

# CRANIAL CRUCIATE LIGAMENT RUPTURE FACT SHEET



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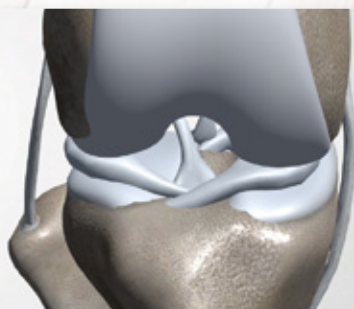
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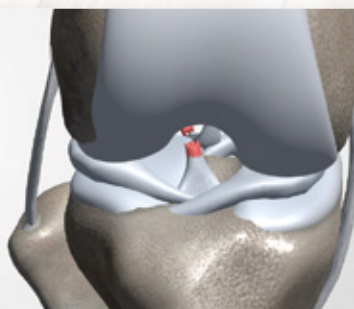
## DESCRIPTION

The main role of the cranial cruciate ligament (known as the anterior cruciate ligament in humans) is to limit forward (cranial) and backward (caudal) movements within the knee. It therefore acts to stabilise the knee joint. In dogs, cruciate tears can occur due to injury or degradation, causing joint instability.



### NORMAL STIFLE

- In a healthy joint, the ligament helps to maintain the correct position of the upper and lower leg bones, to keep the joint stable.
- A normal joint structure facilitates normal joint function without clinical signs of pain.



### CRANIAL CRUCIATE LIGAMENT RUPTURE

- When the cranial cruciate ligament ruptures, the lower leg bone can move forward as the joint becomes unstable.
- Joint instability triggers other injuries, including cartilage tears and osteoarthritis.

# CRANIAL CRUCIATE LIGAMENT RUPTURE

## CLINICAL SIGNS

- Dogs that present with an acute ligament rupture are lame and do not put weight on the limb. It occurs suddenly, usually during exercise.
- When the lesion is chronic, the dog shows a persistent lameness on the affected limb. These dogs may have difficulty sitting down and getting up. They sit in a particular position, without bending the affected knee. The lameness worsens after exercise or rest.

## TREATMENT OPTIONS

### Non-surgical management

- **Weight control** is vital as allowing the dog to become overweight will accelerate the onset and progression of osteoarthritis.
- **Anti-inflammatory drugs** are used to reduce pain and inflammation in the joint, thereby improving the dog's quality of life.
- **Dietary supplements** may be added for different purposes. Glucosamine with chondroitin sulphate supports the joint cartilage. Omega-3 fatty acids are used for their anti-inflammatory properties.
- **Controlled exercise** limits pain and helps to strengthen the surrounding muscles. Exercise should be limited until the lameness improves and then increased in a controlled manner.
- **Physiotherapy** uses a customised exercise programme to improve the dog's clinical signs.

Even though non-surgical treatment may be satisfactory in the short term in certain cases, for example with small-breed dogs, the only way to stabilise the knee, ensure optimal functionality and avoid osteoarthritis is surgical treatment.

### Surgical intervention

There are many surgical techniques available to repair a ruptured cranial cruciate ligament grouped into the following categories:

- **Extracapsular techniques:** These techniques seek to stabilise the knee using prosthetic ligaments on the outside of the joint. These techniques tend to have a better outcome in smaller breeds of dog.
- **Tibial osteotomy:** Different techniques aim to change the forces within the knee to stabilise the joint. This can either be achieved by changing the angle of the tibial plateau (TPLO, Tibial Plateau Leveling Osteotomy) or by moving the attachment of the quadriceps muscle (TTA, Tibial Tuberosity Advancement).



## TIPS FOR THE OWNER

- Daily physiotherapy, including gentle, short exercises – as directed by your veterinarian – is beneficial for your dog as it will improve the mobility of the affected limb.
- Keeping your dog's weight under control with an appropriate high-quality diet and calorie restriction is essential to maintaining their joint health and general well-being.
- You can help your dog by using a harness that provides them with support and assistance on walks.
- Environmental modifications, such as a comfortable bed to sleep on, a mat on slippery floors and a ramp or steps to get into the car, will make daily activities easier for your dog.
- Don't forget to use medical treatment to reduce pain and inflammation, and to improve your dog's quality of life.

Please consult with your veterinarian for confirmation of any diagnosis or treatment.

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