

Patellar Tendinopathy

Advice & Management

Patellar tendinopathy is a relatively common diagnosis that affects the tendon at the front of your knee. The patella tendon is the tendon that attaches the bottom of the patella (knee cap) to the top of the tibia (shin bone). This is most common in people who take part in sports that mainly involve running and jumping (such as tennis, football and basketball) however not exclusive to this.

What Causes Patellar Tendinopathy?

It is not fully understood why or how we get a patellar tendinopathy, but we do know that it is related to overuse. When a tendon is not able to adapt to the load that it is being put under, the tendon has been overused and this can lead to repeated microscopic damage within the tendon. This results in pain and thickening of the tissue.

This is sometime known as a tendinitis or a tendinosis. We use the word tendinopathy to encompass both of these diagnoses.

What are the Risk Factors for Developing a Patellar Tendinopathy?

Many factors affect the load being put through the tendon. If the tendon cannot deal with this load, eventually there will be pain and associated symptoms such as swelling, thickening and stiffness.

Other risk factors include:

- **Age:** most common after the age of 30
- **Gender:** most common in men
- **Weight:** people who are overweight are more likely to develop a tendinopathy
- **Flexibility:** weakness and tightness in the quadriceps can lead to playing a part in overloading the tendon
- **Conditioning:** poor stability and strength around the knee
- **Overtraining:** excessive load through the knee
 - Plyometrics/jumping
 - Repetitive squatting with heavy loads with a poor movement pattern
 - Too much hill running
 - Sudden increase in running distances and speed
 - Lack of strengthening and variation within training

Common Symptoms Associated with Patellar Tendinopathies

The most common symptoms are:

- Morning stiffness: people often complain of stiffness and creaking when they first get up in the morning or after they have been sitting still for a period of time. This usually eases with gentle movement and walking
- Tenderness over the patellar tendon: the tendon is often tender to touch just below the kneecap.
- Variable pain: it is common to be able to exercise through the pain, but after resting the pain may increase. Sometimes people can experience shooting pains through activity, which can stop them from doing their sport or activities.

Do I Need a Scan?

We do not need to complete imaging to diagnose a patella tendinopathy; it is easy to diagnose through your history of symptoms and presentation on assessment.

Self-managing your symptoms

- Ice: Applying a cold compress to the tendon can help you manage your pain. Apply for 20 minutes at a time for 3-4 times a day, or after exercise. Use a cloth to protect your skin and check the skin for any burns.
- Simple pain relief: over the counter medication can be used to help you manage your pain and symptoms. This can be discussed with your local pharmacist.
- Relative rest: You may be advised to stop your sport and rest for a period of time. However it is important to maintain your fitness in other ways to minimise strength loss. Our bodies love to move and gaining strength will be very beneficial for your tendons. However, resting the tendon and reducing load is important to reduce your pain. Other activities you can do are:
 - Swimming
 - Cycling
 - Pilates
 - Circuits
 - Weight training
 - Aerobics
- Muscle strengthening: Our muscles work as shock absorbers and support the tendon. Strengthening your quadriceps, hamstrings, calves and gluteal muscles help to provide good strength and stability around your knee. This will help to offload the patella tendon and improve your pain
- Rehabilitation: This can be with a physiotherapist or osteopath who can help guide you through strengthening exercises alongside movement education.
- Managing your weight: Being overweight puts additional stress on our bodies. There are multiple ways to help you manage your weight. This can help your symptoms and overall health ([link to health and wellbeing](#))

Rehabilitation

Eccentric exercise is the gold standard way of rehabbing a tendon. It is the process of lengthening a muscle under load and progressing this can increase your strength and reduce your symptoms.

Eccentric loading can be too much at the start of rehab, so static exercises are best to start with (see our *Patella Tendinopathy Exercises sheet*). You can then progress these to active strengthening exercises before adding loading and gaining further strength. When completing your exercises, do not push to further than a pain score of 3-4/10 and wait to see what the aftermath feels like before progressing your exercises.

It is not abnormal to feel a flare up of your pain initially, or after a period of increasing your load. Back off slightly and slowly rebuild again. The pain from squeezing the tendon is usually the last symptom to resolve, but the stiffness in the morning can improve quickly with appropriate rehabilitation and strengthening. [See our Get Moving and Get Strong exercises.](#)

Many people who gain strength and improve their movement patterns will be able to return to their daily activities without pain. It is not abnormal to experience flare ups of pain several months later if you increase your activity levels in a rapid way.