Patellar Luxation

The patella (knee cap) is a movable bone located over the knee that connects the muscles of the thigh to the lower leg. When the patella functions correctly, the dog can use the leg well. Patellar luxation is a dislocation of the kneecap most often seen in small dogs. Most of these animals are born with this problem and usually both knees are affected. A fall or twisting injury may aggravate the already existing condition. A common symptom of this “trick knee” condition is a dog that occasionally holds the leg while running but spontaneously starts using it again. This happens as the kneecap pops in and out of place. Often the dog will give out a short cry or yelp when this happens.

We classify luxating patellas depending on the severity. A Grade I is when the kneecap is mostly in place and pops out on occasion. As the ridge wears down, the kneecap starts moving in and out of place more often and is now a Grade II. When the cap is out of place more than in place, it becomes a Grade III. And finally, when the cap is out all of the time, the knee is classified as a Grade IV.

Surgery is usually recommended if your pet is in a great deal of discomfort a lot of the time. Several different types of surgery have been developed and your doctor will describe the one he or she feels will help your pet. Remember, even if your pet does not appear to be in pain, luxations make them more prone to rupturing their cruciate ligaments inside the knee later in life due to the abnormal strain placed on them with this condition. If the end of the femur is starting to “bend” in very young patients, surgery should be done immediately, otherwise it should be done around six to eight months of age when growth is complete and healing is fast compared to older patients.

What Options are Available for Treating Patellar Luxation?

Patellar luxations that do not cause any clinical sign should be monitored but do not typically warrant surgical correction, especially in small dogs. Surgery is considered in Grades II and over (See above). One or several of the following strategies may be required to correct patella luxation:

- Reconstruction of soft tissues surrounding the knee cap to loosen the side toward which the patella is riding and tighten the opposite side
- Deepening of the femoral groove so that the knee cap can seat deeply in its normal position
- Transposing the tibial crest, bony prominence onto which the tendon of the patella attaches below the knee This will help realign the quadriceps, the patella and its tendon
- Correction of abnormally shaped femurs is occasionally required in cases where the knee cap rides outside of its groove most or all the time. This procedure involves cutting the bone, correcting its deformation and immobilizing it with a bone plate
The procedures that will best address the problem are selected on an individual basis by the surgeon that has examined the patient.

Since there is a genetic predisposition to this condition, pets that have patella luxations that are not due to trauma should not be bred.

Normal Patella

Abnormal Patella

- Patella
- Quadriceps
- Shallow trochlear groove
- Femur
- Cranial border of tibia (crest)
- Tibia
- Fibula
- Medial luxation of the patella
- Inward rotation of tibial crest