



hamilton
SPECIALIST REFERRALS

A mini guide to:

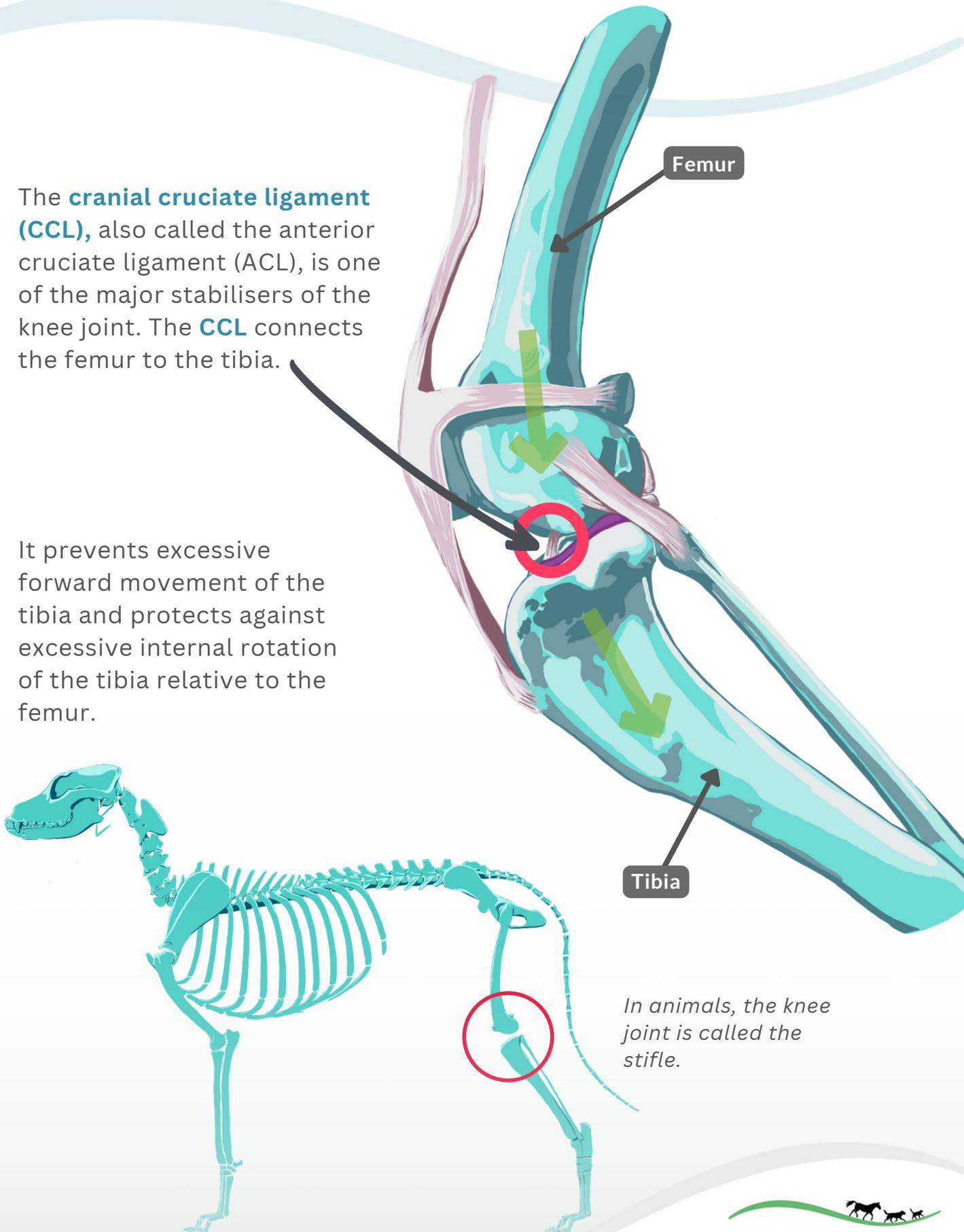
Cruciate Rupture



Overview: What is a cruciate rupture?

The **cranial cruciate ligament (CCL)**, also called the anterior cruciate ligament (ACL), is one of the major stabilisers of the knee joint. The **CCL** connects the femur to the tibia.

It prevents excessive forward movement of the tibia and protects against excessive internal rotation of the tibia relative to the femur.



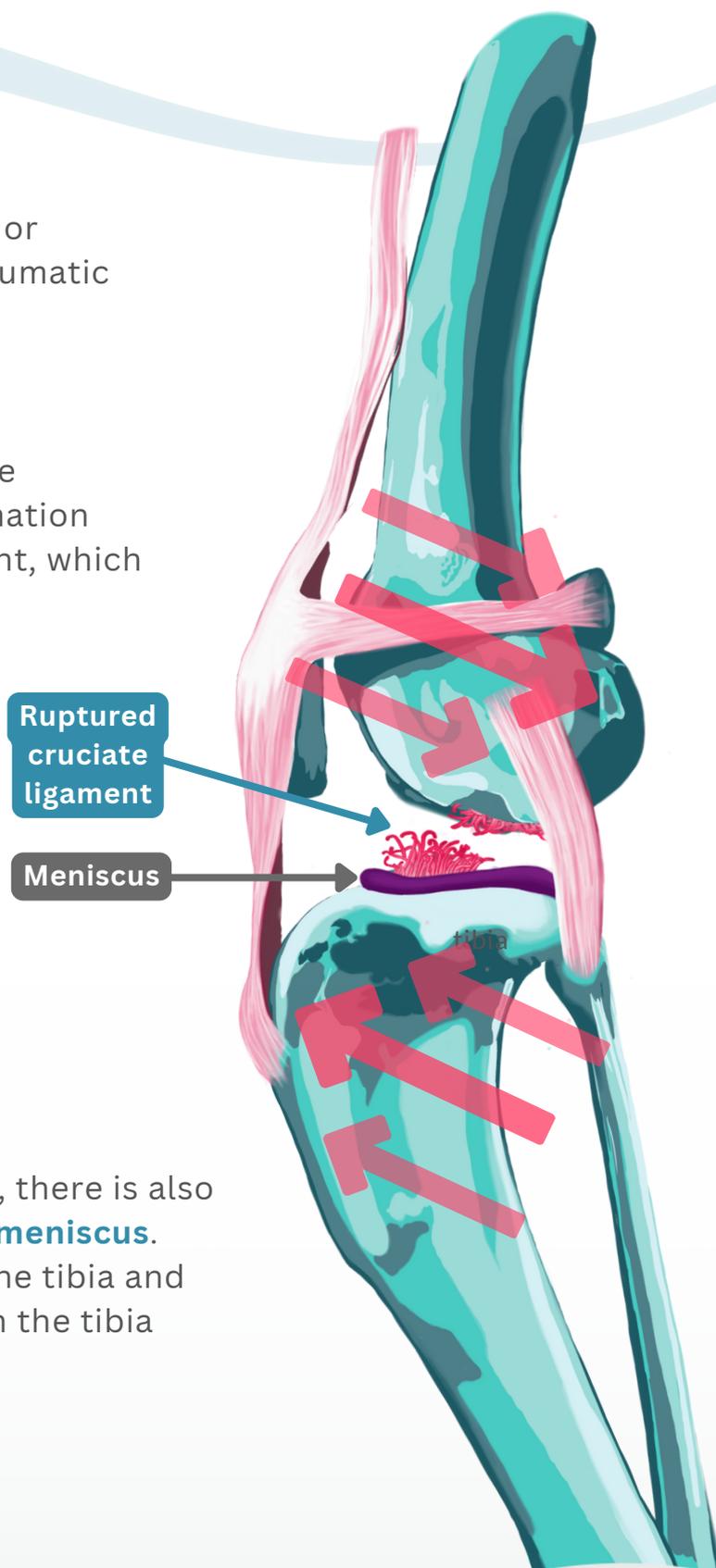
Overview: What is a cruciate rupture?

A cruciate rupture can be partial or complete and can be due to a traumatic injury or secondary to premature degeneration of the ligament.

Damage to any of the fibres of the cruciate ligament causes inflammation and increased fluid within the joint, which leads to pain and lameness.

When a significant proportion of the fibres are torn, the ligament is no longer able to stabilise the joint, which results in further discomfort.

Once the joint becomes unstable, there is also an increased risk of injury to the **meniscus**. The **meniscus** sits on the top of the tibia and acts as a shock absorber between the tibia and the femur.



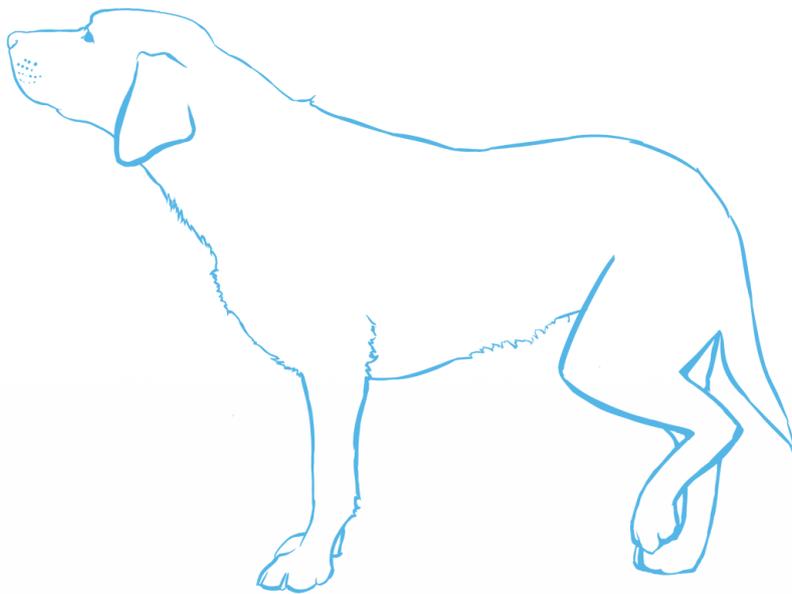
Diagnosis: Causes and Symptoms

Causes

In humans, traumatic injury is most common. In animals, injury most commonly occurs due to prior weakening of the ligament. The term cruciate disease is used to describe this degenerative process, however the specific reasons why this occurs are not fully understood.

Symptoms

Clinical signs can be extremely variable. Some patients can be non-weight bearing, whereas in others, the only symptoms are a subtle loss of muscle mass, reduced ability, or willingness to exercise.



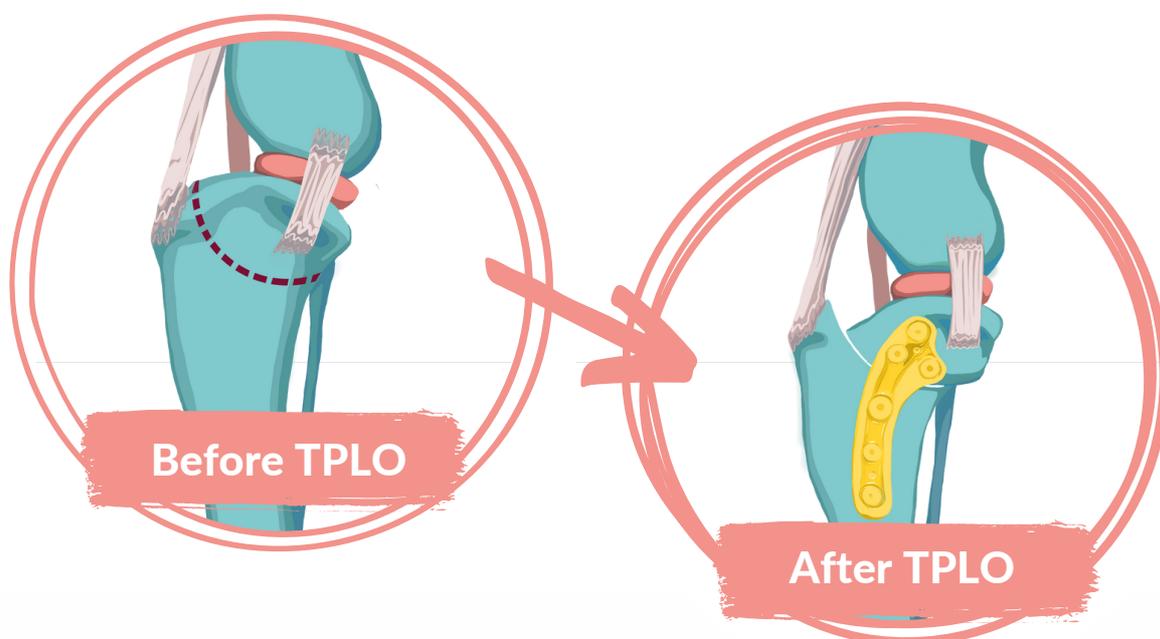
Breeds

Cruciate rupture can occur in any breed, however it is over-represented in **Labrador and Golden Retrievers, Rottweilers, Boxers, West Highland White Terriers, and Newfoundlands.**

Cranial cruciate ligament disease/rupture can also be seen in cats but is much less common than in dogs. Treatment options in cats are similar to those used for dogs.

Treatment: Surgery

Although some animals may improve with conservative management, surgery is required to achieve a return to full function. The most effective surgeries are the tibial osteotomies which include the **cranial closing wedge osteotomy (CCWO)**, **tibial plateau levelling osteotomy (TPLO)** and **tibial tuberosity advancement (TTA)**. The type of surgery performed is case dependent.



The tibial osteotomies alter the mechanics of the stifle joint so the cranial cruciate ligament is no longer required. Other surgeries to replace the ligament or act like it are not successful in dogs. With the tibial osteotomies, bone at the top of the tibia is cut then re-aligned and held in place with metal implants, most often plates and screws.

Robust evidence is lacking, but the **TPLO** is the most recommended procedure with 95% of patients returning to full function without the need for any ongoing painkillers.