and can lead to microtrauma (microscopic tears in the tendon). If insufficient rest time is allowed between stressful activities, the body is unable to repair the microtrauma and the tendon becomes progressively more damaged and symptoms are likely to worsen.

Any of several biomechanical factors may increase the likelihood of developing patella tendinopathy, these factors all serve to add to the force being transmitted through the patella tendon. Muscle tightness or weakness (gluteals, hamstrings, ITB, quadriceps, calf), poor pelvic (core) stability, knee or ankle joint stiffness or compromised nerve mobility can all predispose to patella tendon problems.

Management

The pain is an indication that damaged fibres of the patella tendon are being stressed, therefore it is important that painful activities are ceased in order to allow tissue healing. Rest from aggravating activities unloads the tendon and may be combined with techniques such as ice, massage and taping to enhance healing of the tendon. Your physiotherapist will also begin a treatment program to address the biomechanical factors listed above as appropriate, this may involve stretches, joint mobilisation and specific stability exercises. Rehabilitation of the tendon involves a strengthening program that is slowly progressed to become more relevant to your sport as time passes.

What to expect

You will need to take a break from jumping, bounding and running activities in order to reduce the stress on the damaged tendon. The duration of this rest period varies according to how long you have been experiencing the symptoms and how easily they are provoked, the demands of your activity will also be taken into account. The period of rest may be 2-8 weeks. You should not consider return to sport until all day-to-day activities are completely pain-free, and you will be advised to return to a lower intensity and duration to gradually increase the capacity of your tissues and minimise the risk of re-injury.

Physiotherapy Tips

1. Discontinue painful activities to allow symptoms to settle.
2. Tape or brace as directed.
3. Maintain fitness cycling or exercise in the water.
4. Perform the stretches and exercises as directed by your Physio.
5. Carefully plan a progressive return to running or sport, this will start with short runs on soft, flat surfaces.

Other sources of knee pain

1. Patellofemoral pain.
2. Fat pad impingement.
3. ITB friction syndrome.
4. Meniscal tear.