

Cranial Cruciate Rupture and Your Dog

Cranial cruciate ligament (CCL) rupture is one of the most common orthopedic injuries in dogs. This injury is similar to a torn ACL in people and can come on suddenly or over a period of months. If the injury occurs over time, the ligament is often stretched or partially torn until it eventually ruptures completely. Large dogs such as the Labrador Retriever, Golden Retriever, Rottweiler, American Staffordshire Terrier and Newfoundland seem to be predisposed.

Researchers have looked at the factors that may predispose these breeds to CCL injury, and current evidence points to a complex interplay between conformation, genetics, and the mechanics of movement. CCL injury can occur in athletic dogs who participate in agility or hunting activities, but it can also occur with a family pet who simply accompanies his owner on regular walks. We also know that there are often degenerative changes in both the affected ligament as well as the “good” side. Due to the fact that there may be degenerative changes on the “good” side and that the same conformation and genetics affect both, the “good” CCL often eventually tears in about 50% of dogs.

The cranial cruciate ligament helps the stifle (knee) function as a hinge joint. When it ruptures, instability of the joint occurs with the tibia (shin bone) thrusting forward on each step. Pain and swelling result. Eventually the meniscus, the thick fibrous pad in the stifle joint, also tears resulting in further pain and inflammation. The result of the CCL +/- meniscus tear is chronic pain, arthritis and loss of function of the knee.

A torn CCL is most often able to be diagnosed on physical exam. Exam findings include swelling (effusion), pain, instability (cranial drawer motion), muscle atrophy and thickening of the tissues around the knee (medial buttress). And while the ligament is not visible, an X-ray is often taken to look at the joint for signs consistent with this injury and to rule out other possible causes of lameness. In addition, the

X-rays are used to measure the knee for the proper sized implants for a corrective osteotomy to stabilize the knee.

Surgery is the standard treatment for CCL rupture. While a small percentage of dogs improve without surgery (these dogs respond to medical management which includes anti-inflammatory medications, rehab and rest), the majority do poorly. The problem with waiting to see if your dog improves sufficiently without surgery is that most dogs do best if surgery is performed in the first few weeks. Postponing surgery too long may result in muscle atrophy, pain, severe arthritis and secondary meniscal tears. As such, surgical intervention is the best recommendation for all dogs with a torn CCL.

There are multiple surgical procedures and variations of procedures used to treat ruptured cruciate ligaments in dogs. In essence these boil down to two main procedures. The TPLO is considered the “gold standard” for large dogs.

1. The “Traditional Procedure”: A traditional procedure known as an “extracapsular” technique or a “Flo” technique or an “imbrication” (tightening) technique has been used for many years. It is still used very successfully in small dogs. Some large breed dogs return to good comfort and function with this procedure, others do not.
2. TPLO (Tibial Plateau Leveling Osteotomy): The TPLO is considered the “gold standard” procedure. It involves changing the slope of the joint angle so that the tibia doesn’t thrust forward when weight-bearing.

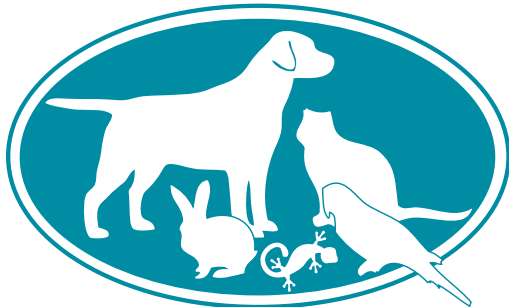
While the TPLO is an excellent procedure for most dogs, it is not without risk. Complications include infection, broken implants, fractures of the bone etc. Our goal is to get pets back to about 90% of the comfort and function they had before injury.

Unfortunately, 100% normal as they were before losing the CCL is not always realistic. We can accomplish this goal of good comfort and function in 90 to 95% of dogs. There are 5 to 10% that may experience disappointing results that include arthritis, stiffness and discomfort after exercise.

Lastly is the concern about the meniscus after a CCL injury. All dogs should receive an arthrotomy (the joint is opened and explored). The torn CCL is removed and the meniscus is inspected. If the meniscus is torn, that part of it is removed. If it is intact it is left because it plays an important role in stabilizing and cushioning the joint. At this point the joint is closed and the stabilization portion of the

surgery is performed. It is important to know that in a small percentage of dogs (2-5% for a TPLO, 10-20% for a traditional procedure), an intact meniscus can tear post-op. This tear can happen days, months or years after the procedure. In this event, a second surgery is sometimes required to remove the meniscus.

Remember! Controlling your pet's activity and rest are critical in the weeks following surgery. Your pet MUST be kept on a leash EVERY time he or she leaves the house. While we want your pet to rest and stay controlled, gentle, gradual physical therapy will help your dog heal. Visit www.topdoghealth.com or ask us for help! We are here for you!



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