AITFL *InternalBrace™* Ligament Augmentation

Surgical Technique
AITFL Internal Brace™ Ligament Augmentation

The AITFL Internal Brace ligament augmentation is designed as an optional adjunct to the Syndesmosis TightRope® implant.

Internal Brace Ligament Augmentation With Collagen-Coated FiberTape® Suture Implant System (AR-1688-CP)
- All-in-one system with 3.5 mm/4.75 mm BioComposite SwiveLock® anchors including drills and taps in one convenient sterile package
- Knotless repair that allows for a strong no-profile repair construct

Titanium Distal Fibula Plate
- Plate holes accept Syndesmosis TightRope implants
- 3.0 mm variable-angle locking screws
- Suture eyelets for the addition of the AITFL Internal Brace ligament augmentation
- Low-profile anatomic design

Syndesmosis Repair Using AITFL Internal Brace Suture Eyelets

1. Insert the collagen-coated FiberTape suture through the anterior proximal and distal holes before applying the distal locking fibula plate.

Optional:
Plate already on bone.
Use the Micro SutureLasso™ instrument (AR-8704) to pull the FiberTape suture through the holes.
Surgical Technique

Tap using the 4.75 mm tap to the laser line.

Insert the Syndesmosis TightRope® XP implant 1.5 cm to 2.0 cm above the tibial plafond. This places the Syndesmosis TightRope XP implant at a lower level of the interosseous membrane and just above the tibiofibular contact zone, which is covered by hyaline cartilage. Tension appropriately.

Reassess syndesmotic motion to determine the need for additional AITFL InternalBrace™ ligament stabilization.

At Chaput’s tubercle, use the 3.4 mm drill and aim slightly cephalad away from the tibiotalar joint. Remain aware of the TightRope implant trajectory to prevent intersection.

Tap using the 4.75 mm tap to the laser line.
After final anchor placement is inserted, cut the remnant FiberTape suture tails with FiberWire® scissors.

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Tensioning: Bring the eyelet of the 4.75 mm SwiveLock® anchor to the edge of the tibia drill tunnel. Pull the FiberTape® suture to the desired tension and mark the FiberTape suture at the level of the black laser line on the SwiveLock anchor. Move the 4.75 mm SwiveLock anchor eyelet back to the marked point on the FiberTape suture.

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Insert the SwiveLock anchor until screw is against the bone, then hold the green paddle on the driver stationary while turning the driver clockwise.

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Recheck syndesmosis to ensure anatomic reduction and restoration of physiologic motion.

After final anchor placement is inserted, cut the remnant FiberTape suture tails with FiberWire® scissors.
Surgical Technique

Syndesmosis and AITFL Internal Brace Repair Outside of the Plate

1. Make a proximal incision parallel to the posterior edge of the fibula. Curve the distal aspect of the incision slightly anteriorly to allow visualization of the anterior syndesmosis. Use caution in the proximal aspect of the incision to avoid injuring the superficial peroneal nerve and in the distal aspect to avoid the intermediate branch of the superficial peroneal nerve. Distal anterior dissection under the extensor retinaculum allows access to the injured AITFL. Reduce and stabilize the fibula fracture as appropriate.

2. Insert the Syndesmosis TightRope® XP implant 1.5 cm to 2.0 cm above the tibial plafond. Tension appropriately.

3. Reassess syndesmotic motion to determine the need for additional AITFL stabilization.

4. The AITFL Internal Brace™ ligament augmentation should be placed parallel with the AITFL fibers. Fibular anchor: Use the 2.7 mm drill, starting at Wagstaffe’s tubercle, with the drill orientated away from the lateral gutter to prevent articular penetration. The drill should be angled approximately 30° plantarly, remaining parallel to the long axis of the fibula.
**Tibial anchor:** Use the 3.4 mm drill and aim slightly cephalad centered in the footprint of the AITFL (Chaput tubercle) on the tibia away from the joint. Remain aware of TightRope® implant trajectory to prevent intersection.

**Tap using the 3.5 mm tap.**

**Insert the 3.5 mm SwiveLock® anchor loaded with collagen-coated FiberTape® suture into the fibular hole. Hold the black paddle on the driver stationary while turning the driver clockwise. The black laser line on the driver is buried into the bone.**

**Tap using the 4.75 mm tap (green handle) to the laser line.**
Surgical Technique

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Recheck syndesmosis to ensure anatomic reduction and restoration of physiologic motion.

11

After final anchor placement is inserted, cut the remnant FiberTape suture tails with FiberWire® scissors.

10

Mallet the SwiveLock anchor until screw is against the bone, then hold the green paddle on the driver stationary while turning the driver clockwise.

9

Tensioning: Bring the eyelet of the 4.75 mm SwiveLock® anchor to the top edge of the tibia drill tunnel. Pull the FiberTape® suture to the desired tension and mark the FiberTape suture at the level of the black laser line on the SwiveLock anchor. Move the 4.75 mm SwiveLock anchor eyelet back to the marked point on the FiberTape suture.
<table>
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<td><strong>InternalBrace</strong>’ Ligament Augmentation Repair Kit</td>
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<tr>
<td>With Collagen-Coated FiberTape Suture</td>
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<tr>
<td>Syndesmosis TightRope XP Fixation System, Titanium</td>
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<td><strong>Titanium Ankle Fracture Plates</strong></td>
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<td>Locking Distal Fibula Plate, right</td>
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<td>Straight Plate</td>
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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 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. Postoperative management is patient specific and dependent on the treating professional’s assessment. Individual results will vary and not all patients will experience the same postoperative activity level or outcomes.