Cruciate Ligament Rupture in Cats

What is a cruciate ligament rupture?

The cruciate ligaments are two fibrous bands which form an X shape in the knee, a rupture is a tear in one or both of the ligaments due to trauma, such as a sudden movement which twists the knee.

Symptoms:

- Hindlimb lameness
- Reluctance to place weight on the affected limb
- Pain
- Swelling
- Decreased activity

Diagnosis: Physical examination can diagnose a cruciate rupture. Imaging may be necessary to determine the extent of the damage.

Treatment: Non-surgical, rest for 6-8 weeks. Surgery to repair the tear and cage rest.

About:

The cruciate ligament is a pair of ligaments which form an X shape within the knee of the hind leg. These ligaments attach the femur (thigh bone) with the tibia (shinbone), the long bones above and below the knee joint (which is known as the *stifle joint* in quadruped/four-footed animals).

Four main ligaments hold the knee joint together and keep it stable:

- **Anterior medial and lateral collateral ligaments** which run down the inside and outside of the knee.
- **Anterior (cranial) and posterior (caudal) cruciate ligaments** which sit within the knee joint.

The cruciate ligament’s role is to provide stability to the knee joint, preventing twisting of the bones or hyperextension of the knee joint.
A cruciate ligament rupture can occur due to a traumatic event which results in severe twisting or pivoting of the knee joint. Damage may also develop slowly due to degeneration which can come with age. When the ligament ruptures, the entire joint becomes unstable and the leg bones can easily move out of place. It is quite common for damage to occur to other parts of the joint, such as the meniscus at the same time as a cruciate rupture.

Ruptures may be partial or full (complete). A partial rupture means only one of the two cruciate ligaments has been torn. A full rupture occurs when both the cranial and posterior cruciate ligaments tear.

There is a higher incidence of cruciate ligament ruptures in cats who are overweight.

Symptoms:

Cats with a ruptured cruciate ligament most commonly present with rear limb lameness, he may also hold the affected limb off the ground. Symptoms may be sudden onset if an injury or trauma is the cause or slowly progress over a period of time.

Other symptoms may include:

- Swelling of the affected area
- Pain
- Decrease in activity

Diagnosis:

Your veterinarian will perform a complete physical examination of your cat and obtain a medical history from you. Questions he may ask include if the lameness occurred suddenly or has been slow and progressive. Has the cat been in a recent trauma such as a fall? As there are a number of causes of limping in cats, which may have similar symptoms, your veterinarian will need to narrow down the cause during the physical examination.

He will watch your cat walk as well as carefully perform an orthopedic examination which includes a physical examination of the affected limb for swelling as well examining the physical structures around the joint. The joint will be carefully moved through several
motions including a cranial drawer test and a tibial compression test which can be helpful in diagnosing a cruciate ligament rupture. This test may need to be carried out under anesthesia. He will evaluate the non-affected limb for comparison.

Radiographs may be taken of both the affected and non-affected leg to determine if a cranial rupture is evident as well as to look for signs of arthritis.

**Treatment:**

**Non surgical**

Treatment may include exercise restriction for 6-8 weeks, as obesity can be a significant factor. Weight loss will be necessary for overweight cats. Anti-inflammatory drugs and painkillers may be prescribed at this time.

Your veterinarian will need to monitor your cat for signs of improvement. If there is no change or the condition becomes worse surgical treatment will be necessary.

The drawback of this wait and see approach is there is a very good chance the affected stifle will develop arthritis in the future.

**Surgical**

There are a number of methods to stabilise the joint surgically, which your own veterinarian may perform or he may refer you to a specialist. The meniscus will also be evaluated for tears as this is a common concurrent injury in cats with a cruciate ligament rupture.

**Aftercare**

A loss of appetite can develop after surgery due to the anesthesia or painkillers. Offer him a strong-smelling food such as tuna or cooked chicken breast, or feed by hand. If he continues to refuse food, speak to your veterinarian.

Your veterinarian will immobilise the stifle joint for at least two weeks to allow it to repair. Strict cage rest is necessary at this time. He may recommend very short walks in a harness to encourage your cat to use the limb. Do not let him run or jump for at least 12 weeks post surgery. Do not let the cat outside (unless on a harness) at this time.

Your veterinarian will prescribe painkillers for the first 10-14 days post surgery.

Be watchful for signs of infection including swelling, redness, oozing fluid or odour.

Follow-up visits will be necessary post surgery to remove or change bandages, remove staples or stitches and evaluate the affected joint.