

CRUCIATE DISEASE IN THE CAT - LATERAL SUTURE STABILISATION (LSS)

Cruciate disease in the cat

Cranial cruciate ligament (CCL) disease is the most common cause of hindlimb lameness in the dog. It appears to be less common in the cat but may be due to under reporting. CCL disease affects the stifle joint, the equivalent of our knee. In the cat the CCL can rupture due to trauma or in older overweight cats we can see a progressive degeneration of the ligament. In cats CCL damage can often occur in association with injury to additional knee ligaments. It is important all ligaments, especially the collateral ligaments, are assessed prior to surgery. The CCL is an important primary restraint mechanism. It prevents excessive forward and backward sliding of the femur (thigh bone) on the tibia (shin bone) and limits internal rotation of the joint. When the CCL tears it is painful and the joint becomes unstable. This instability can damage the cartilage in the knee. Cruciate disease occurs alongside a chain of inflammatory processes that result in arthritis.

Does my cat need surgery?

This is always worth discussing with your vet. The recommendation that conservative, or non-surgical, treatment for cats with CCL rupture is based on a very small number of published cases. We would argue that assessing outcome in the cat is very difficult and that for most cases surgical stabilisation provides at least as favourable an outcome with a more predictable and quicker return to function. Our concern is arthritis will progress more rapidly if the joint is not stabilized. With surgery a good to excellent outcome can be expected in over 90% of cats. If conservative management is elected this normally consists of weight reduction (when necessary) and cage rest / indoor confinement to avoid strenuous activity. We would advise surgical stabilisation if lameness has not resolved after 2-3 weeks of conservative management.

Did you know?? Sterility for orthopaedic surgery is extremely important. At VetFix we use a new set of disposable sterile drapes, gowns and of course gloves for each patient. In addition we use a high dose of intravenous antibiotic to help keep infection risk to an absolute minimum.

Meniscal Injury

The menisci are important C-shaped disks of fibrocartilage that cushion and stabilize the knee. When we perform CCL surgery we are careful to assess the menisci for any damage. Damage to the meniscus is seen in about 30% of cases of cruciate disease. Tears in the meniscus are painful and limit recovery so it is important to carefully remove the torn areas. At VetFix, we only remove what is absolutely necessary and aim to preserve as much of the meniscus as is possible.

Did you know?? At VetFix we use a suction machine to perform a complete flush of your cat's knee. This improves visualisation and removes any debris associated with the cruciate disease. We also use bi-polar cautery to keep bleeding to an absolute minimum.

Lateral Suture Stabilisation (LSS)

There are three main techniques for cruciate disease management: TTA surgery, TPLO surgery and lateral suture stabilisation (LSS). TTA and TPLO can be considered dynamic repairs and LSS a static repair technique. There is no strong evidence to suggest any one technique is better than the other. Our preference in cats is often LSS, though every case is different. LSS provides an excellent outcome in the majority of cases. It is quick to perform and few complications are associated with the procedure. The primary repair itself will often fail and the LSS technique relies upon scar tissue, thickening of the joint capsule and collateral muscular adaption to provide longterm support to the knee.

The surgical technique for LSS involves placing a strong ligature or suture to replicate the stabilizing action of the CCL.

AFTERCARE

Your cat will often be discharged with pain killers. Please give these as directed.

Incision site care

Please check the incision site daily and keep the bedding/cage where your cat lives clean and dry. There will often be a small amount of bruising in the initial 3-5 days. Please contact your local vet should you notice discharge or excessive swelling from the wound (other than a small amount of crusting). Your cat should not lick the incision site. An E-collar may be necessary to prevent this.

Progress checks

These are often carried out by a veterinary nurse or your vet at 3-4 days, 10-14 days, 30 days, 6-8 weeks and 12 weeks after surgery. They may be more frequent if concerns arise.

What to expect?

Your cat may feel a little groggy for the first few days after surgery. If you think he/she is in pain, please contact your local vet for advice. Your pet should be restricted to a cage (a small dog cage is ideal) for the first 2 weeks and then kept indoors for a further four weeks. Jumping on or off elevated objects should be prevented. A litter tray will be necessary during this period.

Important! We normally expect weight to be taken on the leg within 10-14 days. If this is not the case, or if you are concerned about progress, please call your local vet for advice.

EXERCISE PLAN AND PHYSIOTHERAPY REGIME

Important! Please only do what you and your cat are comfortable with. No exercise should be painful or forced. Trying to do too much is far more dangerous than adopting a more conservative approach!

WEEK 1

Expect slight wound swelling and holding the leg up most of the time

STRICT CAGE REST (small dog cage ideal- approx. 60cm x 60cm x 60cm)

LITTER TRAY FOR TOILETING

STRICTLY NO STAIRS. NO JUMPING. NO SWIMMING / UNCLEAN ENVIRONMENTS

ICE PACKING (DAY 1-3): *Using, for example a bag of frozen peas wrapped in a tea towel, you can ice your cat's knee (on the opposite side to the incision) for 5-10 minutes two to three times daily. Icing can help your cat in the immediate post-operative period. It controls and decreases inflammation and will help to reduce post-operative pain. Only do this if you feel comfortable doing it and your cat is happy to let you do so!*

WARM COMPRESS (DAY 5+): *If the incision is clean and dry. Warm the knee for 10 minutes. You can try using a microwaved wheat bag (with cover on i.e. not too hot. It should be comfortable to touch). Then perform:*

RANGE OF MOTION EXERCISES (DAY 5+): *These should be very gentle with no attempt to go beyond what is comfortable for your pet.*

Have your pet lie on his/her good side and gently flex and extend the operated knee while supporting the leg. Being very patient and careful, perform 10 slow repetitions. Repeat these three times daily. You should only do this if it is within your pet's comfort level. Ask the veterinary nurse to demonstrate this exercise to you when in for a progress check. This may only be suitable for some cats and should not be attempted if your cat is not happy to let you do so.

Important! For successful physiotherapy in the cat it is important exercises are performed in a quiet environment free of other animals. In addition the room should have the door closed to reduce the risk of the cat escaping outside!

WEEK 2-4

Expect some weight bearing on the leg

CAGE REST WITH SUPERVISED ACCESS OUT OF CAGE: Walking slowly encourages your cat to use the leg. Spend up to 20-30 minutes per day with your cat in a controlled environment such as a room with no opportunity to jump on or off elevated objects

CONTINUE WARM COMPRESSES AND RANGE OF MOTION EXERCISES: Continue flexion and extension exercises of the knee as described above. In addition, hold the joint in full flexion and extension for 5 seconds. Perform 10 repetitions and repeat three times daily. Again, do not go to the point of creating pain or resentment. *This may only be suitable for some cats and should not be attempted if your cat is not happy to let you do so.*

Important! Your pet may feel like using the leg normally. It is really important that the exercise plan and physiotherapy regime is followed. Don't overdo it and do not let your cat jump from elevated objects. Keep your cat indoors unless specifically told otherwise by a veterinary surgeon.

WEEKS 4-6

Expect use of the leg but still a slight lameness

INDOOR ACCESS ONLY: Avoid any opportunity for your cat to jump on or off any surface above 60cm (about two feet).

CONTINUE RANGE OF MOTION EXERCISES

INTRODUCE CONTROLLED PLAY: All going well your cat should be using the leg well at this stage. If this is the case, start to build up muscle and proprioception (sensory stimuli) by introducing scratch posts and encouraging activity with a toy.

WEEKS 6-8

Expect to have a progress check with your vet around now. They will advise on the next step of your pet's physical rehabilitation plan. Below is a guide only.

For most cats provided good progress has been seen they can now be let outdoors. We would always suggest supervising this access for the first week and building up the period they are allowed outdoors.

LONGTERM OUTCOME AND LIFESTYLE

We expect a good to excellent outcome in over 90% of cats. The majority of cats return to a normal level of activity and endurance. On occasion the implant may need to be removed if it is causing a persistent problem. Keeping your pet lean is, without doubt, the most useful long-term intervention you can make.

Important! Weight loss is critical to long-term joint health in overweight cats.

All cats that have CLL rupture with develop arthritis. Glucosamine/chondroitin supplements may have some beneficial effects although this has not been clearly established. In addition, there is some evidence that omega-3 and omega-6 fatty acids (fish oil) in the diet can help. Anti-inflammatories are often prescribed by your vet for pain management. These may be used on a continuous or intermittent dosing regimen. They are a very effective medication to control pain and discomfort. Remember glucosamine / chondroitin and omega-3 and omega-6 supplements are not pain killers and should not be thought of as such. If you think your cat is in discomfort, see your vet.

COMPLICATIONS

With any surgery complications can and do occur. With LSS surgery in the cat these complications are rare. Despite every attention to sterility, surgical site infections can occur in approximately 5% of cases. These may resolve with antibiotics or require implants to be removed. With LSS it is possible for the suture to break early and necessitate surgery to repeat the suture or perform an alternative technique. Occasionally if a suture is too tight it may prevent normal use of the knee and require replacement.

Be warned! Rupture of the CCL in the other leg can occur. This may be more likely in overweight and older cats when the initial injury was not associated with any obvious trauma. Except keeping your cat lean there is little you can do to avoid this but try to be prepared both emotionally and financially!