

Cranial cruciate ligament injury is the most common cause of rear limb lameness. Dogs can tear or rupture this ligament when the joint is rotated or overextended. Obesity, biomechanical problems, or repeated minor stresses can also take a toll on the ligament, causing harmful changes over time.

Signs of CCL rupture:

- Limping
- Abnormal sitting posture (straight leg held out to the side)
- Difficulty rising
- Stiff gait
- Exercise intolerance
- Hindlimb muscle atrophy
- Stifle swelling and pain

Injury to the CCL can be complete or partial “rupture.” If left untreated, the ruptured ligament and resultant joint instability lead to joint swelling, pain and arthritis. When this occurs in one joint, it then places additional stress on the opposite hindlimb as the dog compensates for the resulting pain. This often causes degenerative changes in the opposite stifle (knee) as well. Therefore, a dog with CCL rupture in one stifle has a higher chance of developing the same problem in the opposite stifle within 1-2 years (approximately 50%).

Large active dogs and those that are overweight are more prone to CCL injury. Cats and small dogs can also rupture the CLL but the incidence is lower and more likely to occur later in life.

### **Treatment**

Treatment for this painful condition requires surgical intervention in the vast majority of cases. The goal of treatment is to stabilize the joint to allow normal joint movement, thereby alleviating the dog’s pain and allowing for normal activity and a happy, healthy quality of life. Small dogs and cats (weighing less than 10 kg) can very occasionally be managed with conservative treatment consisting of exercise moderation and the use of non-steroidal anti-inflammatory pain relievers and joint supplements such as Glucosamine and chondroitin sulfate. However, intermittent discomfort continues along with the progression of degenerative joint disease (arthritis).

Non-steroidal anti-inflammatory drugs available for the dog are: Deramaxx, Metacam, Previcox, Rimadyl and Etogesic. In general these medications provide pain relief and are anti-inflammatory. All drugs in this group have the potential for causing gastro-intestinal irritation, so if your pet has any vomiting or diarrhea whilst on this medication you should stop giving it and contact your veterinarian.

### **Surgery**

Most patients do require surgical stabilization at some point in their life. There are two methods of fixation: extracapsular repair and osteotomy. With either the lateral suture stabilization or osteotomy, the first part of the surgery is the same and involves exploring the stifle joint and removing the damaged cruciate ligament since it cannot be repaired and releases inflammatory mediators into the joint that cause continues pain, lameness and progression of arthritis.

Extracapsular repair can be done in several different ways but the most common is the lateral suture while osteotomies are typically one of the following:

1. Tibial Plateau Leveling Osteotomy (TPLO).
2. Tibial Tuberosity Advancement (TTA)
3. Modified Maquet Procedure (MMP)

Please discuss the best option with your regular veterinarian or a board certified surgeon.