

Cranial Closing Wedge Osteotomy: Pre-operative Information

What is cranial cruciate ligament (CCL) disease?

CCL disease is a common orthopaedic condition in dogs. The CCL is located inside the knee joint and serves to hold the joint stable as your dog moves around. In affected dogs the ligament gradually weakens and tears, sometimes resulting in a complete rupture. This results in lameness, which may range from mild and intermittent to severe and continuous. Unfortunately some dogs will go on to develop the same condition in the other knee.

How is CCL disease diagnosed?

Diagnosis of CCL disease typically involves x-rays to check for swelling of the joint and to rule out other causes of lameness. A thorough examination of the leg under sedation would also be performed, feeling for joint instability.

How do we treat CCL disease?

Several surgical techniques have been developed to help to manage this condition; based on your dog's weight and bone structure, a cranial closing wedge osteotomy (CCWO) has been recommended.

Surgery involves exploration of the joint, removal of the damaged ligament and inspection of the menisci (cartilage shock absorbers within the knee). If necessary, any damaged portions of menisci are removed.

Two cuts are made in the tibia and a wedge of bone is removed in order to alter the angle of the weight-bearing surface of the knee. Metal implants are used to stabilise the tibia in its new position. X-rays will be taken to ensure that the implants are correctly positioned. Assuming that there are no complications, these metal implants will remain in place for the rest of your dog's life.



What happens after surgery?

Following surgery your dog may remain in the hospital overnight for pain relief and monitoring. Once home they will need to be strictly rested for 6 weeks, with only short trips on the lead to the toilet. They must not climb stairs, run or jump as the bone needs time to heal so confinement to a cage or small room will be necessary.

They will need to wear a buster collar for 2 weeks to prevent them licking the surgical wound. After 6 weeks we will take follow-up x-rays under sedation and then you will be asked to gradually increase exercise levels.

We recommend that your dog sees a qualified physiotherapist for physiotherapy/hydrotherapy during recovery. Please ask if you would like any recommendations.

What are the possible complications?

The majority of dogs return to a normal level of exercise long term, though some may require intermittent medication for episodes of stiffness and all will go on to develop osteoarthritis in this joint. Some dogs (up to 10%) develop a late meniscal injury, which may require a short surgery to treat. Other rare complications include infection, fracture of the tibia, implant failure and patella luxation (knee cap dislocation).