

Cruciate Ligament Injury

The cruciate ligaments are two bands of fibrous tissue that run through the stifle (knee) joint forming an X when the stifle is viewed from the side. They are called the cranial/ anterior (CCL or ACL) and caudal/ posterior cruciate ligaments.

Partial or complete rupture of the ACL is a very common injury in the dog and also occurs in cats. Rupture causes instability of the stifle joint. In the short term this causes acute pain, and over time leads to degenerative joint disease (osteoarthritis). Commonly, there is also tearing of the meniscal cartilage within the joint, which makes the pain more severe and the prognosis less positive.

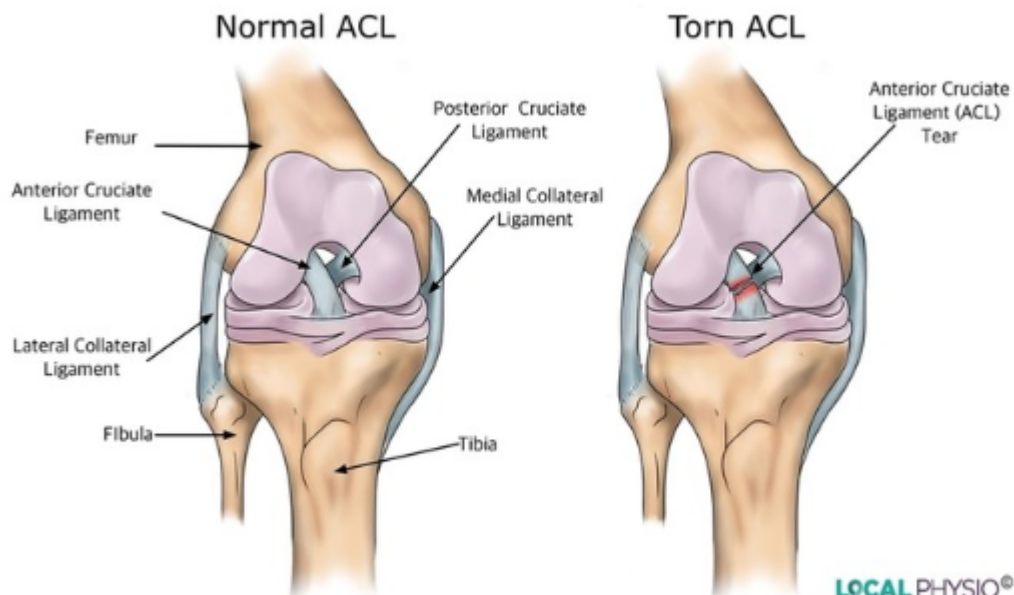
Diagnosis

Diagnosis may be possible at the initial consultation. However most awake patients are sore and nervous, so they tense the muscles of the leg. This makes it very difficult to feel the instability in the joint. Usually a general anaesthetic is required to allow the veterinarian to make this diagnosis. Radiographs (x-rays) are always recommended to allow surgical planning, look for any other problems, and assess the degree of arthritis already present.

Treatment

Without surgical repair, pets with ACL lameness will never return to pre-surgical injury levels without pain. Arthritis will develop in the stifle joints of all pets with ACL injury, but will progress much faster and be more severe in untreated pets. Surgery is therefore recommended for any pet with ACL damage.

All dogs undergoing joint or bone surgery **MUST** have their activity strictly curtailed during their 6 to 12 week recovery period or risk failure of their surgical implants (and procedure).



EXTRACAPSULAR REPAIR

Extracapsular repair is recommended for cats and small dogs (up to 10-15kg).

This involves;

- Opening the joint to examine the meniscal cartilages.
- Removing the torn ligament fragments and any damaged cartilage
- Tightening and suturing closed the joint capsule
- Replacing the function of the ruptured ACL with strong non-absorbable suture material placed from the bottom of the femur to the front of the tibia. This is often secured with metal crimps, which you may feel under the skin.
- The tissues under the skin are then closed and tightened to further stabilise the joint.
- Finally, the skin incision is closed using absorbable sutures.
- Antibiotic cover (on the day and in some cases ongoing) and A LOT of pain relief is given throughout the procedure and recovery period.

Please contact the clinic for pricing.

For large dogs, an extracapsular repair cannot hold up to the daily stresses an active or heavy dog will place on its joints. Hence more involved surgical procedures are recommended in order to optimise the long-term outcome of the pet. The goal of these procedures is to limit abnormal movement of the tibia relative to the femur when the dog is weightbearing normally.

TIBIAL PLATEAU LEVELING OSTEOTOMY (TPLO)

This is the procedure most commonly recommended and performed by specialist orthopaedic surgeons for management of cranial cruciate ligament disease in cats and dogs of all sizes. Specialist training and equipment required make this the most expensive management option, but also the most optimal for these pets.

TPLO involves;

- Joint inspection and management as for extracapsular repair
- Placement of a special jig to guide multiple cuts made around the top and front surfaces of the tibia.
- Rotation of the freed tibial segment until the top of the tibia (the 'plateau') is at the optimal angle to prevent adverse movement relative to the femur when weightbearing.
- Placement of a bone plate to anchor the rotated segment until the surgical cuts have healed.
- Closure of the surgical site with several layers of absorbable +/- nonabsorbable suture.
- Appropriate pain relief +/- antibiotic cover as recommended by the specialist surgeon and anaesthetist.
- The implants remain in place for life unless there is a complication necessitating their removal.

Follow up Xrays are taken around 8 weeks after surgery

We now offer the services of a mobile surgical specialist - Dr Ram (based at Vet24 in Balcatta). By prior arrangement, Dr Ram can perform TPLO surgery on your pet here at Foothills Animal Hospital. Please contact the clinic for pricing.

Alternately, there are several excellent specialist centres in Perth. We routinely refer to WAVES (in Beeliar), but if you would prefer a different specialist, we can also recommend Perth Veterinary Specialists, Rivergum Referrals, Vet24 and The Animal Hospital.

If you would like specialist management of your pet's cruciate ligament injury, please just ask.



Potential Complications of Stifle Surgery

(Most of this information is taken from the Vet24 TPLO Referral Surgical Services Consent Form)

Success and complication rates vary between pets and are dictated by choice of procedure & concurrent patient-specific factors. These factors include; pre-existing arthritis, age, weight and activity level of the pet, multiple-limb involvement and other complicating illness such as diabetes & immune mediated diseases.

In most situations, with appropriate procedure choice, the estimated **success rate** of surgery is around 90%. In around 10% of pets, persistent or recurrent lameness can be expected.

Swelling and bruising will occur in all cases and will resolve without intervention in most pets.

Meniscal injury (pre and post surgery) is seen in around 20% of cases and requires removal of the torn cartilage. The meniscus is a cartilage layer that protects the bones in the joint. Late meniscal injury can cause persistent lameness after surgery.

Wound breakdown & infection should occur in less than 2% of patients. The surgical site is much more likely to break down or become infected if the pet is permitted to lick the surgical site.

Haemorrhage- significant haemorrhage is rare, but may occur if a branch of the cranial tibial artery is transected.

Delayed union/ non-union/ malunion – failure of the surgical osteotomy (surgically induced fracture to allow movement of parts of the bone) to heal correctly is uncommon (<5%). Fracture through the surgical site and non-union are most likely to occur if the pet is not confined strictly according to postoperative instructions.

Implant Failure – less than 5% (ie breakage of the implant(s)). Usually due to excessive postoperative activity.

Patella tendonitis & Pivot shift – uncommon.

Death under anaesthesia – Very rare. We take every available precaution to keep your pet as safe as possible whilst under anaesthesia. Please ask us ANY questions that you may have about your pet's personal risk factors & how we can mitigate these.

If you have any questions or concerns about your pet, please do not hesitate to call us on 9497 7488, or send us an email at admin@foothillsanimalhospital.com.au