

Dr. Gourly was a big man, quite intimidating to young veterinary students who were chosen to work with him. Dr. Gourly was a surgery professor at the UC Davis School of Veterinary Medicine. In addition to multiple courses in surgical anatomy and technique, all of us wanting to be small animal veterinarians were assigned a six-week clinical rotation with one of the clinic surgeons at the Veterinary Medical Teaching Hospital. I got Gourly. Rumored to be tough on his students, he was actually a gentle man with a big heart. He simply made it clear at the onset he expected us to do things right, no shortcuts. And if you didn't follow his guidelines...well lets just say you found out about it right away. Frankly, I don't remember any other clinical instructor who put more interest and time into assuring his students learned good basic surgical skills. His sometimes-intimidating approach to teaching was simply a reflection of his will to produce good veterinary surgeons.

Dr. Gourley taught me many important principles about veterinary surgery, many of which I still use today, 17 years later. Of all the things I learned from Dr. Gourly, I will never forget his advice about the diagnosis of canine knee injuries. His advice has proved quite valuable because as it turns out knee injuries in dogs are very common.

The canine knee is not an inherently stable joint. Unlike the much more stable "ball and socket" joint of the hip or the hock (ankle) joint that has many interlocking bones to give it stability, the knee is basically formed by two bones held together by ligaments and other soft tissues. These ligaments of the knee are responsible for keeping the joint stable and functioning normally, and in so doing, withstand a lot of stress. Sometimes the stress is overwhelming and the ligaments become injured. Such is the case with a common knee injury called rupture of the anterior cruciate ligament. Some of you may recognize this condition because it is also a common injury in people. It's often called rupture of the ACL.

The ACL becomes injured when unusual stresses are placed on the knee. Most veterinarians agree that the actual injury occurs as the animal is pushing off with the hind leg while at the same time turning or twisting the knee. One can see how this can easily happen when a dog is running and playing. With the way some dogs run and play, I'm surprised it doesn't happen more often.

Injury to the knee can result in a strain or partial tear of the ACL or in some unfortunate cases the ACL can be completely torn. Either case will show the same symptoms. This is where my memory of Dr. Gourley comes in. Dr. Gourley would always say that a dog with an ACL injury will of course show obvious lameness in that leg but when standing at rest, the dog will hold the injured leg with the toes just touching the floor. He would call this "toe touching at rest" and suggested that if we ever see that in a dog always suspect an injured ACL as the cause of the problem. Over the past 17 years I have found Dr. Gourley's advice to be incredibly accurate.

If an ACL injury is suspected the clinician will use various types of stress tests on the joint looking for joint instability characteristic of the problem. Since these stress tests on the injured knee can be a bit painful for the dog many patients will tolerate them better if they've been given a mild sedative. The sedative also causes the muscles of the leg to relax and allows for better evaluation of the knee. X-rays of the knee joint will help rule out other kinds of orthopedic injuries.

The dog that presents with a torn ACL may have more than meets the eye. It is common for these patients to also injure the cartilage (meniscus) in the knee. This is a serious complication that if not addressed can lead to prolonged periods of discomfort and joint dysfunction.

Therapy for ACL injuries varies from simple to complex. In some patients (usually the smaller dogs) a few weeks of restricted activity and rest will often result in good return of comfort and function-provided there is no cartilage trauma. In the larger dogs rest will sometimes work but often these dogs need knee surgery. There are many different surgical options and the modality chosen is dependent on the severity of the injury, patient age and body weight, and the dog's lifestyle (i.e., hunting or working dog vs. couch potato). Your veterinarian can recommend the best approach.

The canine knee is an amazing joint with remarkable resilience. But if asked to do too much the knee can sustain serious injury. Hopefully a knee injury will never be a part of your dog's medical history. But if it should happen, rest assured your veterinarian will be able to accurately diagnose and treat the problem. It would make Dr. Gourley proud.

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