

Patellofemoral Pain Syndrome

What is it?

Patellofemoral Pain Syndrome (PFPS) refers to pain arising from the joint between the kneecap and the underlying thigh bone. Other names for this condition include Patellofemoral Syndrome and Runner's Knee.

What are the symptoms?

The main sensation associated with Patellofemoral Pain Syndrome is pain, felt behind and around the kneecap. PFPS is commonly aggravated by walking, running, going downstairs or sitting for a prolonged period with a bent knee. Associated with this pain may be grinding noises heard when the knee is bent or straightened, a sensation of the knee giving way and weakness in the knee as well as swelling.



How did I get it?

PFPS most often results from overuse of the knee. When the knee is bent and straightened, the kneecap (patella) slides up and down within a groove on the end of the thigh bone (femur). See figure 1. With repeated bending and straightening, such as during activities involving walking, running, jumping and cycling, the underneath surface of the kneecap can become irritated. This can result in pain and occasionally swelling. There is some controversy regarding how it occurs – previously it was believed that an imbalance of the thigh muscles was the main culprit however it is now thought that the hip musculature (which determines knee position) plays a significant role.

What should I do?

PFPS frequently does not get better on its own if the cause is not addressed and you continue your activity or sport. If you have or suspect patellofemoral syndrome, you should consult your nearest sports medicine professional. In the meantime, you should avoid any activities which aggravate or cause your knee pain to occur. Icing the front of your knee will be of benefit. Ice should be applied to the injured area for 15–20 minutes every 1–2 hours. Ideally, it should be applied using crushed ice wrapped in a moist cloth or towel.

If you have or suspect you have PFPS, you shouldn't ignore the problem. This may lead to your problem

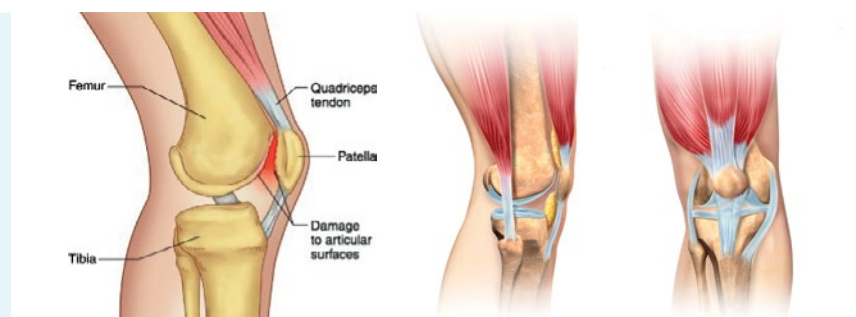


Figure 1 Note the area of the pain behind the knee cap and the damage within the knee cap and thigh bone region due to overuse

getting worse such that your pain becomes more severe and is felt more frequently. Patellofemoral pain syndrome does not produce any long-term effects, as long as it is properly diagnosed and appropriately treated. Recovery usually takes a number of weeks. During this period you can often keep participating.

Although in some situations recovery may be prolonged - in these cases, surgery may be required to assist in improving the biomechanics of the kneecap and to relieve pain. This is only performed after conservative or non-surgical treatment has failed to give relief.

How is a diagnosis made?

A diagnosis is made on the history of the injury. Often x-rays are ordered to rule out osteoarthritis which can mimic patellofemoral pain syndrome. Occasionally an MRI will be ordered to rule out other injuries.

What does rehab involve?

Physical and exercise based therapy must always be the mainstay of treatment. Leg strength, flexibility and function must be preserved. In severe cases, medications may be useful but can be avoided most of the time.

Initial activity modification is an important first step. If there is an activity that is provoking symptoms it should be ceased while an appropriate retraining program for the musculature takes place. Often deep squats are provocative. Avoiding these in the short term may be worthwhile. Cross training can be performed if required.

Exercise therapy with a physiotherapist is quite important. A stretching and strengthening program will most likely be highly effective. Traditionally, the knee muscles have been the focus of rehabilitation but the hip musculature and position sense is just as important - hip musculature and position, control positioning of the knee which influences how the thigh muscles pull on the kneecap.



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