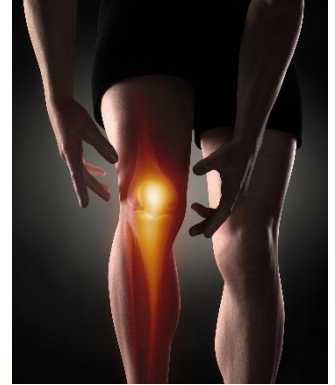


## KNEECAP INJURIES

The kneecap bone (patella) sits in a groove on the thigh bone (femur). As the knee bends and straightens, the normally functioning patella slides smoothly up and down in this groove, known as the femoral groove. The patella is held in place by the quadriceps muscles, the patellar tendon and ligaments on either side. Collectively, this group of structures is known as the patello-femoral joint (PFJ).



Dysfunctions of the PFJ are extremely common in adolescents, in people who are very active and in people recovering from knee joint surgery. Usually, a vague pain is experienced around or behind the kneecap which is made worse with activities such as going up or down stairs, running, squatting or kneeling.

### What causes PFJ Pain?

PFJ pain is caused when the patella doesn't slide in the centre of the femoral groove, causing the bony surfaces to rub against each other. This causes irritation of pain-sensitive structures between the patella and femur, and can often be accompanied by swelling.

There are many reasons that a patella may not sit properly in the femoral groove, some of which include:

- Poor foot, knee or hip biomechanics
- Weakness and poor control of the inner quadriceps muscles
- Tightness in the outer portion of the thigh which pulls the patella laterally
- Muscle wasting and decreased muscle function after surgery
- Poor footwear
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### Treatment

Because there are many factors which contribute to the onset of PFJ pain, treatment involves a combination of approaches.

Most patients will undergo a strengthening regime for the quadriceps muscles. The exercises given will be specific to the patient and gradually increased according to the functional requirements. Soft tissue therapy and stretching of tight muscles, particularly calf, hamstrings, and outer thigh will usually also be included.

Abnormalities in foot mechanics may need to be addressed with orthotics. This can be organised by your physiotherapist or custom fit by our Podiatrist.

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