

### Example of post operative instructions

For 6 weeks following surgery, a strict confinement regime is required with 3 important principles:

- When not under your direct supervision, your pet should be confined in a cage, crate or small room without furniture onto which they may climb.
- Under your direct supervision your pet can walk slowly on carpeted surfaces for a short period a few times each day. Running, jumping, climbing stairs and playing with other pets must be prevented.
- Your pet must be on a lead at all times when outside for toilet purposes and short walks. Walking should be supported with a sling to prevent injury on slippery surfaces.

### Physiotherapy

Gentle massage of the limb and application of a cool pack wrapped in a moist clean tea towel, for 10 mins over the surgical site and around the affected joint help to reduce swelling. This is useful during the first 2 weeks after surgery, after each toilet walk. Aloe vera or arnica rubs can help to reduce inflammation and bruising, but should be kept away from the incision site until the wound is completely sealed and the sutures removed.

If your dog is not walking on the operated limb, then gently flexing and extending the joints of the leg, moving the foot in circular motions (like cycling) with the dog lying on its side without force, can be useful for stimulating muscle activity. Ten repetitions 2–3 times a day are recommended as long as this does not cause pain and is well tolerated.

From 4–5 days after surgery, a warm wheat bag applied to the stifle for 10 mins 2–4 times per day, particularly before the toilet walk, may help to improve blood flow, assist repair and aid reabsorption of the fluid around the ankle (tarsus joint) which is common.

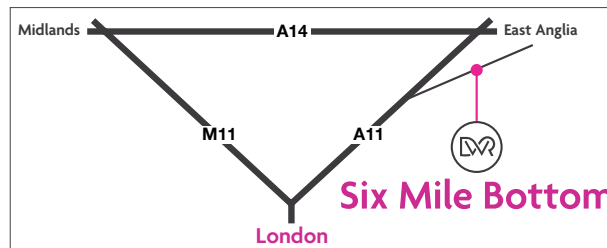
### Recovery and prognosis

Dogs should be walking relatively normally by 6 weeks following surgery. It can take up to 6 months to recover full strength and muscle mass and it is very important to follow instructions about post operative care.

### Re-checks

We would like to see your pet 6–8 weeks following surgery (or as advised by your surgeon) for a re-check. Following TPLO, x-rays are taken routinely at re-check to assess the implants. Please do not give food from midnight the night before and be prepared to leave your dog for a few hours for sedation and x-rays.

**Cruciate disease is the most commonly treated orthopaedic condition in dogs. The term is used to describe lameness attributable to partial or complete rupture of the cranial cruciate ligament with resultant instability of the stifle (knee joint) and development of osteoarthritis. DWR offers TPLO surgery which is the current Gold Standard treatment available.**



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## Cruciate Disease and TPLO Surgery



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## Anatomy and cause of cruciate rupture

The tibia (shin bone) and femur (thigh bone) do not fit together like a ball and socket; instead multiple ligaments around the joint limit and control movement. The cranial cruciate ligament prevents slipping of the femur backwards down the natural slope on the top of the tibia. It also limits twisting and over-extending of the stifle.

The underlying cause of cruciate disease is not fully understood. Dogs of all sizes and ages are affected. Some breeds are affected more frequently which may be due to an inherent weakness of the ligament or perhaps an underlying degenerative process.

Pure traumatic ruptures of the cruciate ligament can occur but gradual fraying and stretching of the ligament is more common with partial rupture progressing to complete rupture. The instability that results within the stifle may lead to damage to the menisci (cartilage, shock absorbers) and the hyaline cartilage covering the ends of the bones which cause further discomfort, swelling and osteoarthritis.

## Symptoms

Lameness and stiffness are the main signs of a cruciate ligament rupture, which may occur suddenly or be gradual in onset. Typically there is no external injury to the joint. Improvement in lameness may be seen initially but the dog will then usually retain a limp.

## How to arrange a referral

Following discussion with your veterinary surgeon, you may request a referral to Dick White Referrals to benefit from the expertise of our Orthopaedic Specialists, who are experienced in the treatment of cruciate disease. They work closely with Specialists in Anaesthesia and Analgesia to keep your pet safe and comfortable during and after surgery. Our physiotherapists and nursing staff contribute greatly to the care of these patients.

## Clinical examination

In a dog with a long-standing cranial cruciate ligament rupture the joint is not usually very painful. There may be a firm swelling on the inside of the joint, some muscle wastage around the thigh and fluid accumulation within the joint. It is often possible to palpate the dog without sedation, and the characteristic instability that results from cruciate ligament rupture makes the diagnosis straightforward.

## What to expect following your consultation

Following consultation with one of our Orthopaedic Specialists or Residents, your pet will probably be admitted for further assessment, x-rays (to allow accurate measurement and surgical planning) and surgery if indicated. This is usually planned for 24 hours following the appointment.

## Investigations

For further joint manipulation and radiography, your dog will be sedated. Radiographs can indicate arthritic changes and an increased volume of joint fluid. Two tests (the 'cranial draw' and 'tibial compression test') are used to check for instability between the femur and the tibia if they are positive, there is a cruciate rupture.

## Treatment

We usually recommend TPLO (tibial plateau levelling osteotomy) for cruciate ligament injury. However we may, on rare occasions, advise alternative procedures.

In TPLO surgery, the joint is opened, the diagnosis confirmed and the ligament is removed. The menisci within the joint are also partially removed if damaged. A curved cut is made in the tibia and the top section rotated to alter the alignment of the joint so that the forces across the joint are neutralised to prevent slipping when weightbearing.

When the bone has been realigned, a metal plate and screws are applied to hold the bone in the new position whilst it heals. These are normally left in place permanently unless they loosen or become infected.

Following surgery, patients are hospitalised for at least 24 hours for ongoing nursing and pain relief.

## Risks of surgery

As with any surgery, there are potential risks which we make every effort to minimise. These can include:

- Bleeding during surgery (major bleeding is very rare);
- Fluid accumulation under the skin. This may require further massage, dressings or, in some cases, drainage;
- Implants may occasionally fail or become infected and require a second surgery to replace or remove them. This risk can be reduced by following our discharge instructions rigidly;
- In about 50 % of dogs, the cranial cruciate ligament in the other knee will rupture at some stage, usually within one year.
- Despite treatment, arthritis will progress in the joint and this may result in some long-term stiffness. Surgery is aimed at minimising this progression but will not prevent it;
- Occasionally the meniscal cartilage can tear after surgical treatment, resulting in a recurrence of lameness. In these cases a second surgery is needed to remove the torn portion of meniscus.

## Discharge

Patients are discharged 24–48 hours following surgery if they are recovering well, but may be kept in longer for physiotherapy and pain management if necessary. They will be discharged with non-steroidal anti-inflammatory painkillers - usually recommended for 10–14 days until suture removal. A judgement will then be made regarding further pain relief. Post operative antibiotics are not normally given.

Your pet will be discharged with a hard 'buster' collar to prevent licking of the surgical incision, which risks damaging the sutures and introducing infection. The incision should be checked at least twice daily to ensure that it is not inflamed or leaking fluid. If there is evidence of either, please contact us as prevention of self-trauma or a course of antibiotics may be indicated.

Post operative guidance, including an exercise and rehabilitation programme, will be provided at discharge.

## Post operative progress

Your dog should gradually start to bear weight on the operated leg within 2 days of surgery. Use of the leg should continue to improve gradually. If your dog deteriorates suddenly or does not start to use the leg within this timeframe, it is advisable to have a re-check. To encourage use of the leg it is important to walk slowly with your dog. At a fast pace he or she will be much more inclined to pick the leg up.

