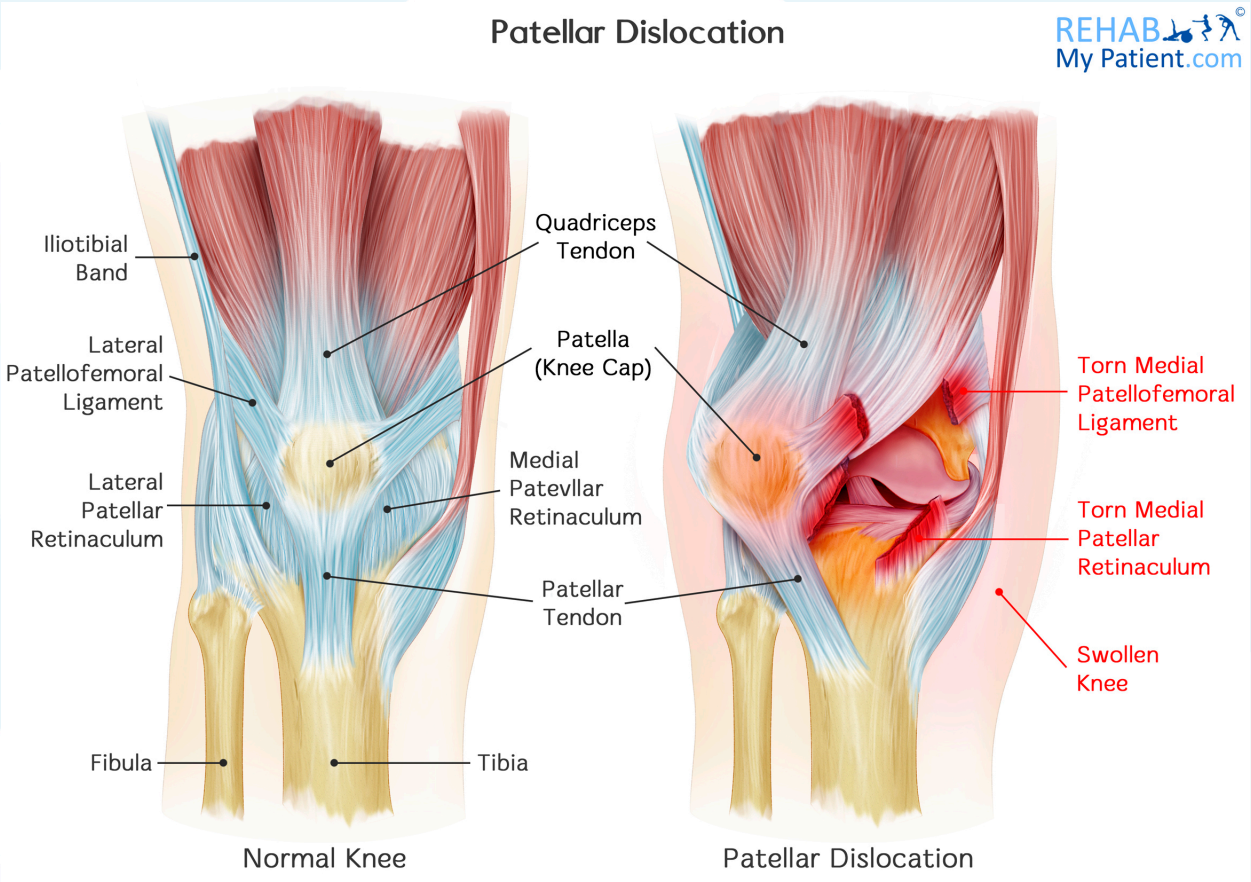
Patella Dislocation

Patella dislocations are often an unusual and quite serious injury. It occurs when knee cap (patella) is moved out of its normal groove within the thigh bone (femur). Often, these injuries are the direct result of some high-energy trauma to the knee. It could be from a car accident, sports injury or a severe fall. Most of the time, this condition is often confused with that of subluxation, but they aren't the same thing. Subluxations are only partial dislocations, and often go back to their normal position very soon after the injury.

The big problem with patella dislocation is that once it occurs, it tends to keep happening. This is because the tissues surround the knee have been torn and hence leave the patella hypermobile, and lax. Usually during sport, the patella will dislocate or sublux again. When it happens it is very painful but the person will be able to quite easily relocate the patella.

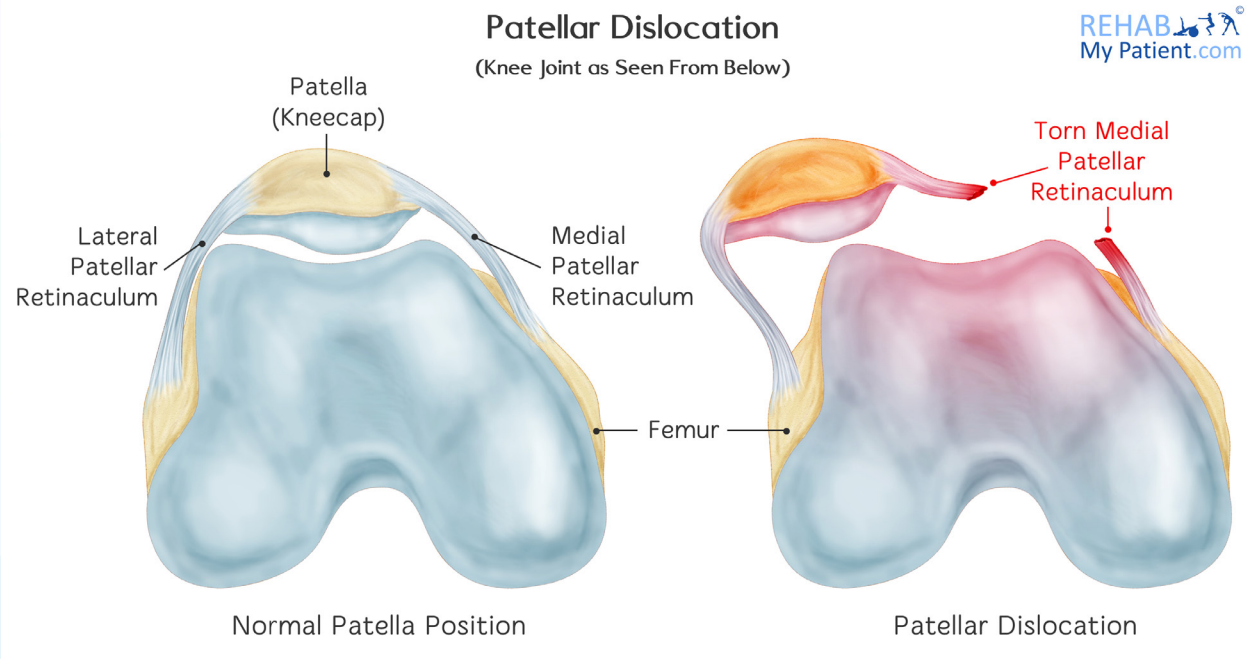
Patella Dislocation Anatomy

The kneecap is known as the patella, meaning "little pan" in Greek. It is a sesamoid bone meaning that muscles attach to the bone, and it is the largest sesamoid in the body. Babies are born with soft cartilage which grows into a patella around three years old. There are two facets (surfaces) under the patella that articulate with the knee joint. There is cartilage covering the surfaces of these facets, and this joint is known as the patella-femoral joint. This is the joint that may become dislocated as the patella moves out of alignment with the knee.



Surrounding the patella is the retinaculum, a sheath that holds the patella in place and allows the quadricep muscle group to blend into the patella.

Most patella dislocations occur laterally, so the patella moves to the outside of the knee.



How to Treat a Patella Dislocation:

1. **Non-Surgical**
   Non-surgical treatment for patella dislocation is almost always physiotherapy or rehabilitation. However, in some cases, a doctor may advise rest and a "wait-and-see" approach. Rehabilitation is recommended for the best recovery, as exercise based therapy will help to build supportive muscles around the knee and thigh to help reduce further dislocations or subluxations. A lot of rehabilitation focuses on the VMO (vastus medialis obliquus), or the inside quadricep muscle. Strengthening this muscle may help to hold the patella to the inside of the knee preventing the patella from deviating laterally.

2. **Surgical**
   If physiotherapy is unsuccessful (usually determined if the patella continues to sublux or dislocate following a rehabilitation program), patella stabilization may be considered. A lateral release is one option, where the outer part of the retinaculum is cut. This stops the patella from subluxing laterally. In addition, the tissues on the inside of the knee may be tightened, which is known as medical imbrication or sometimes called reefing. This may be done by shortening the quadricep attachment to the inside of the patella.
   In some cases, ligament reconstruction must be performed. The medial patellofemoral ligament (MPFL) is torn during patella dislocations, and this may be reconstructed. This is usually done from another tendon in the body, or from that of a cadaver.

Tips:

- Rest the leg, keep it elevated and apply ice to the site to help reduce the swelling in the dislocated patella.

- Wearing a knee brace for a couple weeks following the dislocation will help keep the joint stable. Avoid placing a lot of stress on the knee in the first few weeks following the injury.
- Physical therapy can help you to regain movement and strength in the knee. Strengthening the parts around the knee is crucial to avoid another dislocation.