

Dr Bu Balalla BSc (Med) MBBS FRACS (Orth)

Specialist Orthopaedic Knee Surgeon

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Patellofemoral instability and patella dislocation

Why does the patella dislocate?

The kneecap, or patella, is a bone which lies within the tendon complex joining the quadriceps (thigh) muscle to the tibia (shin bone). It serves to increase the leverage of the quadriceps muscle. However, it is not held tightly by the bony groove on the front of the femur, called the trochlea. It is mainly reliant on soft tissue tension to provide stability.

There are several factors which may contribute to dislocation of the patella, including a high riding patella (patella alta), an abnormal shape to the trochlear groove (trochlear dysplasia), injury to the medial patellofemoral ligament (MPFL), or generalised ligamentous laxity ("double-jointedness"). Other factors include abnormal rotation of the leg bones during development.



What actually happens during a patella dislocation?

During a dislocation, the patella jumps towards the lateral (outer) side of the knee, instead of falling into the trochlear groove. The first time this happens, it tears the ligament on the medial side, called the MPFL. The patella sits forcefully against the lateral side of the knee and can cause a bone bruise on the femur which can be tender. As the patella returns to its usual position, it can cause a piece of cartilage and bone to be knocked loose from its articular surface. This piece can float around the knee joint, causing catching, locking, or clicking.



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What are the symptoms of patella dislocation?

Many patients report a "pop" in their knee after a twisting injury or a direct blow to the knee. There is often a sense of the kneecap sitting on the outer surface of the knee. This often pops back in when the knee straightens, or requires a visit to the Emergency Department to put it back in place. Following a dislocation, the knee is often sore and swollen and crutches are necessary. The symptoms can be indistinguishable from an ACL rupture. This swelling and pain may last for weeks, and the kneecap may feel unstable.

Will it happen again?

Most patella dislocations will occur only once. However, once that patella begins to repeatedly dislocate, it is likely to keep doing it.

What should I do after a patella dislocation?

I recommend using a knee splint only as long as you need it for pain control. Discard the splint as soon as you can walk without it. A knee sleeve or bandage should be used to limit the swelling and can give you a sense of security. Rest, ice and elevation should be used in the first few days for pain relief.

Should I see an orthopaedic surgeon following my patella dislocation?

I encourage you to see a specialist regarding your dislocation. Associated with your dislocation may be a fracture of the cartilage of the patella, which must be identified, and be surgically reattached or removed. This is best identified on MRI scanning. The MRI can also give important information about the other factors which contribute to dislocation and can provide an idea of how likely it is to happen again. If you have had multiple dislocations, an MRI is very useful in surgical planning, and can be used to by a specialist to advise you of your surgical options.



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How is it treated?

The treatment depends on the underlying problem, and the age of the patient. In general, some options are not available until the patient has stopped growing as the surgery can affect the growth plates.

Correct identification of the underlying problem is vital. Stabilisation may require reconstruction of the medial restraint called the MPFL, which is injured at the time of the first dislocation. The connection of the patella tendon to the tibia may have to be moved in order to correct a high-riding patella. If the trochlea is very malformed, it may require a deepening procedure called a trochleoplasty. One, or several of these options may be required, depending on the reasons for the instability.

This resource is provided by Dr Balalla for the information of his patients. Every patient's condition is unique and this information should not substitute for a full consultation with a qualified orthopaedic surgeon.

To arrange a consultation or to discuss any of the information above, please phone Dr Balalla's rooms on (02) 9680 1315, or email enquiries@drbalalla.com.au. © Dr Bu Balalla 2012