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

Cranial cruciate ligament (CCL) disease is the most common cause of hindlimb lameness in the dog but it less common in the cat. 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. 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?
The options of conservative or non-surgical is always worth discussing with your vet.
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.

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.

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 surgical technique for LSS involves placing a strong ligature or suture to replicate the stabilizing action of the CCL, the LSS technique relies upon scar tissue, thickening of the joint capsule and collateral muscular adaption to provide long-term support to the knee.

AFTERCARE

Your cat will be discharged with pain killers, please give these as directed.
Significant red and/or purple bruising may occur at the surgery site and may spread up and down the leg. Also swelling may develop and travel down to the ankle area and the ankle may swell ("Jelly-Leg"). This is all normal and should not be cause for concern. If the wound oozes a green or yellow material, please call the clinic!
Your cat should not lick the incision site. An E-collar may be necessary to prevent this.

Post operative checks
These are often carried out by a veterinary nurse or your vet at 3-5 days and 10-14 days after surgery.

What to expect?
Your cat may feel a little groggy for the first few hours after surgery. If you think he/she is in pain, please call the clinic for advice. Your pet should be restricted to a crate 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 the clinic 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 that 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 crate ideal), litter tray for toileting.
STRICTLY NO STAIRS. NO JUMPING.
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 and 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 is if it is within your pet's comfort level. Ask the vet

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 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.
You can continue warm compresses and range of motion exercises: Continue flexion and extension exercises of the knee as described above. 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 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 to have a progress check with your vet around now.
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 and 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 by introducing scratch posts and encouraging activity with a toy.

WEEKS 6-8
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. In addition, anti-inflammatories could be 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.