

MMP for Cranial Cruciate Ligament Surgery

After-care information for clients

Your pet's cranial cruciate ligament failure has been treated surgically using the Modified Maquet Procedure (MMP). The operation is based on a technique developed almost 50 years ago for use in human knees by Dr Maquet, a Belgian orthopaedic surgeon. The operation works by redirecting the force generated by the large quadriceps muscles to compensate for the failed cruciate ligament. This is achieved by cutting free, and moving forward, the part of the tibia (the tibial tuberosity) attached to the quadriceps muscle. The bone cut is called an osteotomy and the osteotomy is stabilised using a modern orthopaedic implant material called Orthofoam. The porous titanium Orthofoam promotes remarkably rapid bone ingrowth and healing and this is key to the reduced convalescence and minimal pain seen with MMP surgery.



Successful recovery after knee surgery, no matter which procedure has been used, requires a period of controlled activity. Compared to other procedures, MMP causes less discomfort and while a comfortable, pain-free patient is obviously a good thing, many dogs are tempted to use the operated leg too much, too soon. No matter how comfortable and confident your pet is feeling in the days after their MMP operation, **it is absolutely essential that running, jumping, and general 'rough and tumble' with other pets is avoided for the first 6 weeks or so**. The bone must be given time to heal adequately and too much strain placed on the osteotomy too early can result in stress fracture or implant failure and while this is rarely catastrophic, the ensuing complication may be painful and will certainly delay the recovery.

First and second weeks

Your dog will have a short course of antibiotics and a longer course of a non-steroidal anti-inflammatory drug (NSAID). Treatment with NSAIDs will usually continue for at least six weeks while the osteotomy heals.

Bandages are not used following MMP because it is important that your pet is able to flex and extend the operated knee freely right from day one. A gauze pad is sutured over the skin incision to protect the wound. The pad can be removed after five days or so and the skin sutures are removed a fortnight after surgery.

During the first 14 days, your pet should be encouraged to take frequent short leash walks – 5-10 minutes six or eight times daily is a good starting point. It is important that the operated knee joint is returned to use as quickly as possible – concentrate on walking relatively slowly as this will encourage the patient to use the leg. Ideally, your dog should go outside ON A LEASH to toilet during the first two weeks after surgery.

Do not swim the dog.

No other exercise is recommended for the first 14 days – it is important to not let your pet loose to run freely in the house, particularly up and down stairs.

Third and fourth weeks

The amount of activity can now be gradually increased but it is essential that the patient is not allowed off the leash until after the 4 week X-ray check.

Leash walks can be longer and faster though take care to ensure that the patient continues to use the operated limb confidently at every step.

Fifth and sixth weeks

Check X rays are scheduled for the end of week four and these should confirm that the osteotomy is healing well. Bear in mind that although bone healing and remodelling will be progressing nicely, full strength will not be established for several more weeks.

At this stage, the patient will be capable of frequent lengthy (30 minutes or more) leash walks and we will soon be introducing some free running activity. The key to success is a programme of gradually increasing activity. At first, the patient can be allowed off the leash towards the end of the last walk of the day – choose a quiet area with a good surface – a short cut grassy park is ideal – without dogs or other distractions that might encourage your pet to do too much too soon. Five minutes is enough for the first day off the leash. Subsequently, the amount of free running play and exercise can be increased gradually back towards normal pre-injury levels. Most dogs will be capable of full, unrestricted athletic activity within 12 weeks of their MMP operation. Some residual low grade stiffness and lameness may still be seen at twelve weeks but this will resolve completely over the subsequent month or two as the patient regains full fitness and the osteotomy completes its healing process.