

Standard Repair for Cranial Cruciate Ligament (CCL) Rupture



What is a cruciate ligament?

There are two ligaments in the stifle (knee) that are called the cruciate ligaments because they cross each other. One runs from the back of the femur (thigh bone) to the front of the tibia (shin bone). This one is called the cranial cruciate ligament (CCL). The other one runs from the front of the femur to the back of the tibia and is called the caudal cruciate ligament. Cruciate ligaments are important for the hinge joint function of the stifle joint. They help to keep the stifle aligned, and the CCL especially prevents internal rotation of the stifle, forward displacement of the tibia, and hyperextension.

What is a cranial cruciate ligament tear?

A cranial cruciate ligament (CCL) tear in dogs is similar to an ACL tear in humans. It can be an abrupt tear during trauma or the result of strenuous activity. However, it can also be a slow deterioration of the ligament over weeks or months, potentially affecting both knees. Following a CCL tear, the limp is usually quite severe. While some improvement may occur with time, surgery is the desired method of treatment for most dogs and cats. Over the past 30 years, numerous surgical techniques have been developed to help correct the instability created by a CCL tear. In cats, small-breed dogs, and some older, large-breed dogs, we usually perform a surgical technique that is referred to as a standard cruciate repair. Following removal of the torn CCL, a synthetic ligament is created. Stability of the stifle is immediate following surgery but most pets will not fully use the leg for several weeks. A combination of strict rest and physical therapy will aid in the pet's recovery and in the ultimate use of the leg. While the standard repair may be performed in medium- and large-breed dogs, a tibial plateau leveling osteotomy (TPLO) is typically the best option for these dogs.

What is post-operative care for a cranial cruciate ligament tear?

Strict rest is required following surgery to allow for proper healing of the surrounding soft tissues. Initially, there should be no running, jumping, or playing. After the first month of strict rest, controlled activity may be gradually introduced for three months following surgery. Physical therapy is also suggested to aid the healing process.

What are the risks or complications with this surgery?

There are a few risks or complications with stifle surgery. Be sure to discuss them at your appointment. At that time, we should have pertinent blood work on hand to assess the risk for general anesthesia. The risk is usually very low for healthy animals with normal blood work. That risk is further reduced by local pain control during anesthesia, which is accomplished by an epidural anesthesia. Most complications are minor in nature. With some minor complications, additional medications or other forms of physical therapy may be

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required. Complications such as infection, suture reaction or reaction to the artificial ligament, tearing of the artificial ligament, or future meniscal tearing are possible. Major complications, those requiring additional surgery, are rare. As long as the activity restrictions are adhered to, the chance that additional surgery will be needed is low.

Can the leg be re-injured following surgery?

After the healing is complete, it is rare for problems to develop. However, it is not unusual to see an occasional limp in some dogs for several months following surgery. Some dogs will have already developed arthritis in the affected stifle or will develop it post operatively; this could lead to a source of occasional stiffness or limping in the future.