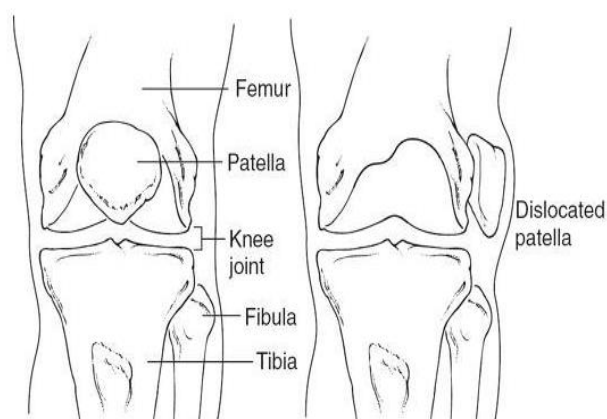


STEVEN CHUDIK MD

SHOULDER, KNEE & SPORTS MEDICINE

Patellar Dislocation and Subluxation

Patellar dislocation and subluxation are injuries to the kneecap (patella) affecting the joint it forms with the thigh bone (femur). The patella is a V-shaped convex bone that sits within a V-shaped concave groove of the femur, known as the trochlea. *Patellar dislocation* is a condition in which the patella is displaced from its normal position and no longer sits in the trochlea. *Patellar subluxation* is a condition in which the patella is not centered within the trochlea, but the joint surfaces still touch; thus the patella is not in normal relationship to the trochlea. This tends to occur in adolescents and young adults.



Frequent Signs and Symptoms

- Severe pain when attempting to move the knee and a feeling of the knee giving way
- Tenderness, swelling, and bruising of the knee
- Numbness or paralysis below the dislocation from pinching, cutting, or pressure on the blood vessels or nerves (uncommon)
- Often patellar dislocation to the outer side of the knee, causing an obvious deformity; often relocates on its own when the knee is straightened, leaving no deformity; damage is the same in both cases
- Lump on the inner knee, which is the end of the inner part of the thigh bone (femur)



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Etiology (Causes)

- Direct blow to the knee
- Twisting or pivoting injury to the lower extremity, such as with cutting (rapid change of direction)
- Powerful muscle contraction
- Congenital abnormality (you are born with it), such as a shallow or malformed joint surfaces

Risk Factors

- Participation in contact sports (football, soccer), sports that require jumping and landing (basketball, volleyball), or sports in which cleats are worn on shoes
- Persons with wide pelvis, knocked knees, or shallow or malformed joint surfaces
- Previous knee sprains or patellar dislocations
- Poor physical conditioning (strength and flexibility)

Prevention

- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
 - Thigh, leg, and knee strength
 - Flexibility and endurance
 - Cardiovascular fitness
- For jumping (basketball, volleyball) or contact sports, protect the patella with supportive devices, such as elastic bandages, tape, braces, knee sleeves with a hole for the patella and a built-up outer side or straps to pull the patella inward, or knee pads.
- For sports that require cleats or spikes on the athletic shoe, use cleats or spikes of appropriate length for the sport and the turf or field conditions.

Outcomes

With appropriate reduction (repositioning of the joint) and treatment, complete healing requires at least six weeks.

Potential Complications

- Associated fracture or joint cartilage injury due to the dislocation or reduction (repositioning) of the patella
- Damage to nearby nerves or major blood vessels (rare)



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- Prolonged healing or recurrent dislocation if activity is resumed too soon
- Excessive bleeding within the knee due to dislocation
- Patella pain and giving way, usually due to inadequate or incomplete rehabilitation
- Unstable or arthritic joint following repeated injury or delayed treatment

Treatment Considerations

After immediate reduction (repositioning of the bones of the joint), treatment consists of ice and medications to relieve pain. Reduction can be performed without surgery, although surgery may be necessary to remove loose fragments of bone or cartilage caused by the dislocation or reduction or to help prevent further dislocation. Elevating the injured knee at or above heart level helps in reducing swelling. Your doctor may drain the blood from your knee.

Immobilization by splinting, casting, or bracing without immobilization for up to six weeks is may be recommended to protect the joint while the tissues heal. After immobilization, stretching and strengthening of the injured, stiff, and weakened joint and surrounding muscles (due to immobilization and the injury) are necessary. These may be done with or without the assistance of a physical therapist or athletic trainer.

Possible Medications

- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within seven days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Strong pain relievers may be prescribed as necessary. Use only as directed and only as much as you need.

Modalities (Heat and Cold)

- Cold is used to relieve pain and reduce inflammation. Cold should be applied for 10 to 15 minutes every two to three hours for inflammation and pain and immediately after any activity that aggravates your symptoms. Use ice packs or an ice massage with a cloth between the ice and your skin to prevent burning /freezing your skin.
- Heat may be used before performing stretching and strengthening activities prescribed by your physician, physical therapist, or athletic trainer. Use a heat pack or a warm soak.

Notify My Office If Symptoms Worsen



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