CRUCIATE DISEASE

Go Well

& Your Pet

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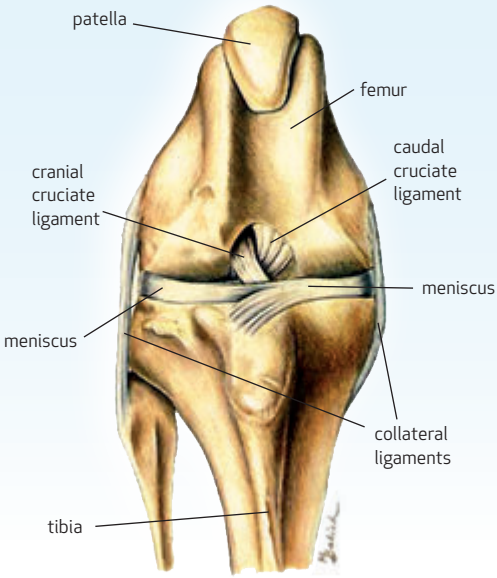
Understanding The Knee Joint

The knee joint is formed by three bones that are joined together by tough fibrous bands of tissue called ligaments. All the ligaments and the joint capsule ensure that the bones of the knee joint can only move within a limited area in relation to one another. As there are no interlocking bones in this joint, it is these structures which provide stability. Two of these ligaments crisscross the knee joint from the femur to the tibia and are called cruciate ligaments.



'Image Courtesy of Hill's Pet Nutrition'.

Femur – the thigh bone that runs from the hip to the knee.

Tibia – the shin bone between the knee and the ankle.

Patella – the kneecap.

Cruciate ligaments – ensures that the bones of the knee joint have limited forward movement in relation to one another. The cranial or front ligament degenerates and ruptures in cruciate disease.

Meniscus – 'cartilage-like' pads that provide shock absorption between the thigh and shin bones. The meniscus is often damaged in cruciate disease.

Collateral ligaments – ligaments that stop the thigh and shin bones from sliding side to side.

Cranial Cruciate Ligament (CCL) Disease

Knee joint instability caused by CCL degeneration and the eventual rupture of the CCL is the most common reason for hind limb pain and lameness in dogs.

In dogs, CCL disease of the knee is a consequence of a subtle, slow degeneration of the cruciate ligament. This may present or be diagnosed by your veterinarian as knee instability causing a mild lameness.

The final process of CCL disease is complete tearing or rupture of the ligament. With the loss of this critical structure the knee joint becomes unstable resulting in tissue damage, inflammation, pain and lameness. Signs become more apparent and include difficulty rising, non-weight bearing or 'toe touching' lameness and an unwillingness to play.

Risk factors for cruciate disease include:

- Degeneration or aging of the ligament
- Extra strain on the ligaments from obesity
- Poor physical condition
- Breed and genetics
- The shape and structure of the skeleton

Investigation

On suspicion of cruciate disease following the history and examination of your dog, additional investigation to confirm the diagnosis of CCL disease and assist in the development of a treatment plan may be required. This may include blood tests, examining the joint when relaxed under anaesthesia and radiographs to assess the health of the joint.

Treatment of Cruciate Disease

The treatment of choice can vary significantly depending on your pet's individual circumstances, in particular their weight. If the knee remains unstable, cruciate disease continues the development of arthritis.

Orthopaedic surgery is required in most animals to return stability to the joint. Medical management of CCL disease, without surgery, is only a consideration in small dogs. Your veterinarian will advise you whether this is a consideration for your pet.

As there are several different surgical approaches, your veterinarian will assess your pet's weight, conformation and physical condition to assist you in making the best decision for your pet.

Surgery focuses on returning stability to the joint by either artificially replacing the ligament or surgically remodelling the joint so that the ligament is no longer required.

The surgical procedure involves an internal examination of the joint called an arthrotomy. The CCL remnants and the menisci will be examined and damaged tissue will be removed if present, helping to resolve ongoing inflammation of the joint.

PLEASE NOTE:

Given that predisposing factors for cruciate disease include many factors that affect both knees, it is not uncommon for animals to develop a similar problem in the other knee at some point in the future.

Meeting your pet's needs

Your veterinarian is the trusted professional to meet your pet's needs. If your veterinarian has diagnosed or is suspicious of cruciate disease in your pet, this leaflet contains important information.

Cruciate disease is one of the most common causes of lameness in dogs. Current techniques in surgery and physical rehabilitation allow most dogs to have very good outcomes. We trust that the information contained will help you work with your vet to achieve the best outcome for your pet's surgery.

Post-operative care

Good post-operative nursing care at home is critical to achieve the best outcome following surgery. Carefully follow your veterinarian's post-operative recommendations for exercise. These are designed to limit any risk of complete or partial failure from exercise and begin the healing process of any surgical repair.

Norbrook®

Produced by:

Norbrook Laboratories Australia Pty Ltd.
7/1 Trade Park Drive
Tullamarine, VIC 3043,
Australia

Norbrook NZ Ltd
KPMG Centre
18 Viaduct Harbour Avenue
Auckland

Cruciate Disease & Your Pet

Immediately after surgery, limit pain through:

Rest and nursing care.

Administer pain relief medication following the labelled directions provided by your veterinarian.

Icing as directed daily for the first 3-5 days after surgery.

After this, short term management includes:

Pain relief or joint supplements prescribed by your veterinarian.

Physical rehabilitation exercises as prescribed by your veterinarian. Some methods may include gently flexing and extending the knee, water or treadmill exercises.

Lifestyle modifications your veterinarian recommends such as:

- Swimming or other low impact exercise.
- Gentle, controlled walking (avoiding slippery floors and stairs).
- Weight loss if your pet is overweight.
- Avoidance of any high impact activities such as running, jumping, or ball chasing.

Longer term management:

Your veterinarian will re-evaluate your pet based on their progress and, when appropriate, increase exercise with a view to returning your pet to normal activity. Often this takes between 8-12 weeks.