

## CRUCIATE LIGAMENT RUPTURE

### **I know that knee injuries are common in people. Do they occur in dogs?**

Just as football players frequently suffer knee injuries, the dog may also be prone to knee injuries since the knee joint is one of the weakest in the body.

### **Why is the knee so likely to be injured?**

The knee joint is relatively unstable because there are no interlocking bones in the joint. Instead, the two main bones, the femur and tibia, are joined with several ligaments. When severe twisting of the joint occurs, the most common injury is a rupture of the anterior cruciate ligament which is one of two ligaments which actually cross over within the joint and ensure that it is stable and works in one plane. When it is torn, an instability occurs that allows the bones to move in an abnormal fashion in relation to each other. It is not possible to bear weight on the leg without it becoming unstable.

Many dogs appear to develop a specific weakness in their ligaments and an anterior cruciate ligament can be stretched, leading to joint soreness, several weeks before it actually breaks. It's not known exactly why this weakness occurs but lack of regular exercise and being overweight may be important factors. It also must be said that when a dog suffers a ruptured cruciate ligament in one knee, it is prone to suffering the same injury in the other knee at a future point.

### **How is it diagnosed?**

One of the most reliable means of diagnosing this injury is to move the femur and tibia in a certain way to demonstrate the instability. This movement is called a "drawer sign". It can sometimes be demonstrated with the dog conscious. However, if there is severe pain, if the dog has very strong leg muscles, or if the dog is uncooperative, it may be necessary to use a sedative or a light anaesthetic in order that the veterinary surgeon may examine the joint thoroughly.

### **How is it treated?**

Correction of this problem in larger dogs requires surgery. If left untreated, dogs larger than 10-15 kg tend to develop a severe case of arthritis in the injured joint. We offer an operation in which a strip of tendon tissue from one of the thigh muscles is placed through the joint as a false ligament. Surgery improves function and substantially reduces – but does not totally prevent – the development of arthritis. Heavier dogs are more vulnerable to arthritis. If you would prefer your dog to have the best available surgical option, we can refer you to a specialist surgeon who can perform a more involved procedure, generally associated with less post-operative arthritis.

Small dogs may not require any surgery at all and may heal with minimal arthritic changes simply with the aid of rest and anti-inflammatory medication. For this reason

we will often wait 4-6 weeks to monitor their improvement without surgery and only operate if lameness does not substantially diminish.

### **I have heard of torn cartilage. Does this also occur?**

Occasionally the injury that causes a ruptured anterior cruciate ligament will also result in tearing of one or both of the menisci or “cartilages”. At the time of surgery, these are examined and treated, if necessary.

### **What happens if surgery is not performed?**

Occasionally, the dog that has a ruptured cruciate ligament will become sound (will no longer limp) even if surgery is not performed. However, arthritis will usually begin and result in lameness a few months later. That lameness is usually permanent.

### **My dog is overweight. Does that relate to this injury?**

A special reminder is appropriate concerning the dog's weight. Obesity or excessive weight can be a strong contributing factor in cruciate rupture. The ligament may become weakened due to carrying too much weight; this causes it to tear easily. Obesity will make the recovery time much longer, and it will make the other knee very susceptible to cruciate rupture. If your dog is overweight it is worth consulting your veterinary surgeon regarding the problem. Various weight reduction programmes are available and will assist weight reduction.

### **What happens after surgery?**

There is generally a long period to full recovery following surgery for a ruptured anterior cruciate ligament. This is typically at least 3 months and it's important to recognise that the repaired knee will never be as good as new.

Immediately after the surgery we will often place the leg in a padded bandage to reduce swelling and provide support for about 5-10 days. The sutures in the wound will be removed in 10 days. We commence a course of the anti-arthritis drug, Cartrophen 5-7 days after surgery. This medication is given by subcutaneous injection once weekly for 4 weeks and the regular visits allow us to assess your dog's progress over the first 6 weeks. Cartrophen protects important cartilage tissue and increases the production of lubricating joint fluid.

We advise that following surgery, dogs should be restricted to only leash-walking for toileting for 6 weeks. The dog should be confined to a small area where running and jumping are not possible. Over this time you should see your dog gradually placing more weight on the injured limb. These restrictions on your dog's mobility are critical to the long-term successful outcome of this surgery.

From 6 weeks after surgery, we advise a steady increase in the amount of exercise given, but continue to use the leash until 3 months after the surgery. After this time, you may allow steadily increasing periods of free exercise. To help the dog avoid injury during this time, try to ensure that exercise is kept within a comfortable limit.

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**Disclaimer:** This information is of a general nature only, and must not be used as veterinary advice except where directed by your veterinarian. Hall Veterinary Surgery does not warrant the suitability of this information for specific cases. If your animal is unwell or you want to act on this information, please contact us on 6230 2223.