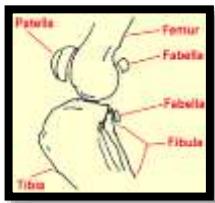


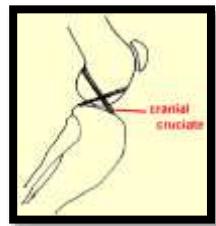
# Cruciate Surgery

Injury to the cruciate ligament resulting in surgery is one of the most common orthopedic complications seen in dogs. The cruciate ligament is a major part of the knee and a tear of this ligament, sometimes known as an ACL or CCL tear, is a painful and immobilizing injury. While this is not a serious and life threatening injury, your dog should be seen by a veterinarian to be evaluated. Of the many injuries that can affect the knee a cruciate injury is the most common.

The knee which is also known as the stifle is a complex joint which contains the kneecap



(patella), cartilage which is known as menisci, a series of ligaments that connect the thigh bone (femur) to the shin bone (tibia). There are two essential stabilizing ligaments that cross over one another in the knee, the anterior cruciate ligament and the posterior cruciate ligament. Injury or malfunction of even one of part of the knee can cause a great deal of discomfort and lameness.



There are several different ways an injury to the cruciate ligament can occur. The most common is as a result of an athletic injury in an otherwise active and healthy dog. This could mean that they landed wrong when running or jumping. Overweight or obese dogs are at a higher risk of experiencing this type of injury because they carry more weight and can have weakened joints. Also some breeds, such as Labrador Retrievers, are more predisposed to cruciate ligament injuries. While a cruciate tear cannot always be prevented keeping your dog at a healthy weight and providing plenty of low impact exercise such as swimming or long walks can minimize the risk.

A cruciate injury is the result of a complete or partial tear of the ligament with the anterior cruciate ligament being more commonly affected than the posterior cruciate ligament. When a tear of this ligament occurs the tibia is allowed to move freely under the femur which results in pain and an abnormal gait. Sudden lameness in a rear leg is often the first sign of

injury noted by the owner. If the injury is left untreated arthritic changes can develop very quickly causing long term lameness and pain. If your dog is showing signs of pain or lameness it is best to have a veterinarian evaluate them within a few days.



Your veterinarian will perform an orthopedic exam on your dog to try and isolate the area causing the pain and to rule out injury to other areas of the leg including the foot and hip. If the doctor suspects a knee injury they will check for signs of a cranial drawer; to do this they manipulate the femur and tibia to feel for instability. A positive drawer sign is noted when the tibia can be moved forward independently of the femur, mimicking the motion of opening a drawer. X-rays of the leg may be taken to check for arthritis or fractures. In a few cases referral for more advanced diagnostics such as a MRI may be recommended.

While most dogs require surgery to correct the cruciate ligament injury a few can improve with more conservative therapy which mostly involves cage rest for several weeks with very short leash walked bathroom breaks only. Some veterinarians will place a brace on the knee or prescribe anti-inflammatory medications. A few dogs will eventually recover with cage rest but these dogs typically weigh less than 25 to 30 pounds. Even if the dog does recover they can re-injure the knee in the future or tear the ligament in the other knee.

The preferred way to correct a cruciate ligament tear is through surgery and the outcome is normally good. There are a few different surgical approaches that can be done, each with their own pros and cons. The traditional surgical procedure is often called the extracapsular repair. In this method the damaged ligament is removed and is replaced by a very strong form of suture material. This suture material will take over the functions of the cruciate ligament. The tissue of the knee will heal over several months and the suture material will eventually break leaving the healed tissue to stabilize the knee. This procedure is relatively quick and uncomplicated surgery and can be successful in most dogs, especially medium and small dogs. This procedure is less expensive than others but long term success is not excellent. Full recovery from this surgery takes 6 to 9 months.

Another surgical option that is growing in popularity is a tibial plateau leveling osteotomy or TPLO. This surgery is significantly more complicated than the traditional extracapsular surgical method and must be done by a specially trained board certified veterinary surgeon. The TPLO surgery alters how the knee joint works allowing it to function properly without a cruciate ligament. A cut is made into the top of the tibia known as the tibial plateau and the tibial plateau is then rotated to change the angle. A metal plate is then attached to keep the bone in place. Over several months the bone heals into its new position. Some improvement can be seen within days with full recovery taking several months meaning that cage rest is required. The long term outcome is typically pretty good and re-injury is uncommon. The metal plate does not need to be removed unless future problems arise with it. As with any surgery complications are possible and the TPLO surgery is significantly more expensive than the traditional surgery.

The third and newest surgical option is called the tibial tuberosity advancement or TTA. Like the TPLO surgery the TTA surgery allows the knee to function without a cruciate ligament. The details of this surgery are slightly different than the TPLO surgery but the TTA surgery still involves cutting of the tibia and placement of a metal plate. Some surgeons describe the TTA as a less invasive surgery than the TPLO surgery and it provides a faster recovery however other surgeons see little difference between the two surgeries. The cost of TTA surgery is similar to that of TPLO surgery.

Regardless of the type of surgery done a resting period of at least 8 weeks and in most cases an even longer resting period is crucial to the healing process. Physical therapy is often recommended and can be extremely successful for long term recovery.

For more information feel free to contact Cedar Grove Veterinary Services at 920-668-6212.