

Cranial Cruciate Ligament Surgery

The basics

Cranial cruciate ligament (crcl) rupture is a condition of one of the ligaments of the stifle joint. The stifle joint is basically made of two femoral condyles aka 'balls' sitting on the tibial plateau aka 'ski slope'. Naturally, the balls would want to roll down hill. The crcl prevents this roll. The crcl rupture is a degenerative disease where the crcl progressively becomes weaker and the balls start rolling down hill more and more. The end result is rupture of the crcl with consecutive instability of the stifle joint. This whole process is accompanied by pain, limping, and arthrosis.

What to do about it

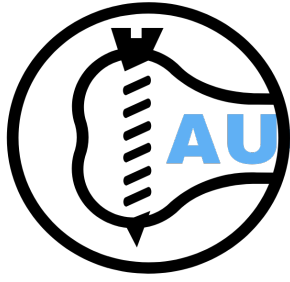
At the moment, there is no solution to preventing crcl ligament degeneration. One available option is medical management (pain killers, stifle braces and restricted exercise for the rest of your pet's life). Unfortunately, medical management tends to have poor outcomes: continuous pain, continuous stifle joint instability, chronic limping (not always noticeable), progressive degeneration of the stifle joint which, in severe cases can lead to leg amputation.

Fortunately, a good option exists, with good success rate and low complication rates. This option is surgery.

There are several surgical methods to tackle crcl disease, some better than others. However, reducing the angle of the ski slope and transforming it to something similar to a 'snooker table' seems to have the best long term results. As you already intuited, the 'balls' are more stable on a 'snooker table' so the joint becomes more stable, less painful, and functional.

For the surgery to work, the tibia aka shin bone needs to be cut under the stifle joint and the 'ski slope' realigned. Of course, to stabilise the bone, metal implants have to be used (plates, screws, metal pins and wires). It is easy to deduct that, postoperative, your pet will have to be managed as he/she would have had a fracture. This means restricted exercise for the initial 6 weeks – see below.





The aftercare

The first 2 weeks

Sutures are usually resorbable, under the skin and there is no need to be removed.

Check ups with your vet/nurse are recommended at day 3 and day 10 postoperative.

Limping is to be expected, most of the times worse than before the surgery. This is due to surgical trauma.

Swelling, from the stifle to the hock is also expected, again due to surgical trauma.

The incision should be clean and dry. If the wound opens up or if there is discharge, please see your vet.

Medication – pain killers are prescribed for 7-14 days, on a case by case basis.

Antibiotics – we are all aware of antibiotic resistance and the damage that misuse of antibiotics has done to our life. We usually don't prescribe antibiotics unless absolutely necessary.

Physiotherapy – please see the 'Postoperative recovery' sheet on our website.

For cats, the same principles apply.

*** From week 2-3 postoperative, the incision should be clean, dry, with a normal colour of the skin and not red, puffy or open. Please contact your vet if this is not the case

For cats, room bound restrictions apply for this time interval. The rest of the principles still apply, including hydrotherapy.

Week 2 to week 6 postoperative

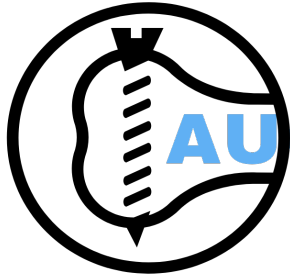
Gradual improvement of the lameness should be noted. However, weight bearing should be noted from day 3 to 5 postoperative. If this does not happen, please contact your vet.

Once the incision has healed, hydrotherapy can be started and we do encourage it – please see our dedicated section on the website.

Physiotherapy – please see our dedicated section on the website

Follow up xrays are recommended at 4-6 weeks postoperative; these are performed to assess the metal implants and healing of the bones. In the rare case where complications occur, follow up xrays would allow us to act quickly, before the situation turns disastrous.

For cats, room bound restrictions apply for this time interval. The rest of the principles still apply, including hydrotherapy.



Week 6 to 12 postoperative

By now, lameness should be sporadic and rarely noticeable. Do not panic if this is not your case, remember, some patients recover faster than others. Also, remember that 10-15% of patients can take up to 6 months to full recovery.

Providing all is well and recovery is within normal time frame, you should be allowed to walk your dog on a long lead and even gentle trots are allowed. The sofa and stairs restrictions are now lifted. However, your dog should not be allowed to run (although if this happens is not the end of the world but do stop it as soon as you can), chase balls, toys, play with other dogs etc.

For cats, the full roam of the house should be allowed, however, the kitchen is still a forbidden space because of the countertops – these high surfaces are too risky for a cat to jump on at this stage.

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A follow up check which should be the sign off consult should be booked at your vet around week 12 postoperative.

The exercise

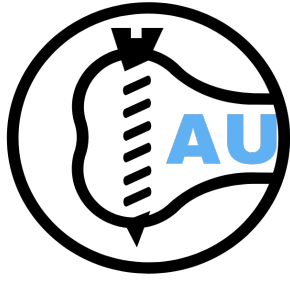
The first 12 weeks postoperative, your pet should be walked on a lead.

He/she should not be allowed to jump/run, go on sofa, go upstairs etc. Cage rest is rarely recommended and, in our opinion, detrimental to your pet's mental health and recovery. In the rare occasion where dogs are too boisterous, cage rest may be adequate.

Walking regime should be started as soon as possible i.e. from day 1-2 postoperative. Dogs thrive on exercise and early ambulation will stimulate the blood flow and mental status which is beneficial for your pet.

We tend to recommend 10 minutes per walk, two to four times a day. Every week 5 minutes should be added to the walk i.e. 15 minutes per walk on week 2, 20 minutes per walk on week 3 etc.

For cats, we recommend to confine him/her to a room. If this is not a possibility, a large pen/large dog cage would suffice. The inside of the pen/cage can be boarded with cardboard to prevent him/her from trapping their legs in the bars. Room confinement is mandatory for the first 6 weeks, after which they should be allowed to have the roam of the house except the kitchen.



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What to expect

The procedures used on your pet were described and tested throughout the years. They have been proven to have a good outcome. In our experience, the success rate of the surgery is 95%. This means almost all pets can return to normal life and activity levels. However, this can take 3 to 6 months. This is the same time frame as in human surgery, if not faster. Nine out of ten dog will not need lifelong medication. The remaining one in ten will need the occasional pain killer but should still be able to have a good use of the leg.

Like with any surgery, complication can occur. Late meniscal injury is the most common one (in reality is not strictly related to the surgery). The stifle of the dog, cat or human has a cushion that can get trapped and damaged when the 'balls' roll down the 'ski slope'. At the time of the surgery, we would check to see if the cushion is damaged and, if so, remove the damaged part. Out of the dogs without meniscal injuries at the time of surgery, one out of ten will damage the meniscus, usually weeks or months after the surgery. Most likely, you will noticed abrupt deterioration and accusation of the limping, that does not get better after 5-10 days.

The only treatment for late meniscal injuries is surgery. This is not as invasive as the initial surgery as no bone is cut.

Fortunately, the rest of the complication rate with crcl surgery is low and it includes infection, implant failure or bone fracture. This tends to be low, under 5%.

As crcl degeneration is a disease, it can affect both stifles. Some breeds (especially large dogs or dogs with very steep 'ski slopes') have a higher chance of rupturing the 'other' crcl 6 to 18 months from the first one.

Some degree of arthrosis is expected after crcl surgery. However, in the vast majority of cases this arthrosis should be much less than in a stifle without surgery and, in general should not cause major mobility issues.

For our cat friends, there are not enough studies to draw an informed recommendation but, in our experience, the outcomes and complications are similar to dogs.

