

Patella Dislocations

Background

The patella (or kneecap) is a lens-shaped bone situated at the front of the knee. It is incorporated into the tendon of the quadriceps muscles of the thigh and moves within a groove at the lower end of the thigh bone (femur). Patellar dislocation occurs when the patella completely moves out of this groove.



What are the signs?

When a kneecap dislocates, it shouldn't be hard to spot as the knee usually looks deformed. Other signs and symptoms are:

- You may hear a "crack"
- The kneecap may feel out of joint
- The surrounding tissue swells up very quickly
- It's extremely painful
- You'll be unable to walk

Often the kneecap will spontaneously correct itself soon afterwards, which can mean the diagnosis is not made when it's later seen by a healthcare professional.

This type of injury typically occurs in young and physically active people with minimal trauma when they twist the bent knee with the foot fixed to the ground, for example, during sporting activities. The most common recurrent symptom reported by people is patella or knee cap instability. It may be associated with abnormal shape of the knee joint bones, weakness of the muscles around the hip or knees and tightness of soft tissues.

What should I do?

If you think you've dislocated your kneecap for the first time and it hasn't corrected itself seek urgent medical help. Sit with your leg outstretched and keep it still. Either straighten your knee or ask someone to gently lift up your foot. The kneecap will usually correct itself and the pain should rapidly fade.

If it's not the first time you've dislocated your kneecap and you've managed to gently manipulate the kneecap back into place, with no major injury, there may be no need to go to hospital.

You can manage any swelling by holding an ice pack to your knee for 10 to 15 minutes every hour for the first day of your injury, and every few hours for the few days that follow.

How is Patella Dislocation Diagnosed?

On examination, your physiotherapist or doctor will look for signs of patella dislocation and associated muscle and ligament damage.

An X-ray or MRI may also be used to confirm the diagnosis and identify damaged structures surrounding the kneecap or to the patella joint surface, which is quite common.

How is it treated?

1. Acute (first time patella dislocation)

When the patella dislocates, injury to the soft tissues of the knee joint occurs, which requires a period of rehabilitation. This may include treatments such as immobilisation and bracing (to limit knee movement in extension for up to 6 weeks) followed by progressive exercise to strengthen the muscles throughout the lower limb, manual therapy and taping all of which may be incorporated into your management programme. Your clinician managing your case will discuss all appropriate options with you.

First-time traumatic patellar dislocations traditionally have been treated with non-operative management. Some surgeons have suggested that people may have a better outcome if surgery is performed. Surgery for first time patella dislocation remains a contentious topic and will depend on many variables. Researchers have looked at the results of surgery compared with non-surgical treatment for people who had a kneecap dislocation suggesting the evidence is not of sufficient quality to confirm a significant difference in outcome between surgical or non-surgical management of people who have dislocated their kneecap for the first time.

2. Repeated (recurrent) patella dislocation

Although long term conservative treatments will include physiotherapy to improve the general conditioning of your lower limb and trunk musculature, after a second dislocation further repeated events become much more likely. The risk of re-injury increases substantially each time the patella is dislocated. Surgery may therefore be the appropriate option for recurrent patella dislocations.

If it has been decided that surgery is necessary to manage your condition there are different options that can be used. Surgical techniques will depend upon the progress of symptoms, the type of dislocation(s) and the severity of any underlying shape abnormality to repair or reconstruct injured ligaments, re-shape the lower femur or change the position of where the patella attaches to the shinbone (tibia), ultimately restraining the kneecap from dislocating again. The extent of the surgical procedure is determined by the surgeon. It is necessary to be aggressive enough to avoid future dislocations, but conservative enough to minimize your recovery. In cases treated by surgery, recovery may take several months depending on the extent of cartilage damage, and the repair required.

References / Useful Links:

Smith TO, Donell S, Song F, Hing CB. (2015) Surgical versus non-surgical interventions for treating patellar dislocation. Cochrane Database of Systematic Reviews, Issue 2. Art. No.: CD008106.

<http://www.nhs.uk/Conditions/dislocated-knee>

<http://patient.info/doctor/knee-fractures-and-dislocations>