

Dogs Have ACLs Just Like People

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It is common news in the sports world to hear about a professional athlete tearing their ACL. ACL, which stands for anterior cruciate ligament, is a ligament in the knee that is important for overall stability of the knee joint. Did you know that dogs have ACLs too? Except that in dogs, because they walk on four legs instead of two legs, it is called the CRANIAL cruciate ligament (CCL).

Cranial cruciate ligament injury, or disease, is most commonly a chronic degenerative process in dogs, whereas in people, it is commonly from a traumatic injury. Every once in a while, a dog can truly have an acute injury to their CCL, but there are usually other changes in the knee joint indicating a chronic degenerative process. If you think of the cruciate ligament like a rope made up of many fibers, slowly the fibers will fray and break one at a time, until eventually all the fibers break. When some fibers are still intact the injury is referred to as a 'partial CCL tear'. When all the fibers break, the injury is then termed a 'complete CCL tear'. A complete CCL tear causes severe instability of the knee joint, which may manifest as a hind limb lameness that does not improve with time, rest, and medications.

The clinical sign most frequently seen with a CCL injury is hind limb lameness. Due to the degenerative process, the lameness can wax and wane, maybe becoming worse after high levels of activity and improving with rest. The body will try to stabilize the knee itself by putting down scar tissue around the joint, but it is never able to make the knee fully stable. Dogs can be resilient and compensate for a long time, learning to shift their weight forward onto their front limbs, so catching the problem can be tricky.

Once a dog is diagnosed with a CCL tear, whether partial or complete, surgical intervention to help stabilize the joint is the most ideal treatment course. This will help slow progression of osteoarthritis and allow a dog to return to as close to normal activity as possible. Due to the angle of a dog's knee when they bear weight, an implant placed to imitate the CCL will never be as strong as the original ligament and will be under much strain. This led to development of surgical procedures that alter the geometry and physics of the knee joint with bone cutting techniques, eliminating the need for a CCL. The most common technique practiced is called the tibial plateau leveling osteotomy, TPLO for short.

TPLOs have a high success rate of dogs regaining good to excellent function of their injured knees. The sooner surgical intervention can be pursued, the better chance of maximizing outcome and functionality. The longer a knee is left unstable, the more time it has to develop and progress osteoarthritis, which cannot be reversed. Instability from a CCL tear can also lead to a concurrent meniscal cartilage injury within the knee joint causing added pain.

Protect your dog's knees, and all joints, by keeping them lean and active. If you notice persistent or repeated intermittent hind limb lameness, have them examined by a veterinarian as soon as possible.