

# Canine TightRope<sup>®</sup> Coxofemoral Luxation

An Owner's Guide

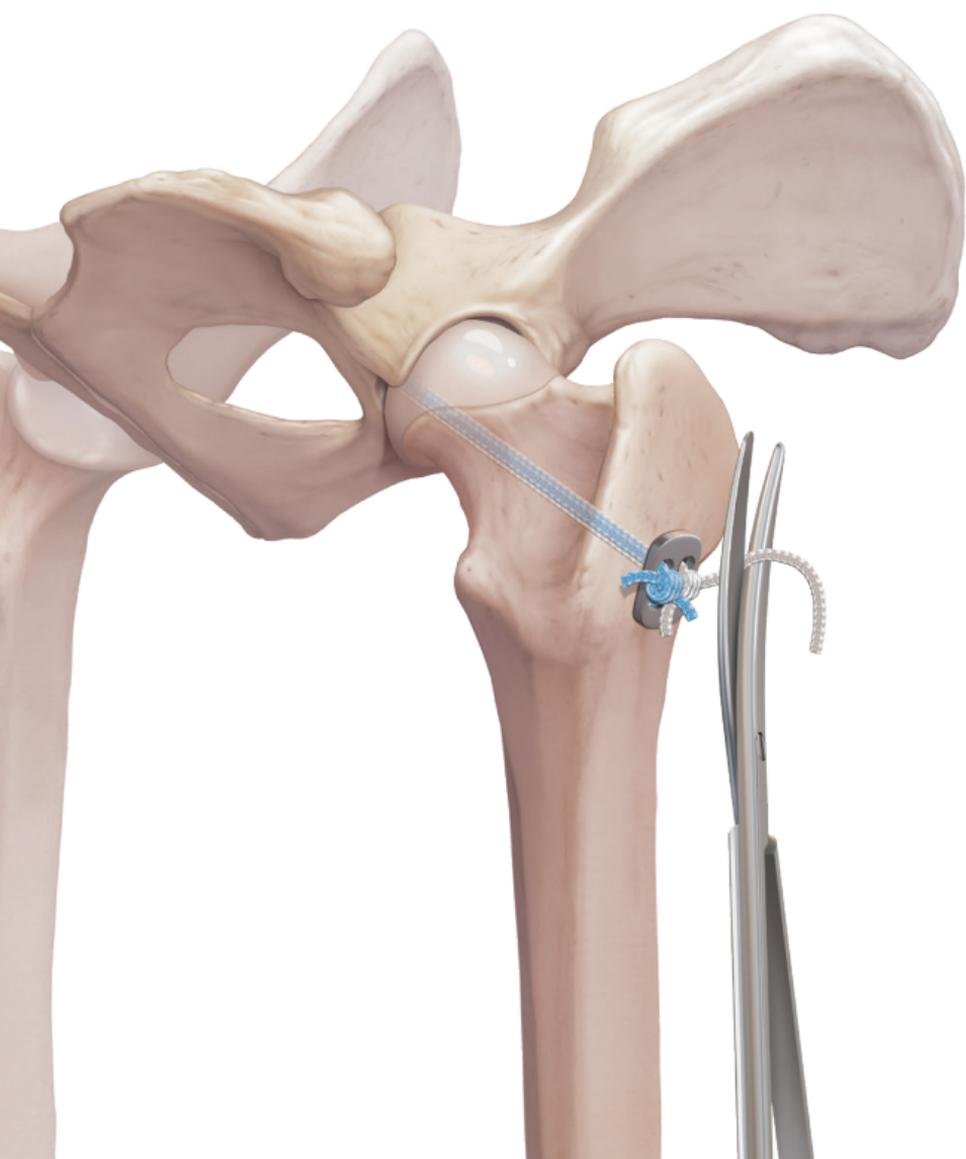


**Arthrex<sup>®</sup>**  
**Vet Systems**

## The Arthrex Difference

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Since 1984, Arthrex has been a privately held corporation committed to one thing: providing the finest quality products and educational services to meet the special needs of surgeons and their patients. Arthrex is dedicated to creative product development and medical education with an experienced, devoted team of professionals who are truly committed to continuing this long-term tradition. New product innovation in less invasive surgery is the heart and soul of Arthrex, which has resulted in the development of over 8,000 products for arthroscopic and minimally invasive orthopedic surgical procedures. Our goal is to make technically demanding surgical procedures simpler, safer and more reproducible.



## What Is Coxofemoral Luxation?

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The coxofemoral joint, or hip, is a ball (femoral head) and socket (acetabulum) joint. A hip or coxofemoral luxation occurs when the femoral head is displaced from the acetabulum. Hip dislocation is most often due to a traumatic event, with vehicular trauma being the most common type. Due to the lateral force that is sustained through the femur, the hind limb is abruptly thrust toward the center of the body. This causes disruption of the ligament of the femoral head and joint capsule, resulting in luxation of the hip. In the majority of cases, the femoral head is forced up and forward from the acetabulum, a condition termed craniodorsal luxation. Ventral luxation is when the femoral head is dislocated downward, under the pelvis. This type of luxation is less common and is usually the result of a slip or fall that caused the dog to go “splay-legged.”

## Signs and Symptoms

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Following the injury, the dog is often unable to bear weight on the affected leg. If the animal can use the injured leg, the gait is typically characterized by external rotation of the knee and inward rotation of the hock (or ankle). The affected limb often appears shorter, and a prominent, hard swelling may be noted above the hip joint, caused by the femur riding high on the pelvis.



Before Surgery



After Surgery



## What Are My Treatment Options?

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Hip luxation must be treated quickly to avoid further damage to the joints and surrounding tissues. There are two treatment categories: “closed reduction” and “open reduction.” For closed reduction, the patient is placed under general anesthesia and a series of traction maneuvers are employed to replace or “reduce” the ball of the femur back into the socket of the pelvis. Once in place, the limb is put into a non-weight-bearing bandage called an Ehmer sling for 10 to 14 days.

With closed reduction, stability of the hip is re-established with healing of the joint capsule, scar tissue, and surrounding musculature. Closed reduction is successful in approximately 50% of first attempts. It is most effective if performed within the first 12 to 24 hours following the traumatic event. Closed reduction is an inappropriate treatment option if bone fragments (avulsion of the ligament, rather than tearing) are present within the joint.

When closed reduction fails, if there are concurrent orthopedic injuries (pelvic fractures, intra-articular fractures) or if immediate weightbearing is necessary, surgical intervention is warranted. If hip joint conformation is normal, then open reduction with stabilization is recommended. If the hip is severely dysplastic, then a total hip replacement or a femoral head and neck excision (FHO) is most appropriate.

## TightRope® Coxofemoral Luxation Repair

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This surgical (open reduction) technique is a form of “toggle rod stabilization.” A strong biomaterial is used to stabilize the hip joint while the supportive structural tissues heal. The biomaterial is an ultra-high molecular weight polyethylene suture material that is used extensively in human surgery for many orthopedic applications. This material has properties that make it stronger and less prone to failure than any other suture material.

TightRope coxofemoral luxation stabilization is similar in concept to using a molly bolt to anchor a heavy object to a wall. The biomaterial suture is looped through a flat piece of surgical titanium called a toggle. The toggle is then passed through a hole drilled in the wall of the acetabulum, and then “flipped” up against the wall of the acetabulum. The looped suture strand is then advanced through a tunnel created in the femoral neck and secured to the outer aspect of the femur by tying the suture strands over a “button.”

### Post-Op Care

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Limb use following surgical repair is often immediate; however, restricted activity is mandatory for 8 to 12 weeks following surgery to allow the joint capsule and surrounding musculature to heal. Professional rehabilitation therapy starting at 4 weeks post-op is strongly encouraged. The patient can return to normal activity once range of motion of the hip joint and muscle mass of the limb return to normal. Rates of re-luxation rate following repair are low with the TightRope system, occurring in less than 5% of cases.

## Contact Information

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This Animal Health Topic was written by and reviewed by Diplomats of the American College of Veterinary Surgeons. Any opinions stated in this brochure are not necessarily the official position for the American College of Veterinary Surgeons. The American College of Veterinary Surgeons recommends contacting an ACVS board-certified veterinary surgeon or your general veterinarian for more information about this topic.



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