



## **Patellar Luxation (slipping kneecap)**

Patellar luxation is a common cause of hindlimb lameness in the dog. It is caused by the patella (kneecap) slipping out of the trochlea groove. The stifle (knee) is a hinge joint, and the patella slides up and down in a groove in the femur (thighbone) as the knee flexes and extends. When the patella luxates, it usually does so medially but, rarely, laterally luxating patella can be seen.

We grade luxating patella according to severity

**Grade 1** - the kneecap slips out of the groove when the knee is fully extended, and pressure is applied. It usually returns to the groove spontaneously.

**Grade 2** - the kneecap may pop out of the groove in any position of flexion & extension. This may happen spontaneously and may require manual replacement.

**Grade 3** - The kneecap is out of position most of the time, but can be returned to the correct position manually, but then usually immediately pops out again.

**Grade 4** - The kneecap is permanently fixed in the incorrect location.

### **When is surgery required and what does it involve?**

Often Grade 1 patella luxation doesn't need surgery if it is not causing pain or lameness. Grades 2, 3 and 4 usually benefit from earlier surgical correction, as a persistently luxating patella can lead to cartilage wear and osteoarthritis. Dogs with Grade 1 patellar luxation may benefit from surgery if they are lame, or it is painful when the patella luxates. For most dogs with a medially luxating patella, pre-operative planning is important to assess the degree of deformity of the dog's tibia and femur. This tibial and femoral bowing is associated with patellar luxation and, if severe, may warrant osteotomy procedures to correct the deformity. If the skeletal abnormality is severe, advanced imaging to generate a 3D image might be beneficial such as CT scanning. However, most cases of medially luxating patella can be corrected with a simple surgery to stabilise the patella within the trochlea groove.

This surgery may involve:

1. Deepening the groove in which the patella is located.
2. Tightening up the joint capsule and soft tissue structures laterally to add more support to the patella. Sometimes it is also beneficial to release the soft tissue structures medially too.
3. Tibial tuberosity transposition - moving the insertion of the patellar ligament laterally. This allows the patella to track in the groove in a straighter line. This is usually secured with a pin & wire.

### **Postoperative care**

Your dog will be discharged with pain killers. Please check the surgical site daily for signs of infection, inflammation, or pain. It is important to keep the surgical site clean and dry. It is normal to see some bruising and swelling around the surgical site for 3-5 days. Please contact your vet if there is any discharge or excessive swelling around the area. It is important that your dog does not lick the surgical site and you may need to use an elizabethan collar to prevent this. It is normal for the leg to be held in the air for up to 2 weeks, but by this time your dog should be starting to feel more confident and attempting to toe touch. It is important that you do not allow your dog to run or jump in the 6 to 8 week postoperative period. The quadriceps mechanism has some of the strongest muscles in the body, and it is crucial that these do not pull on the tibial tuberosity until it is fully healed. Please make appointments to see your vet at 2-4 days postoperatively, then 10-14 days, 4 weeks then 8 weeks. Your vet may request postoperative radiographs at 6-8 weeks.



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