

Surgical Repair of Medial Patellar Luxation (dislocating kneecap)

Your vet has arranged for me to see your dog because they are concerned that there is a problem with the kneecap dislocating from the groove on the front of the thigh bone (femur). This is a fairly common problem in dogs, particularly small breed dogs.

The problem usually starts with the kneecap dislocating spontaneously during exercise, often causing the dog to run for a few steps with the back leg held up off the ground. The kneecap usually relocates fairly quickly and the dog continues as normal without any lameness. This can happen a variable amount, and often becomes more frequent over time. At this stage the problem is a *mechanical lameness*, meaning that the leg is not working properly for those few steps, but is not usually painful.

Although at this stage the problem is fairly minor, it can progress in a number of different ways. The kneecap can stop relocating and end up permanently dislocated causing a persistent lameness. Other injuries to the knee may be more likely because of the extra strain on the joint. Osteoarthritis in the knee may develop. For this reason, surgery is usually recommended to stabilise the kneecap once it has started to dislocate by itself.

Sometimes a vet may find that it is possible to dislocate the kneecap manually but it has not started to dislocate by itself (Grade 1). There is no clear evidence to say what to do in this situation but I tend to recommend monitoring of the situation rather than surgery for these dogs.

If the problem is already more severe (kneecap permanently dislocated, Grade 3 or 4), then the lameness is likely to be continuous, and surgery is definitely indicated to bring the kneecap back into position. The chance of a successful outcome is reduced once the problem has reached this stage.

Why does the kneecap dislocate?

The kneecap is part of the *quadriceps mechanism*. The quadriceps muscle is the large muscle on the front of the thigh, which is connected to the pelvis above, and the shinbone below via the kneecap and a large tendon. In some dogs, particularly toy breed dogs, the alignment of the quadriceps with the limb is poor and tends to drag the kneecap to the inside of the groove on the femur. If the kneecap has never been well located, the groove may also be shallower than it should be.

The Operation

Your practice will make arrangements with you to drop your pet off on the day of the surgery. Please don't give breakfast on the morning of the procedure. If they are receiving pain relief, they can have their pain relief the night before the operation, but if you normally give it in the morning then please don't give it on the day. Please let the nurse/vet admitting your dog know when they last had pain relief, and also if you will need a further supply of any medication. I will probably not meet you in person on the day of the procedure, but I will speak to you by phone if possible. If you have any questions based on the information in this sheet, then please feel free to ask me then. When I arrive at the practice, I will examine your dog and confirm the diagnosis and plan for surgery. If for any reason we need to alter the plan, I will contact you to discuss it.

Your dog will be mildly sedated to minimise stress, and then anaesthetised. Your dog's leg will be prepared for surgery. The leg will be shaved from hip to toe to give us a large clean zone to minimise the risk of infection.

The operation consists of three parts. The groove that the kneecap should run in is deepened (sulcoplasty), the point of attachment of the kneecap tendon is moved slightly to improve the alignment of the quadriceps muscle (tibial tuberosity transposition) and the tissues to the side of the knee are tightened to pull the kneecap over in the right direction (lateral imbrication). In some cases, if the tissues on the other side of the knee are very tight they may need to be cut to allow the kneecap to move over (medial release). The tibial tuberosity is secured with one or two pins depending on the size of your dog. These pins will probably remain in place for life. Occasionally if they cause a problem once the area is healed, they may need to be removed. Once these procedures have been completed the surgical site will be closed. In most cases there will be no skin stitches visible – all the stitches will be under the skin and dissolving.

In most cases your dog will be discharged from the practice the evening of the procedure. You will receive a printed discharge note from me which will give details of the procedure, medication and instructions for exercise. Your dog will receive an injection of painkiller immediately before going home and you will also generally have some further pain relief to give at bedtime. Nonetheless, on the night after a major operation like this you may find your pet is restless or agitated. You should make sure that you know how to contact your practice's out-of-hours service and also where you would need to go if your dog needed to be checked over, bearing in mind that this may not be at your usual practice premises.

EXERCISE & RECOVERY

Before surgery, please obtain a crate or cage for your dog to be confined to. This should be about twice the size they need to lie down comfortably. It is sensible to familiarise your dog with the crate before surgery and you can help them feel settled inside by adding some of your worn clothing so the crate contains familiar smells. It is also beneficial to wash and clean all of their bedding that they will use so that this provides a cleaner environment for recovery after surgery.

Your dog will be strictly rested for the first 6 weeks after surgery, and it is very important that you enforce this at all times. They should be restricted within the cage when you are not with them or actively in control of them, and they should be kept on a short lead at all times when they are out of the cage. It is very important that they are not allowed to jump up on the furniture, play with other dogs, run around off the lead or go up any stairs.

A sling/towel under the abdomen can be used to aid mobility in the first few days after surgery, if required. This is more important for larger dogs or those who have problems with both back legs.

For the first 3 weeks after surgery your pet should only go out on a short lead for toileting to the garden 3-4 times per day for no more than 5-10 minutes. From week 4 after surgery they can start light exercise again and can be taken for two short walks a day always on a short lead. Start with 5 minute walks and gradually increase these up to 15 minutes by the end of week 6. You should concentrate on walking very slowly to encourage them to use the leg as much as possible in a controlled manner – this will ultimately speed up their full recovery. Allowing too much exercise too soon during recovery is one of the most common causes of problems with the recovery from this surgery.

Physiotherapy is an excellent way to get the best possible recovery after orthopaedic surgery. We will provide some initial physiotherapy guidance after surgery, and your vet will be able to advise further on this, but I would also thoroughly recommend seeing a veterinary physiotherapist to help with rehabilitation.

It is important that your pet is not allowed to lick or interfere with their surgical wound until it has healed – please use a buster collar to prevent this if required. Licking, or handling, of the surgical area before the surgery wound is healed is the most likely way of introducing post-operative infection.

Your vet will arrange for your pet to have follow-up x-rays taken to assess healing of the surgery – this is normally performed about 6 weeks after the original procedure. We will assess these x-rays and provide further instructions at this time. In most instances, we hope for pets to be able to end crate restriction in the house after this time, although still being prevented from jumping/climbing/etc., and to be able to have their lead exercise gradually increased with the aim of being back at normal levels of lead exercise by 12 weeks after surgery.

Risks of Surgery

This is a procedure with relatively low risks, and it is a procedure that for us is very routine. However, as you would expect for major surgery there are some risks.

1. Infection – Infection is a small risk of all surgery. We will take all the same precautions to avoid infection as I would take if I were performing the surgery at a specialist hospital (drapes, gowns, gloves etc). Your dog will also receive antibiotics during surgery. You should monitor the wound after surgery for any excessive redness, swelling or discharge. If an infection does develop it will generally resolve with further medical treatment. Very occasionally the area may need to be flushed.
2. Failure of the surgery – Sometimes, the kneecap continues to dislocate despite the procedures to relocate it. If this happens, we will discuss whether there are further options available to remedy the problem. The procedures described here are normally very reliable.
3. Osteoarthritis – Some degree of “wear and tear” in the joint is inevitable following the injury and no surgical procedure has ever been demonstrated to stop this. However, surgical treatment now is the best way to minimise this, and many dogs will not be troubled by arthritis for many years.

There is a small risk associated with a general anaesthetic. Your vet may discuss with you whether you would like your dog to have a blood test prior to surgery to ensure that there are no underlying health problems that we were unaware of.

Thank you for entrusting the care of your pet to us, and I look forward to speaking to you on the day of the procedure.

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