

# Cranial Cruciate Injury



## Basics

The cranial cruciate ligament is a band of tissue inside your dog's knee which allows normal motion and stabilizes the joint, preventing any unnatural movements. Rupture of this ligament results in destabilization and unnatural movements within the joint which then causes pain, inflammation and arthritis development. This is the same ligament that footballers often injure (ACL injury).

Cranial cruciate injury is the most common cause of hind limb lameness in dogs. It can affect both young and old, big and small, however some dogs are more prone than others – those in poor physical body condition and those who are overweight. Some breeds such as Staffies and Labradors are also at higher risk.

## Signs and Symptoms

Limping, decreased activity, decreased muscle mass, swelling, pain, stiffness and difficulty rising or jumping are all common signs associated with cranial cruciate injury.

Clinical signs can range from very mild (an almost undetectable limp) all the way up to very severe (dog is crying and unable to use the leg at all). This can be attributed to whether the damage is mild or severe, how old the injury is and how tough your dog is!

**Any limping dogs should be checked by your vet immediately to prevent further possible damage and ongoing pain**



## Diagnostics

Diagnosing cruciate injury has multiple steps. First your veterinarian will perform a thorough clinical exam and feel both legs and knees. Special tests such as 'cranial drawer test' and the 'tibial thrust test' will be performed to help detect tears.

Xrays will then help to confirm the diagnosis if there is suspicion that a cruciate injury is present. Xrays allow us to assess the joint for arthritis, swelling and to rule out other possible conditions. It also helps to plan surgery options.

## Treatment

### Surgery

**Surgery is by far the most effective method for re-establishing stability within the knee, thereby reducing the pain and inflammation for your pet.**

The goal of surgery is not to repair the damaged ligament but to stabilize the knee, and this can be achieved with a variety of techniques. Your full list of options will be discussed with you by your veterinarian and each case will have slightly different recommendations. There are however, some general guidelines when deciding which surgery is best for you and your pet.

#### *De Angelis Surgery*

This procedure is the quickest, simplest and least invasive surgery. It involves the placement of a fishing-line material placed outside the joint in the same direction as an intact cranial cruciate ligament. This suture helps to provide stability by imitating the function of the cruciate ligament. This technique is most suited to smaller dogs (those under 10kg) as the larger weights of big dogs are more likely to snap the material. If this happens, surgery is of no value, and for this reason, this technique is not recommended for any dogs over 10kg.

#### *TTA Surgery*

Tibial tuberosity advancement is also a bone cutting procedure that changes the forces in the knee, in a slightly different way. This surgery is suitable for most big dogs and is offered in clinic, avoiding the need for travel. This procedure is still invasive and rehabilitation periods are very important. We have performed this procedure many times with very successful outcomes for clients and their pets.

#### *TPLO Surgery*

Tibial plateau levelling osteotomy is a bone cutting procedure that changes the forces applied to the knee. This is an advanced procedure which is usually offered at specialist centres in Melbourne. This surgery is considered 'gold standard' in many cases and is suitable for any sized dog. It is more invasive and can have longer rehabilitation periods.

## Aftercare

**Whether or not your dog has surgery, care of your dog and the knee is critical to a successful outcome.**

If your pet has surgery, you will be instructed to follow a strict exercise restriction plan. This usually involves 6 weeks of very restricted activity (in a crate and short leash walks) which slowly builds over time.

Your pet will usually be placed on pain relief during the early post-operative period and you may be given exercises to assist in your pet's recovery. You will also be referred to our animal osteopath to assist in proper return to normal function and to achieve the best result in the shortest time.

If your pet does not have surgery, you can still rest your dog for 6 weeks to allow the body to attempt to produce enough scar tissue to support the joint. Pain relief will still be prescribed and exercises may be suggested.

Without surgery however, your pet is likely to have ongoing lameness, pain and inflammation which will worsen with time. We do understand that surgery is not for everyone or every pet, so we will do all we can to assist you in reducing these negative effects, however, management is limited.

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