



**Patellar Luxation (dislocation of the knee cap) in Flat-coated Retrievers**

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The stifle (knee) joint in the dog is made up of the femur (thigh bone), tibia (shin bone), fibula, patella (knee cap), patellar ligament (middle), medial and lateral (inside and outside) patellar ligaments, medial and lateral collateral ligaments, cranial and caudal (front and rear) cruciate ligaments and the meniscus. The latter three structures are inside the stifle joint.

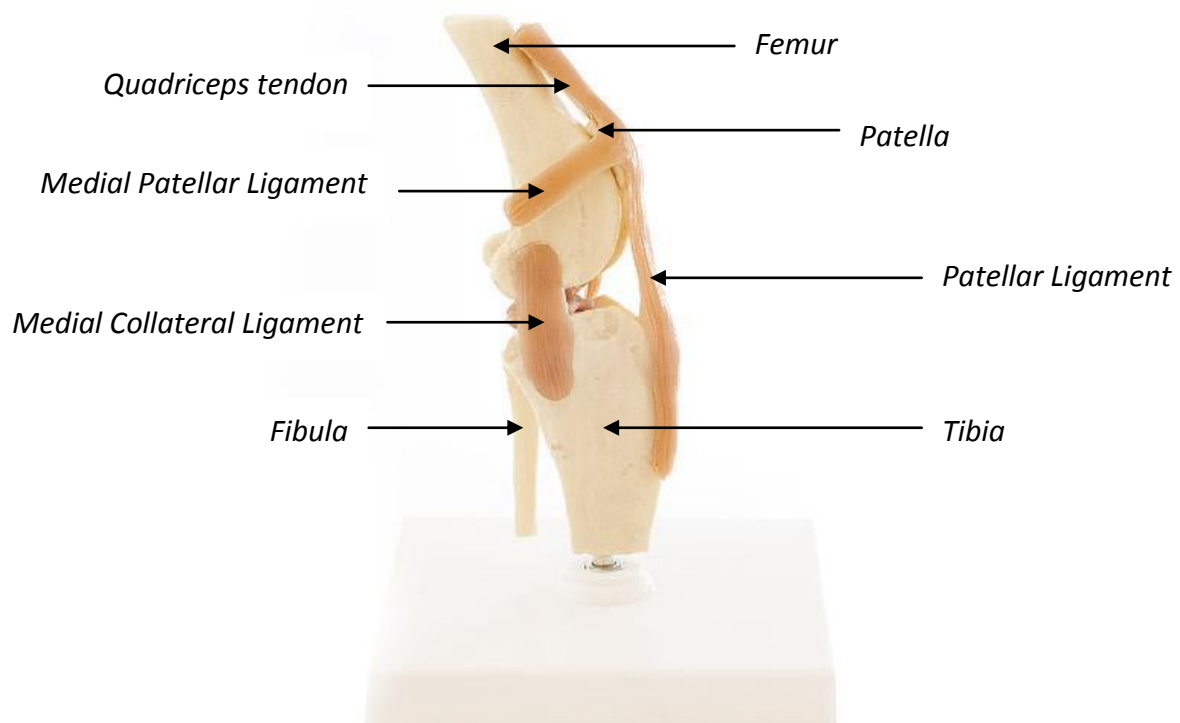


Figure 1. The Stifle Joint

(<http://www.heinescientific.com/en/70/veterinary-medicine/canine-knee-with-ligaments.html>)

The patella is an important component of a normal functioning stifle which should sit within a groove (the trochlear groove) on the front face of the femur. The patella acts as a lever and pulley system to extend the stifle. The quadriceps tendon and the patellar ligament

attach the patella to the quadriceps and tibia respectively. The medial and lateral patellar ligaments help maintain the patella within the trochlear groove.

When the patella is luxating, it comes out of the trochlear groove whilst the leg is in motion. The patella can luxate to the inside (medial patellar luxation) in approximately 90% of cases or to the outside (lateral patellar luxation) in the remaining 10% of cases.

Patellar luxation is a developmental congenital defect, often affecting both stifles, and is usually caused by:

- a. A trochlear groove that is too shallow
- b. A weak or stretched medial or lateral patellar ligament
- c. The lower attachment of the patellar ligament being too far to the inside of the tibia (medial patellar luxation)

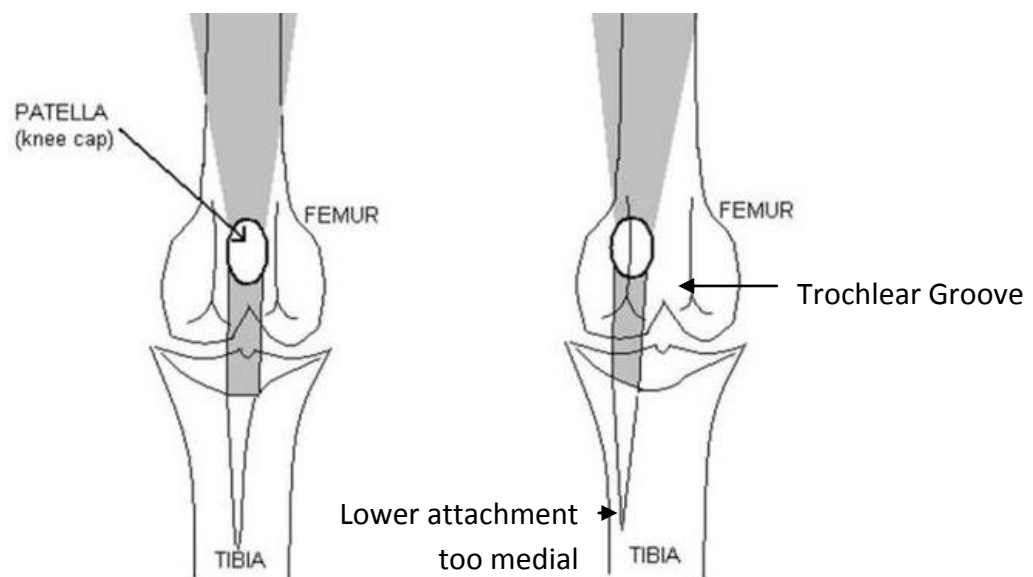


Figure 2. Normal alignment versus patellar luxation (<http://pomeranianklubben.no/sykdomme/>)

It is believed that the above points are caused by malalignment of the limb that occurs during growth and development. Very rarely, patellar luxation can be caused by direct accidental blunt injury to the knee and medial or lateral patellar ligaments.

There is an increasing incidence of patellar luxation in Flat-coated Retrievers but do you know what signs to look out for?

- a. Locking up at trot or canter which has developed as your dog has matured and may first look like the dog is skipping. There is usually no sign of pain despite the dog holding the leg off the ground for a few steps before returning it to normal without concern.
- b. There may be a popping sound when the dog is shifting/ moving around nearby or on its owners lap.
- c. Abnormal sitting posture with the stifle placed outward.
- d. Pain and lameness may exist in chronic cases where there has been wear of the patellar cartilage against the femur causing osteoarthritis.

When an abnormal gait, lameness or inactivity of the affected limb is observed as a result of patellar luxation, surgery is indicated.