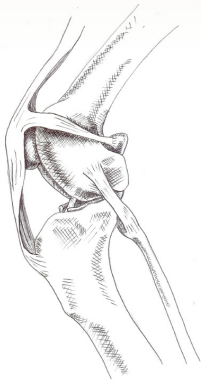


# Tibial Tuberosity

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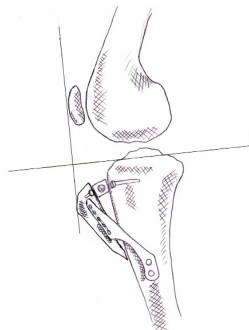


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limp is usually severe. While some improvement can occur with time, surgery is the best method to resolve the lameness and to minimize future osteoarthritis.

There have been numerous surgical techniques developed over the past 30 years. The most recently developed and most promising techniques for restoring normal limb use involve tibial osteotomy (bone cutting). The osteotomy techniques alter the weight bearing forces acting at the stifle. Instead of repairing the CCL, these techniques focus on eliminating the need for the CCL. Tibial tuberosity advancement (TTA) and tibial plateau leveling osteotomy (TPLO) are the two most commonly performed tibial osteotomy techniques.

TTA is a recently developed surgical treatment for CCL injuries. Already common in Europe (with over 18,000 cases performed), the TTA is gaining popularity in the U.S. as its benefits are realized. The biomechanical rationale of TTA is that a forward shift



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in the position of the tibial tuberosity counteracts the instability created within the stifle following a CCL tear. The tibial tuberosity is secured with specially designed implants so that the patellar ligament is perpendicular to the tibial plateau. The long term prognosis for excellent limb use following TTA is comparable to TPLO. Both TTA and TPLO are generally preferred over previously developed techniques, especially in medium and large breed dogs. One advantage of TTA over TPLO is that it is less invasive, as there is less soft tissue dissection during surgery and

the bone is cut in a portion that does not bear the body's weight. This results in less swelling and pain following surgery. Also, while the total activity restriction following TTA is similar to TPLO, the lameness resolves more rapidly following TTA. Finally, TTA implants are made from titanium, which offers superior biocompatibility.

Strict rest is required following surgery to allow for proper healing of the tibia. Initially, there should be no running, jumping, or playing. After the first month of strict rest, a gradual introduction of controlled activity is performed until 3 months following surgery. Physical therapy is also performed to improve the speed of healing. In the weeks following surgery, x-rays are taken to assess healing of the tibia.

Post-operative complications following TTA surgery are similar to that of the TPLO surgery. The overall complication rate is low. Most minor complications are easily treated or self resolving and major complications requiring additional surgery are rare and usually appear after inadequate confinement or trauma.

After the healing is complete, it is rare for problems to develop. In fact, TTA is occasionally performed when other methods of repair have not returned patients to normal use of the leg.



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