Frequently Asked Questions

What is the recovery period like following surgery?

Following surgery we will provide you with a week by week rehabilitation program which includes applied ice and range of motion exercises combined with a gradually increasing activity level. The details are slightly different between procedures. Most dogs are better than they were before surgery within a month, but full recovery is not complete for 4-6 months.

Will my dog be in pain?

We will take every measure to ensure a comfortable recovery for your pet. This includes pain patches applied prior to surgery, epidurals, take-home medications, and long acting local anesthetics similar to lidocaine in and around the surgical site. These are our routine protocols; we will take even further steps if necessary. Not only do we not like to see our patients in pain, but healing is delayed and complications can occur due to excessive pain.

Which surgical technique do you recommend?

While the TPLO is widely considered the better repair method for all dogs, the choice is not so simple. Cost and other factors such as the dog's age, size and activity level play a role in the decision. Generally the larger, younger, and more active your dog is the more we would recommend TPLO as our preferred repair option.

What are the potential complications?

Complications common to all surgeries, although rare, can occur. The most obvious of these are infection and anesthetic risk. We utilize strict sterile technique and peri-operative antibiotics prevent infection and to minimize anesthetic risk we take several precautions including pre-operative blood work, IV fluids during surgery and cardiac and blood gas monitoring. We always have a trained surgery technician in the room to monitor the patient during surgery and recovery.

Why does my dog have this problem?

We believe that cruciate disease is a multifactoral problem, meaning several causes are involved. Genetics play a role, as certain breeds are affected more frequently. Conformation, conditioning and physical fitness are also important pieces of the puzzle. This pamphlet explains how the anatomy of the dog places constant stress on the ligament, and weight issues increase this strain. In addition, research is currently investigating other possible causes, including an autoimmune component, nutrition and other factors. Veterinarians hope to one day be able to prevent cruciate disease from occurring.

HEADWATERS VETERINARY HOSPITAL & BOARDING

11370 US HWY 287

Three Forks, MT 59752

Phone: (406) 285-6672

Fax: (406) 285-6674

E-mail: headwatersvet@yahoo.com

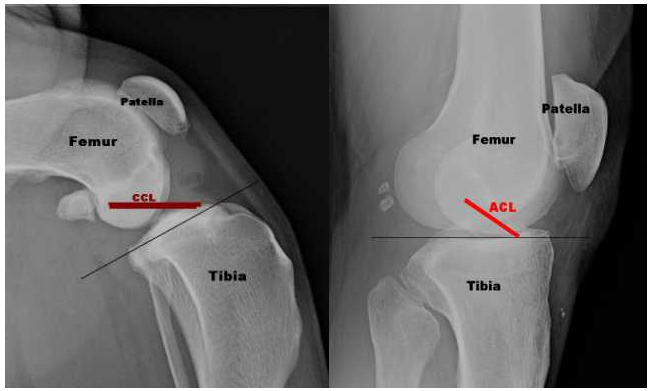
Understanding Canine Cruciate Disease

HEADWATERS VETERINARY HOSPITAL & BOARDING

Tel: (406) 285-6672

Anatomy and Function

The anatomy of the canine knee is virtually identical to that of a human being. Anyone who has ever experienced knee problems will find this easy to understand. The ACL or anterior cruciate ligament is called the CCL or cranial cruciate ligament in dogs, but these two different terms refer to the same ligament. This ligament extends from the back of the femur to the front of the tibia, and its primary function is to



Canine knee (or stifle) Human knee

prevent the femur from sliding backwards in relation to the tibia.

As you can see from the radiographs above, dogs' knees have a rearward slope to their tibia. This conformation places strain on the cruciate ligament during every step a dog takes. This may explain why injury to the CCL of dogs is so common, and why reconstruction techniques commonly used in humans do not work well. Unlike people, it is nearly impossible for a dog to rest the ligament. Many dogs begin with a partial tear which begins to heal and then recurs as soon as the dog feels better and begins using the leg again. This can go on for months, but most dogs eventually tear the ligament completely.

Once the cruciate is torn, the knee is unstable and structures within are vulnerable to further damage. As the knee deteriorates, continuous inflammation leads to arthritis and chronic pain. For these reasons, early surgery is recommended for dogs with CCL tears.

Surgical Options

There are two methods of repair used at Headwaters Veterinary Hospital for repair of cruciate tears: the Lateral Suture and Tibial Plateau Leveling Osteotomy or TPLO. The first part of the both surgeries is exploration of the joint for confirmation of the diagnosis and treatment of damaged structures inside the joint. We use an arthroscope for this part of the procedure to minimize painful invasion of the joint.

Lateral Suture

The lateral suture technique is an older method of repair that utilizes very strong sutures placed out side the joint capsule to mimic the function of the cranial cruciate ligament.

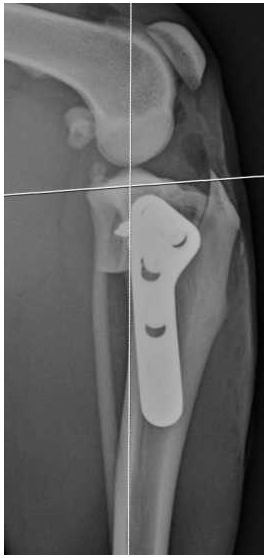
Radiograph showing location of lateral suture placement.

Although the lateral suture repair can be very successful, there are a few drawbacks to the technique. The suture may break prematurely, which necessitates a second surgery. Also, since the suture crosses the joint space, it leads to scar tissue buildup and occasionally stiffness and discomfort in the knee. The larger and more active a dog is, the more likely complications will occur with this procedure.

TPLO

The Tibial Plateau Leveling Osteotomy, or TPLO, was developed in response to mixed results with a number of different repair methods. Rather than attempting to replace the injured ligament, the goal of the TPLO is to neutralize the forces in the knee which helped cause the ligament rupture in the first place. Before surgery, measurements are made of the dogs existing plateau angle. Dogs with steeper slopes are thought to apply more stress to the cruciate ligament. Based on this angle a formula is applied to determine the amount of rotation needed to neutralize this force.

During surgery an arcing cut is made in the tibia which allows the top of the bone to be rotated to the desired angle. This cut is called an osteotomy. The bone is then plated in its new position and the surgical wound is closed.



TPLO pre-op planning TPLO post-op

Note the change in tibial slope, pre and post-op