

The Most Common Orthopedic Problem In Dogs Is?

by Dr. Michael Bauer

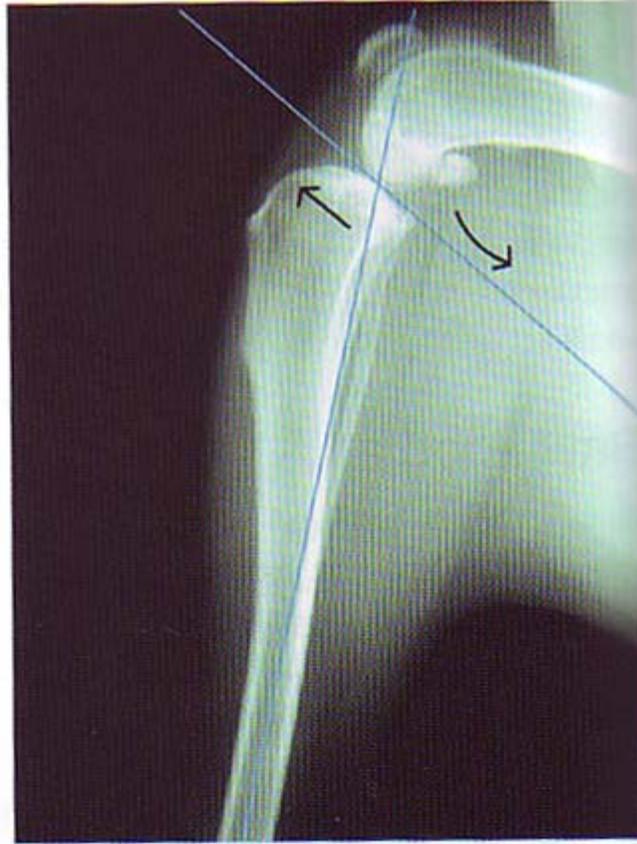
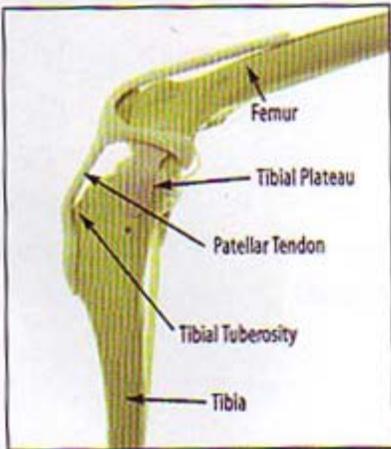
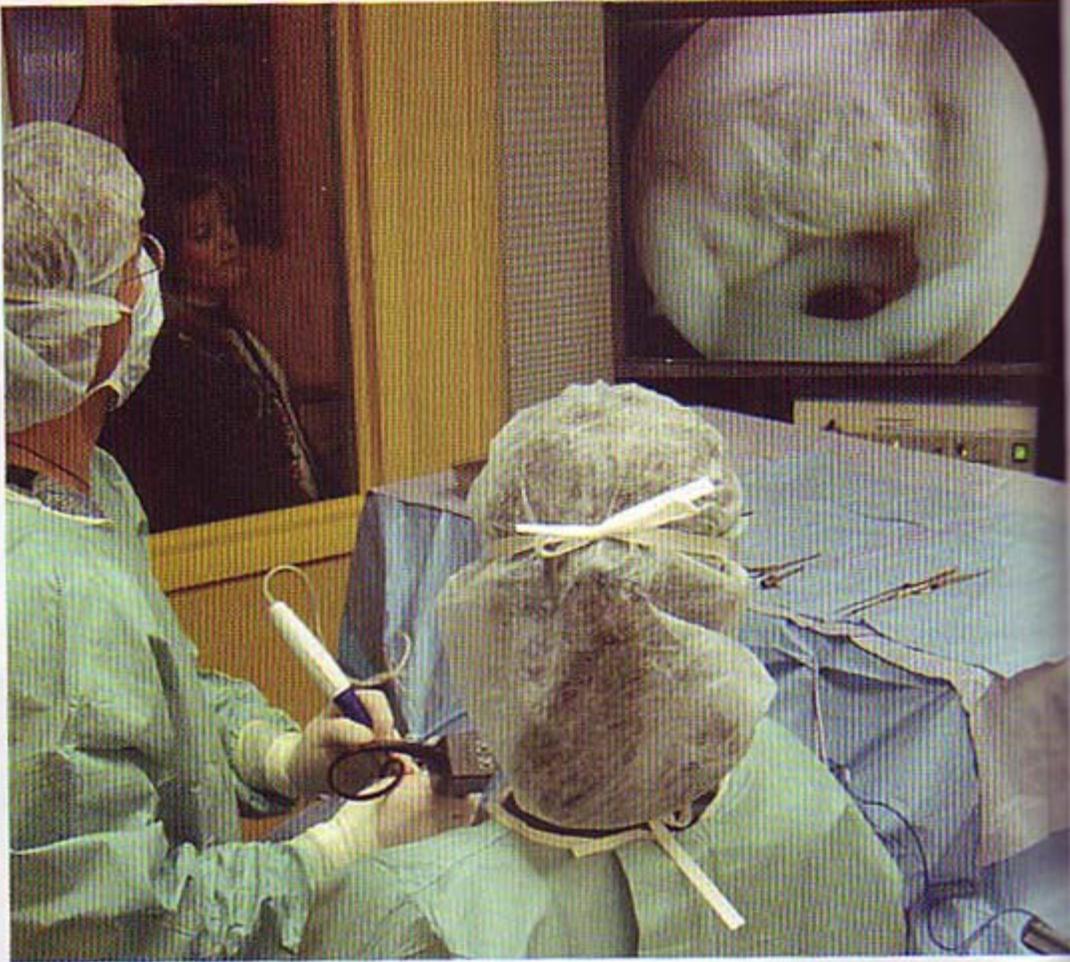
This article was published in the Spring 2008 issue of [The Colorado Dog Magazine](#).

Dr. Michael Bauer is a diplomat, American College of Veterinary Surgeons and owner of [Colorado Canine Orthopedics](#) at [The Veterinary Specialty Center](#) in Colorado Springs.

Guess which of the following is the most common canine orthopedic problem: Hip dysplasia, elbow dysplasia, fractures (broken bones), joint luxations (including knee cap, shoulder and hip) or anterior cruciate ligament (ACL) tears? The answer is... ACL tears. In fact, ACL tears make up over 65% of our orthopedic caseload at Colorado Canine Orthopedics.

Dogs are prone to tear their ACLs. Small dogs, big dogs, toy breed dogs and giant breed dogs are all at risk. The exact mechanism is not completely understood but we believe it revolves around the tibial plateau slope found in virtually all dogs.

In general, when dogs bear weight, the femur slides down and back on the tibial plateau, causing the tibia to thrust forward (figures 1 & 2). This motion is normally counteracted by the ACL. Continual biomechanical wear and tear causes the ACL to break down, fiber by fiber, until a threshold is reached and the ligament tears completely. Because the same biomechanics are working in both knees, about 40% of dogs may eventually tear both sides. The percentage probably approaches 100% in dogs without repair.



Diagnosing ACL tears ranges from simple to complex. Frequently, hip dysplasia or arthritis are mistaken for ACL tears. Almost all dogs with knee arthritis have ACL tears. Dogs with ACL tears may experience mild to severe lameness,, and the most telling sign is they sit to the side instead of straight. Tentative diagnosis is based on palpation and x-rays. Arthroscopy is used to make a definitive diagnosis.

Canine ACL tears are debilitating, and virtually all veterinary surgeons agree they require surgical repair to avoid severe, progressive osteoarthritis. But the good news is today's surgical repairs are very successful. Older repairs involved replacing the ACL, using everything from gortex, to tendon grafts to fishing line. Replacement techniques work well in humans, because two-legged animals have level tibial plateaus. Almost all board-certified veterinary surgeons agree the newer techniques that address the underlying biomechanical problems minimize arthritis and have a much higher overall success rate.

The two current techniques addressing the underlying biomechanical instability are the tibial plateau leveling osteotomy (TPLO) and the tibial tuberosity advancement (TTA). The TPLO, which changes the angle of the tibial plateau, has been considered the gold standard for about 8 - 10 years and has a high success rate (about 95% of dogs return to 95 - 100% of normal). The TTA is a newer technique that changes the relationship of the patellar tendon and tibial plateau angle. We have performed over 5,000 TPLO and about 150 TTA procedures and in our minds the TPLO is a superior procedure. The majority of surgeons agree.

Animals undergoing TPLO surgery are anesthetized with state-of-the-art anesthetics (risks are extremely low), receive an epidural for pain relief and can be discharged from the hospital the day of surgery.

Healing takes about 8 - 12 weeks. Once healed, dogs can do virtually any activity, including running, jumping, playing with other dogs and playing ball (my dog's personal favorite).

If you would like to [learn more about ACL tears](#) visit our website.