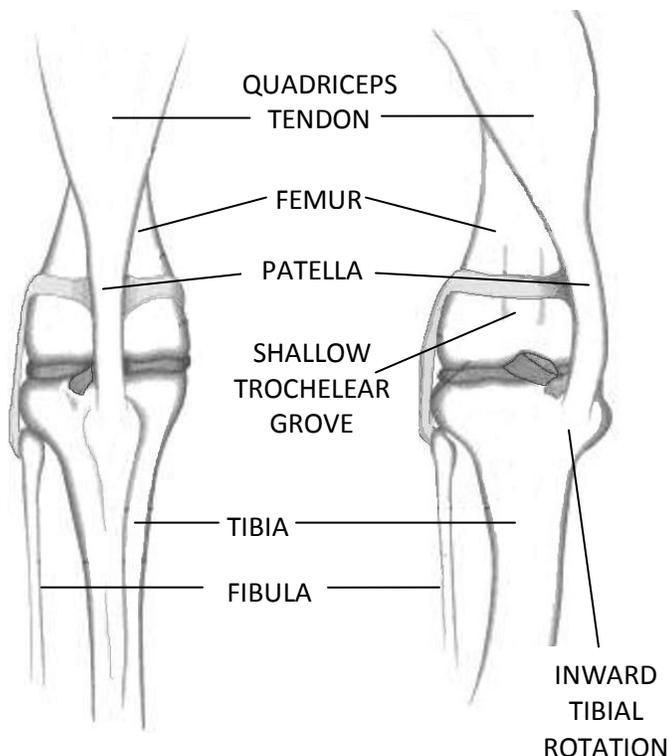


Medial Patella Luxation (MPL)

Medial Patella Luxation is usually a congenital condition commonly seen in small to medium breed dogs and occasionally in cats. The stifle (*knee*) is made of two bones, the femur (*thigh*) bone and the tibia (*shin*) bone. The patella (*kneecap*) is a small bone within the patellar ligament that glides in a depression at the bottom of the femur called the trochlear groove. The quadriceps (*thigh*) muscles are anchored at the hip and attached to the top of the patella, which is then attached to the tibial crest by the patellar ligament. Anatomical abnormalities and misalignment at any level of the hind leg result in the patella being pulled out of its groove. If the patella frequently luxates out of its groove, this may also result in twisting of the femur and tibia. In addition, the groove may be very shallow, thus providing minimal support for the kneecap.

MPL occurs when the patella is displaced outside of its groove towards the inside aspect of the knee. The inability of the patella to tract correctly in the trochlear groove as the pet ambulates, results in muscle-skeletal alterations of the leg, progressive deterioration of the cartilage lining the surface of the knee joint, and arthritis.



Diagnosis

You'll typically notice a little skip in your pet's step. Your pet may even run on three legs, holding one hind leg up, and then surprisingly be back on four legs as if nothing has happened. The diagnosis of MPL is confirmed with physical palpation of the stifle and radiographic evaluation. Your veterinarian will manipulate the patella through a complete range of motion and see how the patella tracts and whether it can be seated into the groove manually. The radiographs will determine the degree of arthritis, and evaluate for any malformation of the femur and tibia. Once the stifle is assessed and graded, the proper surgical repair can be selected.

MPL's are graded on a scale of 1 to 4, with four being the most severe. The disease can progress from the less severe to the more severe grades.

Grade 1

Patella can be luxated medially when stifle joint is held in full extension. No crepitation or bony deformities present. Clinical signs are not present or occur infrequently.

Grade 2

Spontaneous luxation occurs with clinical signs of a non-painful "skipping" type of lameness. Mild deformities develop, with internal rotation of the tibia and abduction of the hock. This condition may progress to grade 3 luxation with associated cartilage erosion on the patellar and trochlear surfaces.

Grade 3

Patella is luxated permanently but can be reduced manually. A shallow trochlear groove may be palpable. Clinical signs of an abnormal "crouched" gait rather than an intermittent lameness because the dog uses the leg in a semi-flexed, internally rotated position. More severe bony deformities are present with internal tibial rotation and an S-shaped curve of the lower femur and upper tibia.

Grade 4

This is a severe condition with permanent, non-reducible luxation of the patella. If not corrected early in life, severe bony and ligamentous deformities develop and are often not repairable.

Surgical Repair Procedures

Tibial Crest Transposition

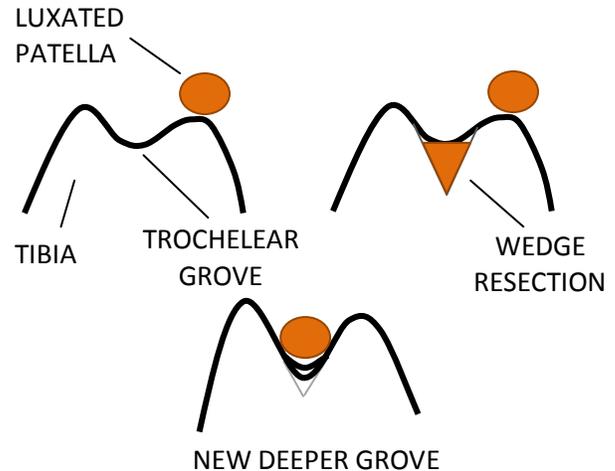
The patella attaches to the tibia via the patellar ligament at the tibial crest. Tibial rotation is often observed with a knock-kneed conformation that causes the tibial crest to twist inward. Tibial crest transposition corrects the alignment and its secured back to the tibia with two bone pins.

Wedge Resection Trochleoplasty

The patella rides in trochlear groove near the bottom of the femur. Often in the smaller breed dogs, this groove is too shallow, which allows the patella to slip out of alignment. Wedge resection trochleoplasty creates a taco-shaped piece of cartilage and underlying bone. This cartilage is cut away, the bone underneath is sliced out to form a deeper groove, and the cartilage is replaced. The result is a deeper groove.

Imbrication

This procedure is used as an adjunctive procedure to supplement one of the other previously mentioned procedures. When the patella slips out of its groove, the joint capsule surrounding it is stretched to allow this motion. Imbrication or tightening of the joint capsule is done on the opposite side of the luxation. Additionally, a releasing incision on the medial aspect can be made to relieve the tension on the joint capsule.



WEDGE RESECTION TROCHLEOPLASTY

Recovery and Rehabilitation

This is highly recommended following surgery. This can be performed by you or please ask about other options for physical therapy. If physical therapy is done at home, passive range of motion exercises should be performed for 5-10 min., 2x daily until your pet is using his/her leg well.

What we do

TVSS is a mobile surgical practice which was designed to provide excellent surgical care for your pet without disturbing the client-referring veterinarian relationship. Our team performs a variety of orthopedic and soft tissue procedures at your pet's hospital which allows for the convenience and comfort of being in a familiar surrounding. We are committed to outstanding customer service and compassionate patient care. Most follow-up care will be performed by your veterinarian, but we are available if concerns arise.