

# Cruciate Disease

## What and where are the cruciate ligaments?

The word cruciate means 'to cross over'. The cruciate ligaments are two bands of fibrous tissue located within each knee joint. They join the femur and tibia together so that the knee works as a stable, hinged joint. In dogs and cats, the ligaments are called the cranial and caudal cruciate ligament. In dogs, the most common knee injury is a rupture or tear of the cranial cruciate ligament.

## How does a cranial cruciate injury occur?

Based on its anatomy, the knee joint is a **hinge joint**. It is relatively unstable because there are no interlocking bones in the joint. Instead it is held together by several ligaments, including the cruciate ligaments, which allow it to move back and forth like a hinge, but restrict its side-to-side motion. Acute or traumatic cruciate rupture is caused by a twisting injury to the knee joint. This occurs most often when the dog is running and suddenly changes direction. This places the majority of the body weight on the knee joint, and excessive rotational and shearing forces are placed on the cruciate ligaments. This injury usually affects the anterior or cranial (front) ligament. A cruciate ligament rupture is usually extremely painful and the knee joint becomes unstable, resulting in lameness. A more chronic form of cruciate damage occurs due to progressive weakening of the ligaments as a result of repeated trauma or arthritic disease. Initially, the ligament becomes stretched or partially torn and lameness may be only slight and intermittent. With continued use of the joint, the condition gradually gets worse until a complete rupture occurs. Obese dogs appear to be more predisposed to developing a cruciate rupture. In these dogs, the injury may occur with minor trauma to the knee, such as stumbling over a rock while walking. Dogs with other knee problems such as a luxating patella may also be predisposed to rupturing their cruciate ligaments. Dogs who rupture one cranial ligament are more predisposed to rupturing the cranial cruciate ligament in the other knee.



## How is it diagnosed?

With traumatic cruciate rupture, the usual history is that the dog was running and suddenly stopped or cried out and was then unable to bear weight on the affected leg. Many pets will 'toe touch' and place only a small amount of weight on the injured leg. During the lameness examination, your veterinarian will try to demonstrate a particular movement, called a **cranial or anterior drawer sign**. This abnormal forward movement of the tibia (lower leg bone) in front of the femur (thigh bone) indicates laxity in the knee joint.

## Is an operation always necessary?

Dogs weighing less than 10 kg **may** heal without surgery, provided they have severe exercise restriction such as strict cage rest for six weeks. Dogs over 10 kg usually require surgery to stabilize the knee. Unfortunately, most dogs will eventually require surgery to correct this painful injury.

**If you're concerned your pet has Cruciate Disease or has serious vomiting and diarrhoea please seek veterinary attention early. Our team of amazing veterinarians are available 24/7 for any emergencies when your vet is not available. Feel free to call us if you aren't sure you should see a veterinarian or not, and our team can assist you.**



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