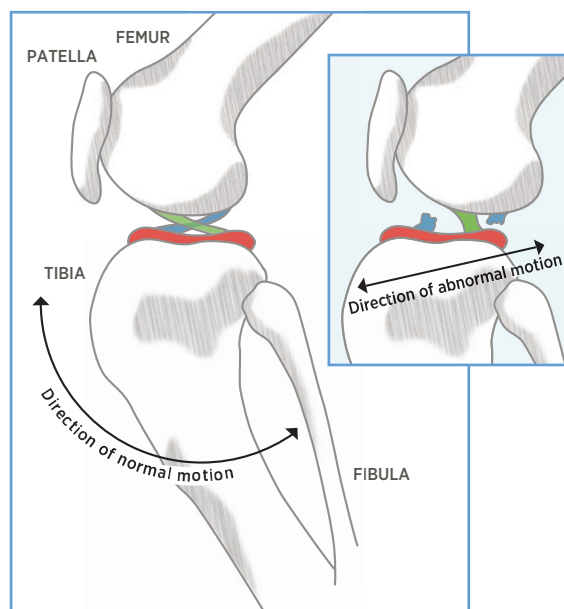
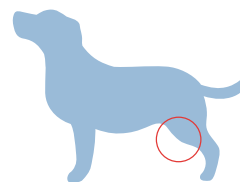




WHAT IS A CRANIAL CRUCIATE LIGAMENT (CCL)? The CCL is one of the most important ligaments in the dog's knee (stifle) responsible for dynamic stabilization. More specifically, its purpose is to prevent hyperextension, internal rotation, and forward displacement of the tibia. This ligament is equivalent in human medicine to the anterior cruciate ligament (ACL). The CCL is made up of many small strands of ligamentous tissue, much like a rope. During weight bearing, the CCL provides knee stability by securing the femur to the tibia. Rupture or tear of the CCL is the most common reason for hind limb lameness in dogs.

WHAT CAUSES THE LIGAMENT TO TEAR? It is common to hear about humans tearing their ACL while engaged in activities such as skiing, soccer, or football. Ligament rupture in the dog is different in that it often is a slow degenerative process. This multifactorial process in which the cruciate ligament weakens is called cranial cruciate ligament disease (CCLD). A sudden lameness during exercise makes it seem as if the tear just occurred when, in fact, a sudden traumatic tear of the CCL in dogs is a very rare occurrence.

MY DOG DOESN'T LIMP ALL THE TIME, ARE YOU SURE IT'S A LIGAMENT TEAR? Dogs can have varying degrees of ligament tearing from partial to complete depending on the stage of the disease process. Getting back to the rope analogy, partial tears are similar to a fraying rope. This partial tear stage can be intermittently very painful. In time, like the fraying rope, the partial tear will become a complete tear. This process is irreversible as partial tears cannot repair themselves. Continuous limping or non-weight bearing on a hind limb may be indicative of a complete tear of the CCL.



Large illustration shows normal knee anatomy: Blue: Cranial Cruciate Ligament | Red: Meniscus | Green: Caudal Cruciate Ligament. Inset shows a Cranial Cruciate Tear (Blue) and "Drawer Motion."

WHAT WILL HAPPEN IF LEFT UNTREATED? A partial tear of the CCL will advance to a complete tear with the progression of the disease. Any knee that has cruciate disease will develop arthritis. Arthritis can be mild, moderate, or severe. Arthritis is a non-reversible change in the joint and delaying treatment only increases its severity. Other issues that occur if left untreated include reluctance to exercise, jump, or perform routine activities such as walking.

WHAT ARE THE OPTIONS FOR TREATMENT? Treatment for a torn CCL ranges from non-surgical (activity restriction, anti-inflammatory medication, rehabilitation therapy) to surgical. The benefit of surgical stabilization is to alleviate the pain associated with CCL disease, provide stability, and to slow the progression of arthritis as much as possible. Surgery is the gold standard for treating cruciate disease. Care Center offers options for surgery and recommendations vary based on the dog's physical health, age, size, and body score as well as the owner's ability to continue recommendations during recovery.

+ **TIBIAL PLATEAU LEVELING OSTEOTOMY (TPLO):** TPLO involves changing the angle of the back of the tibia so the tibia doesn't slip forward during weight bearing. The bone is cut and the tibial plateau is rotated and secured with a bone plate to create stabilization of the knee.

+ **LATERAL SUTURE REPAIR:** The lateral suture repair involves the removal of the torn CCL and stabilizing the joint with a strong suture material that mimics the CCL function. Over time, scar tissue will form around the artificial ligament assuming the stabilizing role.

RECOVERY: Recovery time is dependent on which procedure is performed as well as, other factors that are unique to each patient. Typically, recovery may vary between 6-12 weeks. Strict rest and physical therapy will assist in the timely use of the repaired leg and will promote healing. Strict rest is prescribed for the first six to eight weeks after surgery. Following the weeks of restricted activity, gradual introduction to exercise in a controlled environment will be recommended. This gradual increase in activity promotes muscle building, range of motion in the joint, and acts as a natural physical therapy. TPLO surgery requires x-rays several weeks following surgery to ensure the bone is healing well.



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CINCINNATI 6995 E KEMPER ROAD, CINCINNATI, OH 45249 | **513.530.0911**

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