

Unstable Kneecap

When things are "in the groove," they're going smoothly. That certainly is the case with your knee. As long as your kneecap (patella) stays in its groove in the knee, you can walk, run, sit, stand, and move easily.

When the kneecap slips out of the groove, problems and pain often result.



Causes

The kneecap connects the muscles in the front of the thigh to the shinbone (tibia). As you bend or straighten your leg, the kneecap is pulled up or down. The thighbone (femur) has a V-shaped notch (femoral groove) at one end to accommodate the moving kneecap.

In a normal knee, the kneecap fits nicely in the groove.



But if the groove is uneven or too shallow, the kneecap could slide off, resulting in a partial or complete dislocation. A sharp blow to the kneecap, as in a fall, could also pop the kneecap out of place.

Symptoms

- Knee buckles and can no longer support your weight
- Kneecap slips off to the side
- Knee catches during movement
- Pain in the front of the knee that increases with activity
- Pain when sitting
- Stiffness
- Creaking or cracking sounds during movement
- Swelling

Doctor Examination

During the physical examination, your doctor may ask you to walk around or to straighten and bend your knee. The doctor may carefully feel the area around your kneecap and take measurements to determine if the bones are out of alignment or if the thigh muscles are weak.

X-rays may be recommended to see how the kneecap fits in its groove. Your doctor will also want to eliminate other possible reasons for the pain, such as a tear in the cartilage or ligaments of the knee.

Treatment

If the kneecap has been completely dislocated out of its groove, the first step is to return the kneecap to its proper place. This process is called reduction. Sometimes, reduction happens spontaneously. Other times, your doctor will have to apply gentle force to push the kneecap back in place.

A dislocation often damages the underside of the kneecap and the end of the thighbone, which can lead to additional pain and arthritis. Arthroscopic surgery can correct this condition.

If the kneecap is only partially dislocated, your doctor may recommend nonsurgical treatments, such as exercises and braces. Exercises will help strengthen the muscles in your thigh so that the kneecap stays aligned.

Cycling is often recommended as part of the physical therapy. A stabilizing brace may also be prescribed. The goal is for you to return to your normal activities within 1 to 3 months.

A chronic condition, in which the knee continues to be unstable, can often be corrected by surgery. For example, surgery can be used to realign and tighten tendons to keep the kneecap on track, or to release tissues that pull the kneecap off track.

Last Reviewed

August 2007

AAOS does not endorse any treatments, procedures, products, or physicians referenced herein. This information is provided as an educational service and is not intended to serve as medical advice. Anyone seeking specific orthopaedic advice or assistance should consult his or her orthopaedic surgeon, or locate one in your area through the AAOS [Find an Orthopaedist](#) program on this website.