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SURGICAL TECHNIQUE

## TightRope® for Coxofemoral Luxation Repair

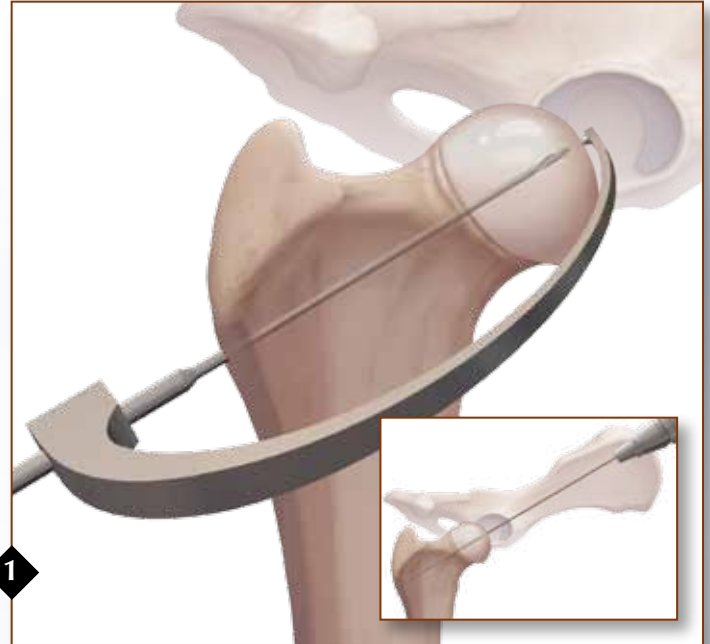


## Surgical Technique as recommended by Peter J. Lotsikas, DVM, Diplomate ACVS

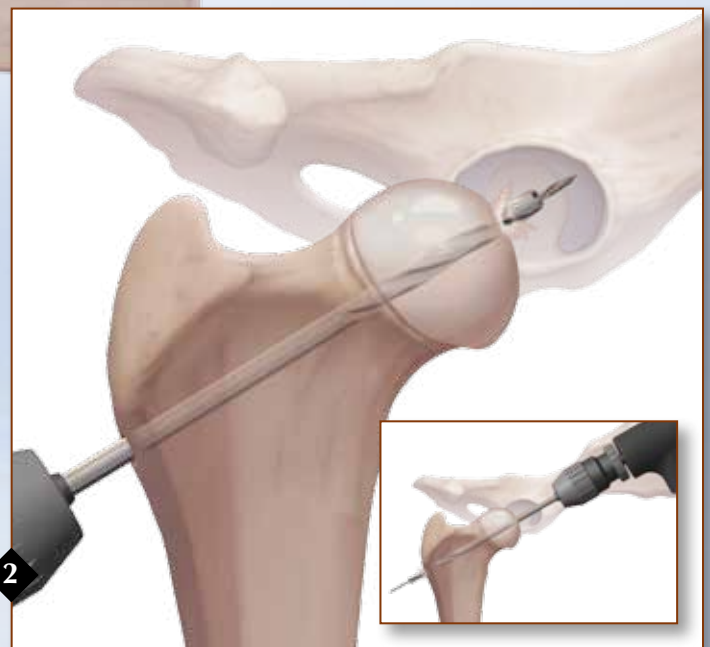
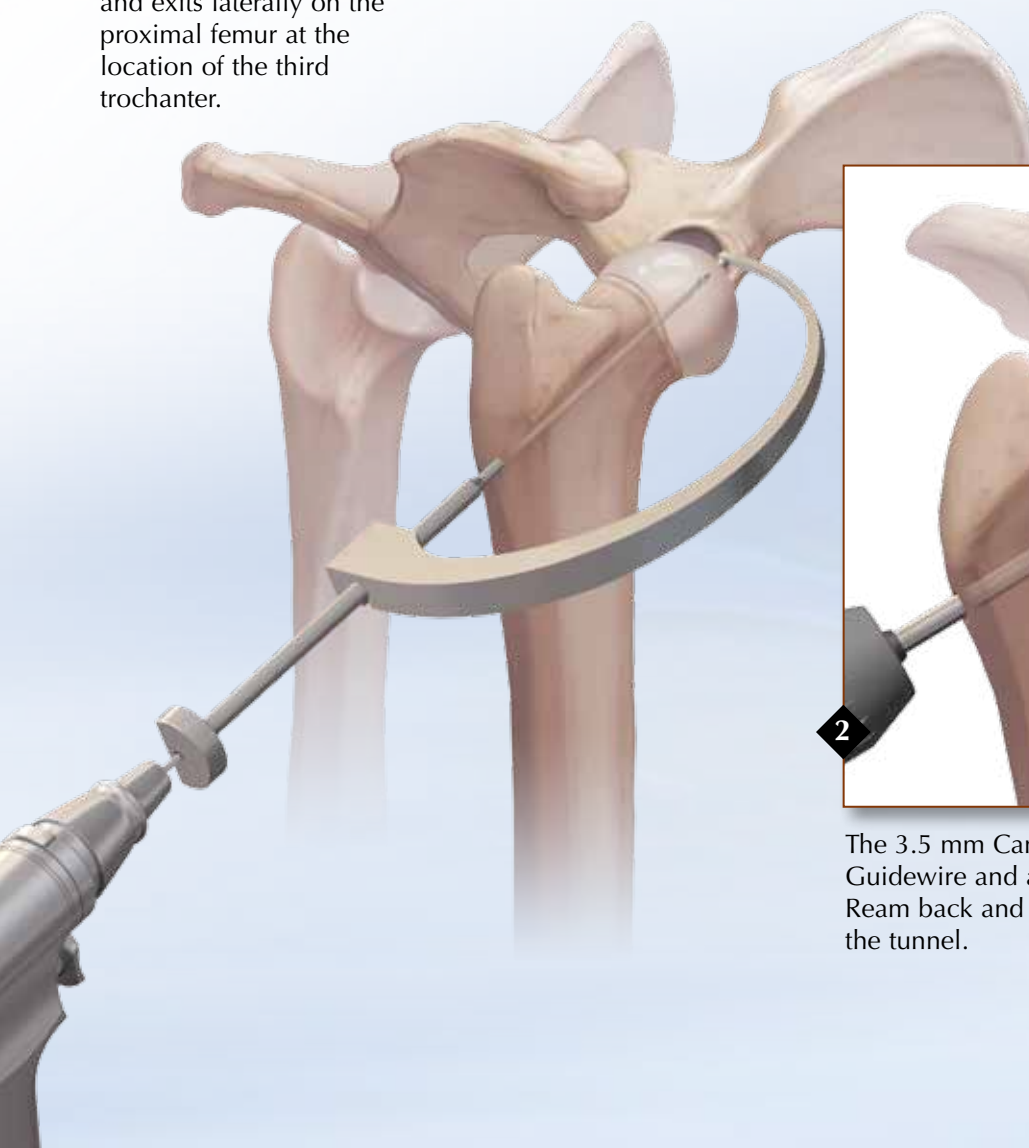
The patient is positioned in lateral recumbency under general anesthesia. A hanging limb technique with aseptic preparation and appropriate draping should be performed. The use of an adherent impervious drape is recommended to keep the suture from coming in contact with the skin.

A standard cranial lateral approach to the coxofemoral joint is performed. A partial tenotomy of the deep gluteal tendon is made at the insertion site along the greater trochanter. The articular cartilage of the femoral head and acetabulum should be thoroughly evaluated. The acetabular fossa should be debrided of ligament.

The location of the femoral bone tunnel starts at the fovea capitis and exits laterally on the proximal femur at the location of the third trochanter.



A .045 Guidewire is placed from the third trochanter to the fovea capitis. This can be placed in a retrograde fashion or normograde with the aid of an aiming device.

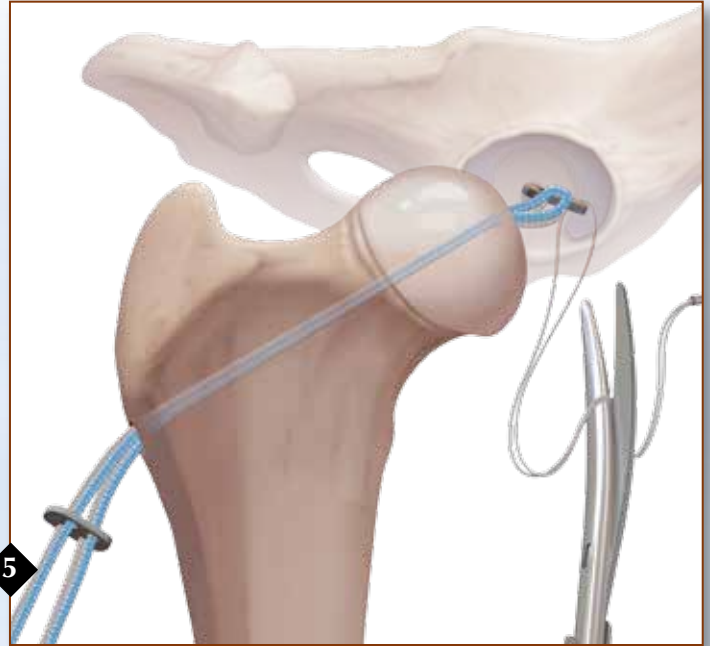


The 3.5 mm Cannulated Drill Bit is inserted onto the Guidewire and advanced through the femoral bone. Ream back and forth to ensure all bone is removed from the tunnel.

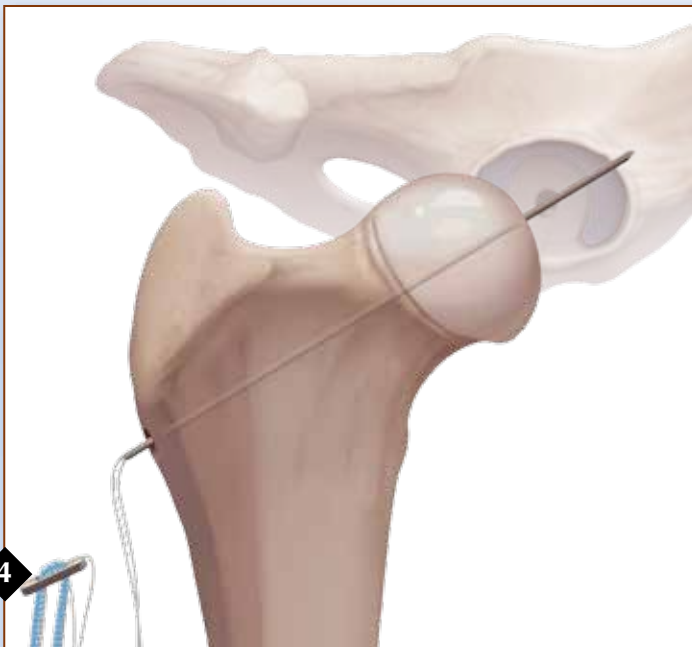
## TightRope for Coxofemoral Luxation Repair



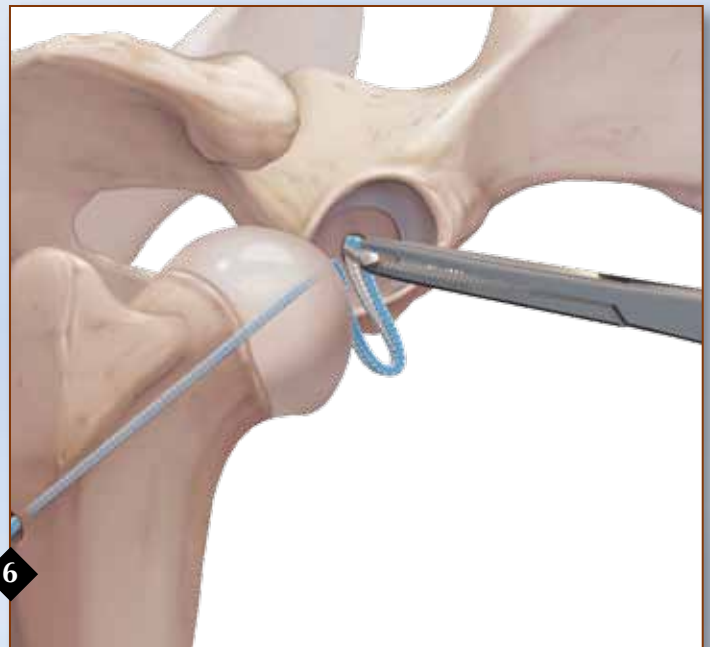
The Cannulated Drill Bit is used to create a hole in the acetabulum at the acetabular fossa. Use caution when drilling to ensure you stop advancing the drill as soon as the medial acetabular wall has been penetrated.



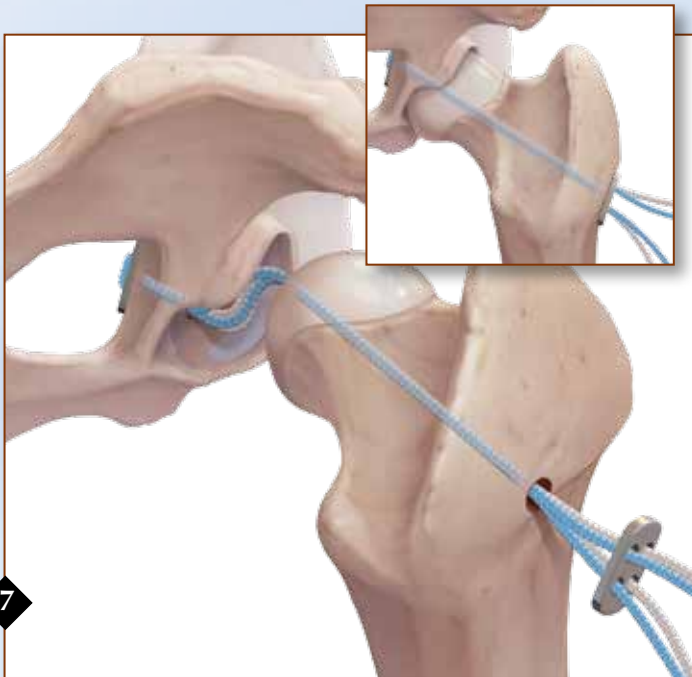
Once the toggle button has exited the femoral head, the lead needle can be removed from the TightRope system by cutting one limb of the white 2-0 suture attached to the lead needle and pulling the needle away from the joint.



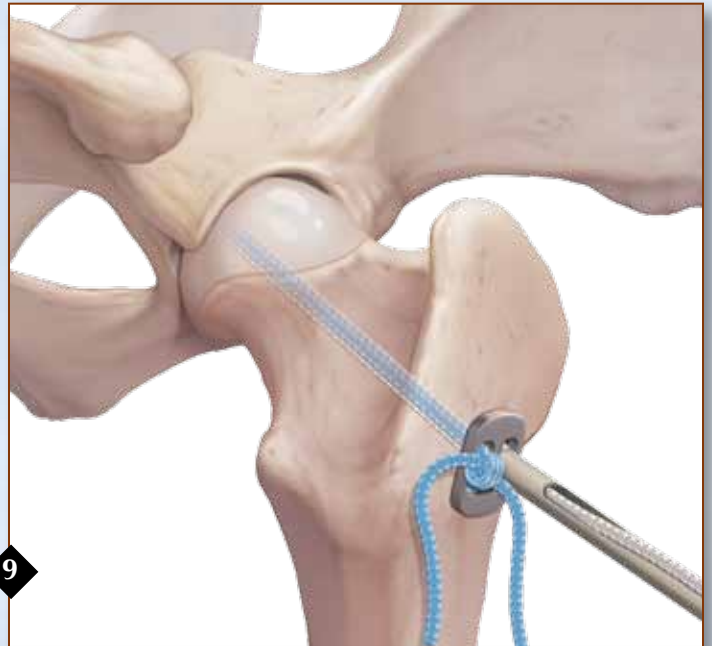
The TightRope lead needle is inserted through the femoral hole from the third trochanter to the location of the fovea capitis. As tension is applied on the toggle button, the button will lay down flat to allow it to advance through the tunnel. The 4 hole button is left on the third trochanter. Do not advance the lead needle into the hole in the acetabulum.



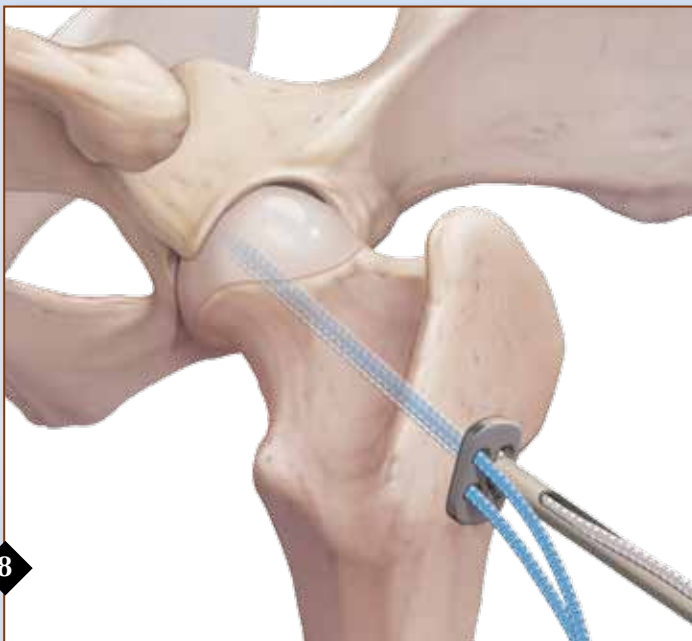
Grasp the toggle button with a curved hemostat and advance it into the acetabular hole. Push the toggle completely through the hole and pull on the FiberTape® strands. This will allow the toggle button to flip and seat firmly on the medial wall of the acetabulum.



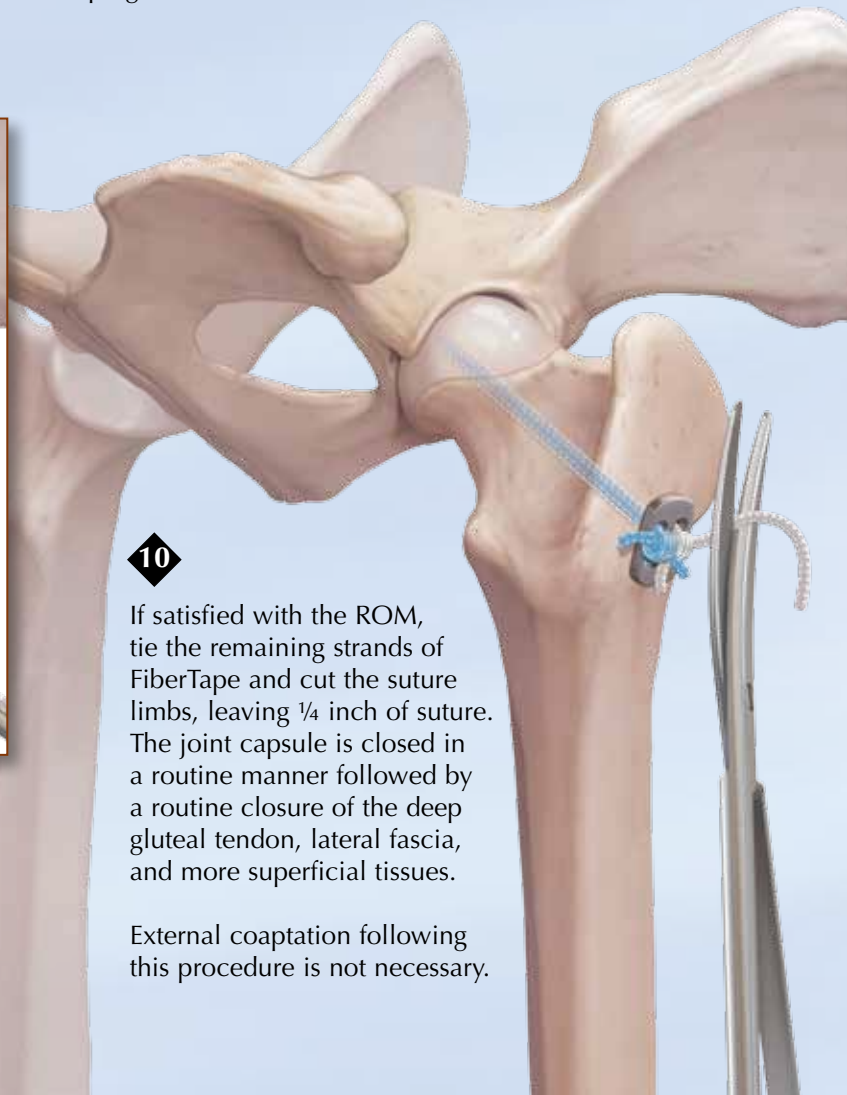
Slack is removed from the FiberTape as the femoral head is reduced into the acetabulum to ensure the femoral head is properly oriented.



The two strands of FiberTape not in the Tensioner are tied over the oval button. Four throws are recommended to secure the knot. Remove the Tensioner from the FiberTape. The hip is manipulated to ensure a smooth ROM without impingement.



The Tensioner is applied to the TightRope by pulling two strands of same-colored FiberTape into the tensioning device and setting at a low tension (5-7 lbs). The hip is put through a gentle range-of-motion (ROM) to ensure the repair is not overtightened.



If satisfied with the ROM, tie the remaining strands of FiberTape and cut the suture limbs, leaving 1/4 inch of suture. The joint capsule is closed in a routine manner followed by a routine closure of the deep gluteal tendon, lateral fascia, and more superficial tissues.

External coaptation following this procedure is not necessary.

## GUIDE TO DRILL BIT AND IMPLANT SIZE BASED ON PATIENT WEIGHT

Dog Weight	Implant Size	Drill Bit Size
< 20 lbs.	Mini TightRope®	2.7 mm for the acetabulum and 2.0 mm for the femoral neck*
20 - 50 lbs.	Mini TightRope	2.7 mm
> 50 lbs.	Standard TightRope	3.5 mm

\* Note: This requires the toggle button to be placed through the medial acetabular wall first, and then the FiberWire is passed through the femoral tunnel from the articular surface using the Nitinol Suture Passing Wire, blunt tip first.

### ORDERING INFORMATION

TightRope CCL	VAR-2800
Mini-TightRope CCL	VAR-2801
Femoral Aiming Guide	VAR-2810
Cannulated Drill Bit, 3.5 mm (use with AR-8920P)	AR-8920DC
Cannulated Drill Bit, 2.7 mm (use with AR-8920P)	AR-8911DC
Cannulated Drill Bit, 2.0 mm (use with AR-8933K)	AR-8933-20C
.049 Guidewire (K-wire)	AR-8920P
.045 Guidewire (K-wire)	AR-8933K
Suture Passing Wire, Nitinol, 8 inches	AR-1255-08
FiberWire Scissors	AR-11796
FiberWire Scissors, small	AR-11797
Tensioner with Tensiometer	AR-1529

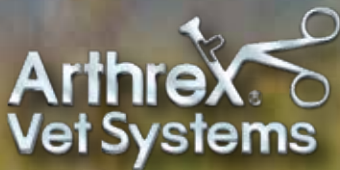
Mini-TightRope  
VAR-2801

TightRope CCL  
VAR-2800

## Recommended Postoperative Rehabilitation

POST-OP PERIOD	GOALS OF THERAPY	THERAPEUTIC & REHABILITATION MODALITIES
Immediate ( <i>during hospitalization</i> )	<ul style="list-style-type: none"> <li>Decrease swelling</li> <li>Increase comfort</li> </ul>	<ul style="list-style-type: none"> <li>Cryotherapy</li> <li>Intravenous antibiotics, non-steroidal anti-inflammatory (NSAID) and pain medication</li> </ul>
Day 3 - 5 through Day 14	<ul style="list-style-type: none"> <li>Decrease swelling</li> <li>Healing of joint capsule</li> <li>Maintain range of motion</li> <li>Increase weight-bearing</li> </ul>	<ul style="list-style-type: none"> <li>Cryotherapy</li> <li>Oral NSAID and pain medications</li> <li>Passive range-of-motion therapy</li> <li>Weight-bearing exercises</li> <li>Rehabilitation therapy – manual manipulation, cold laser, and/or therapeutic ultrasound</li> </ul>
Week 3 through Week 6 - 8	<ul style="list-style-type: none"> <li>Increase range-of-motion</li> <li>Improve weight-bearing</li> <li>Increase muscle mass</li> </ul>	<ul style="list-style-type: none"> <li>Leash walks of incrementally increased length (increase by 5 minutes every five days)</li> <li>Weight-bearing exercises</li> <li>Strengthening exercises</li> <li>Rehabilitation therapy – manual manipulation, cold laser, and/or therapeutic ultrasound</li> </ul>
Week 6 - 8 through Week 10 - 12	<ul style="list-style-type: none"> <li>Symmetry in muscle mass</li> <li>Improve limb function</li> <li>Proper tracking and proprioception</li> <li>Begin retraining and conditioning</li> </ul>	<ul style="list-style-type: none"> <li>Increase challenge of strengthening exercises</li> <li>Leash walks of incrementally increased length</li> <li>Hill work and walks on varying terrain</li> <li>Aquatic therapy (underwater treadmill therapy or swimming)</li> </ul>
Week 10 - 12 through Week 14 - 16	<ul style="list-style-type: none"> <li>Retraining and conditioning</li> </ul>	<ul style="list-style-type: none"> <li>Underwater treadmill</li> <li>Controlled off-leash activity</li> <li>Jogging</li> <li>Gradual return to normal activity</li> </ul>

Recommended by Faith Lotsikas, DVM, CCRT & Lisa Fair CMT, CCRT (Candidate)



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*This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex Vet Systems products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience and should conduct a thorough review of pertinent medical literature and the product's Directions For Use.*

This surgical technique was developed in conjunction with Peter J. Lotsikas, DVM, Diplomate ACVS.

U.S. PATENT NO. 6,716,234; 7,029,490 and PATENT PENDING

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