



ACL: Surgical Repair

The most common orthopedic problem of dogs is a rupture of the anterior (sometimes called cranial) cruciate ligament in the knee. This ligament helps hold the femur bone in the thigh to the lower leg, and prevents side-to-side motion and rotational motion of the knee.

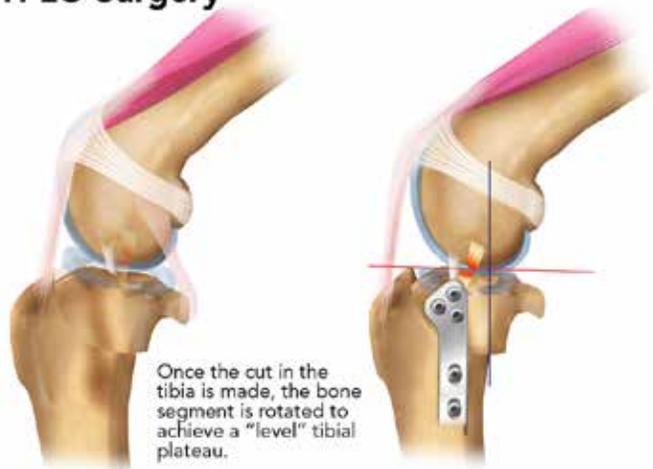
This ligament can rupture as a result of long-term degeneration, whereby the fibers within the ligament weaken over time, or it can rupture because of trauma or abnormal angulation during running or playing. Certain breeds including Labradors, Rottweilers, Boxers, and Newfoundlands may be predisposed. Small dogs that have luxating patellas (kneecaps) are predisposed to ACL ruptures. When the ligament ruptures, the joint becomes unstable, which causes pain and leads to chronic progressive arthritis if untreated.

There are different surgical options for repairing the damage. Which surgery is chosen depends on the size of the dog, experience of the surgeon, and the surgeon's preference. It is becoming more common for orthopedic procedures such as this to be performed only by board-certified veterinary surgeons.

Stifle (Knee)



TPLO Surgery



Once the cut in the tibia is made, the bone segment is rotated to achieve a "level" tibial plateau.



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The most common surgical repair procedures are the TPLO (tibial plateau leveling osteotomy), TTA (tibial tuberosity advancement), and CBLO (CORA based leveling osteotomy).

In a TPLO procedure, the tibial bone is cut and rotated so that its slope changes and a metal plate is affixed. This prevents the femur from sliding down the slope of the tibial plateau when the dog puts weight on its knee. There is a variation of a TPLO, called a CBLO, where the tibial bone is cut at a different angle, and a metal plate and screws attached. In the TTA procedure the front part of the tibia is cut, moved forward, and a plate attached. All these procedures result in a flattening of the top of the tibia to help the abnormal forces that are created with a rupture of the cruciate ligament.

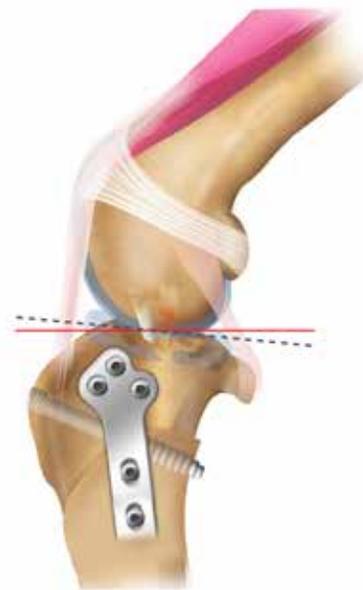


While any dog can have an ACL rupture, only larger dogs can have a TPLO, CBLO, or TTA surgery because of the size limitations of the metal plate used in the procedure. Smaller dogs have a surgery called an extracapsular repair to fix the ACL rupture. Larger dogs don't heal as well with an extracapsular repair procedure, they do better with a TPLO or similar surgery.

This surgery is usually very successful with few complications and most dogs have no need for any long-term pain relieving medication.



CBLO Surgery



TTA Surgery



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