



The Dog's Knee: Cranial Cruciate Tears

 Submitted by Marty Pease, MSPT, CCRP
Canine Rehab & Conditioning Group
www.dog-swim.com

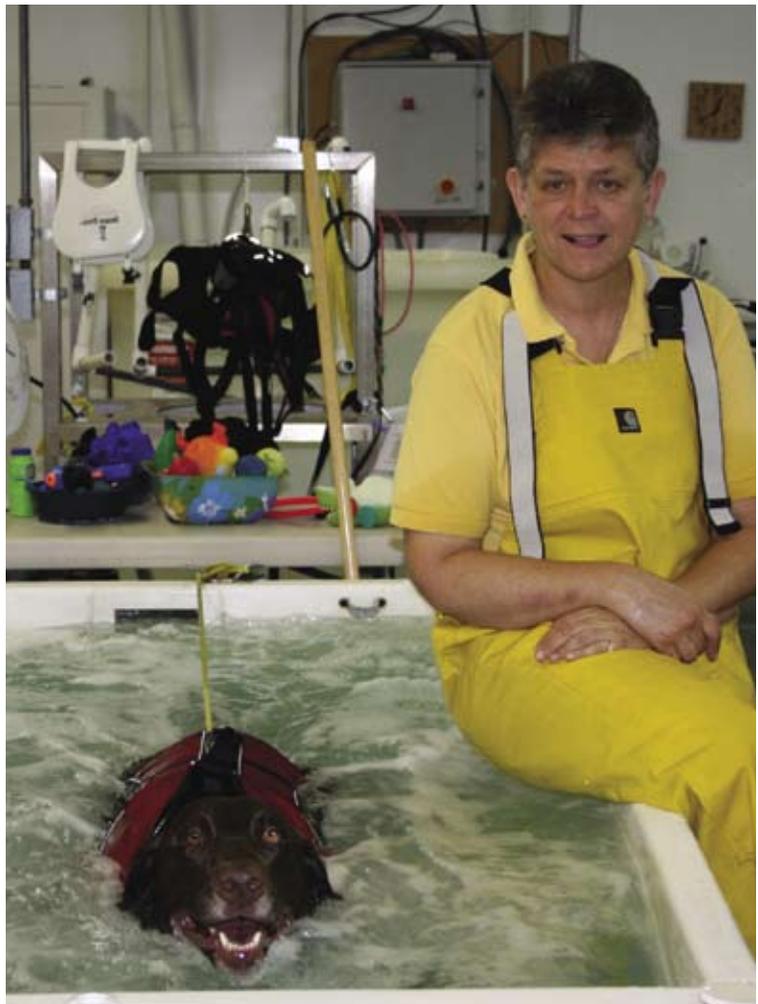
KNEE (STIFLE) DYSFUNCTIONS IN DOGS are becoming more and more common, and while most problems are genetic, traumatic injuries can occur.

If your dog is limping, it's important to see your veterinarian. One of the most common problems is a cranial cruciate ligament (CCL) tear (the equivalent of the human ACL tear)—the ligament provides stability between the tibia and femur, preventing the femur from moving backward on the tibia. In humans, the top of the tibia is flat; therefore, it takes an outside external hyperextension force to tear the ACL. In a dog, the back half of the tibia is on a tilt where the femur sits, this puts the ligament under continuous stress when the dog is on its feet. The ligament tends to microtear over time until a final blow tears it completely. Often the basic problem is congenital in how the tibia is shaped and if a dog has this problem, there is a 50 percent or better chance that it will happen in both knees.

In addition to genetics, there can be other contributing factors to knee issues. Obesity is one issue where the excessive weight of the dog stresses the ligament past what it is designed to hold. Knee strain can be seen in dogs who are weekend warriors—doing extreme activity without being in shape—or through the prolonged use of some medications that weaken connective tissue, such as prednisone.

Muscle strength is important in stabilizing the knee. If left unattended, arthritis will develop due to the friction between the bones and in most cases, surgery is the best long-term solution. If the ligament is partially torn, conservative management may be successful; however, the ligament has a poor blood supply so healing is tenuous.

Photo by Jamie M. Downey



Physical therapy in the hydrotherapy pool for a CCL tear.

There are two most commonly used surgical approaches when surgery is necessary. One is called an extracapsular repair, where a band is placed outside the joint to stimulate the ligament. The other is a TPLO (tibial plateau leveling osteotomy) where the tibia is cut and turned to provide a level surface for the femur to rest. The best approach to use is determined by the size and age of the dog and the veterinarian's preferred approach. If surgery is required, rehabilitation is crucial for the best outcome. Initial therapy is conservative while healing, but very important. Once healing is complete, more aggressive strengthening and hydrotherapy can be used.

If there is a partial tear, physical therapy can help in the recovery. The practitioner will assess your dog and provide guidelines for appropriate activities at home to build strength without stressing the ligament. Physical therapy treatments include assessment, client education, range of motion, strengthening regimes and hydrotherapy. 

For more information:
Canine Rehabilitation & Conditioning Group
Located in Englewood, Colorado
(303) 762-7946 or www.dog-swim.com