

Internal/Brace[™] Procedure for Brostrom Repair

Surgical Technique



Arthrex[®] 

Introduction

Brostrom repair with the *InternalBrace* procedure provides additional fixation of the repaired ligament back down to bone during the healing process, allowing early mobility during recovery and a quicker return to activity.¹ The *InternalBrace* 2.0 surgical technique provides surgical versatility with added size and material options. It comes with a talus offset guide that allows for reproducible anatomic placement of the talus SwiveLock® anchor. Surgeons can drill, tap, and implant the SwiveLock anchor through the guide. The *InternalBrace* technique supports the primary Brostrom repair of soft-tissue-to-bone for chronic ankle injuries and revisions during the healing phase.

■ Surgical versatility—more size/material options

- One system with 4 options accommodates surgeon preference as well as each patient’s variable anatomy
- Versatility of system allows for use not only in lateral ligament augmentation but also repairs to the AITFL and the spring and deltoid ligaments

■ Talus offset guide—reproducible anatomic placement

- Uniquely patented designed for reproducible placement of the talar SwiveLock anchor. Place guidewire, drill, tap, and insert anchor through the same guide without losing your position
- Reproducible and simple targeting of talar SwiveLock fixation

■ Radiopaque marker and laser-line window on SwiveLock driver

- Line-to-line targeting completely eliminates guesswork to determine whether the anchor is completely seated or countersunk if desired

■ Accurate and simple bone preparation

- Cannulated or solid drill and tap options

■ Biologically advantageous—collagen-coated FiberTape® suture and JumpStart® antimicrobial dressing

Reference

1. Kulwin R, Watson TS, Rigby R, Coetzee JC, Vora A. Traditional modified Broström vs suture tape ligament augmentation. *Foot Ankle Int.* 2021;42(5):554-561. doi:10.1177/1071100720976071

Instruments for *InternalBrace* 2.0* Repair



*Also comes in Mini, Plus, and PEEK options. See ordering information on p. 6.

The *InternalBrace* surgical technique is intended only to augment the primary repair/reconstruction by expanding the area of tissue approximation during the healing period and is not intended as a replacement for the native ligament. The *InternalBrace* technique is for use during soft tissue-to-bone fixation procedures and is not cleared for bone-to-bone fixation.

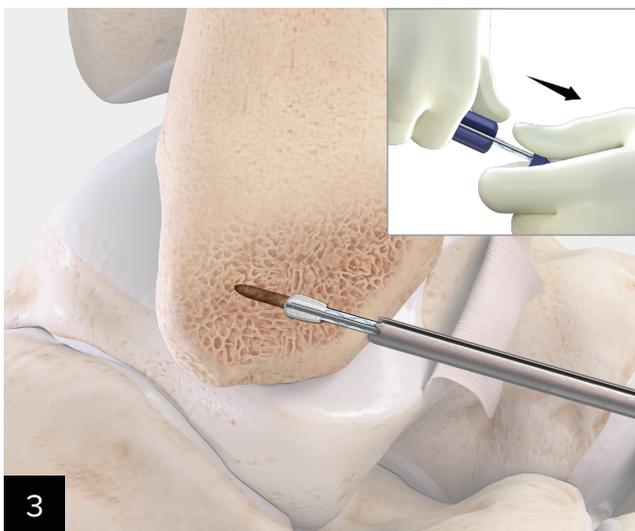
Surgical Technique



Measuring about 1 cm from the distal tip of the fibula, use the DX FiberTak® drill guide and a 1.35 mm K-wire to create a bone tunnel. The drill should be inserted to the automatic stop at the back of the drill guide.



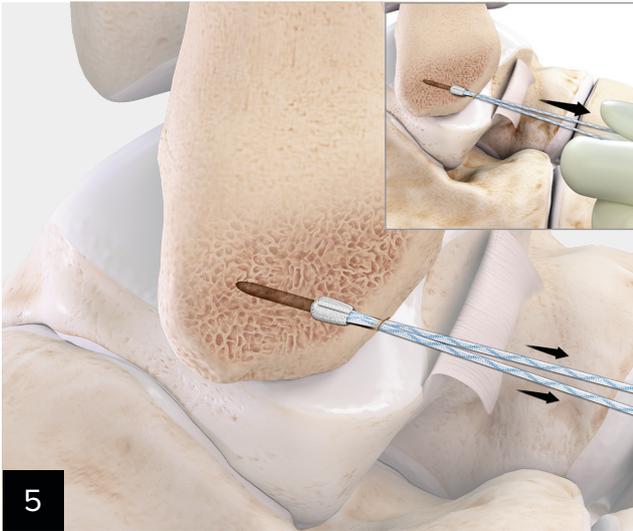
Keeping the drill guide in place, insert the DX FiberTak anchor and impact it until the handle is flush with the guide.



Pull back on the anchor handle about 5 mm to 8 mm behind the drill guide to seat the anchor against the cortical bone.



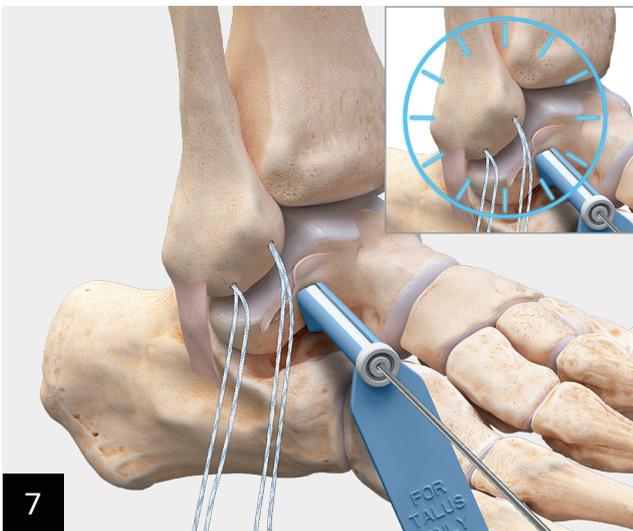
Remove the suture release tab, needle protector, and suture from the anchor body. The open slot of the drill guide allows for easy removal of the sutures from the drill guide.



After removing the drill guide, set the anchor in the bone by pulling back on the sutures.



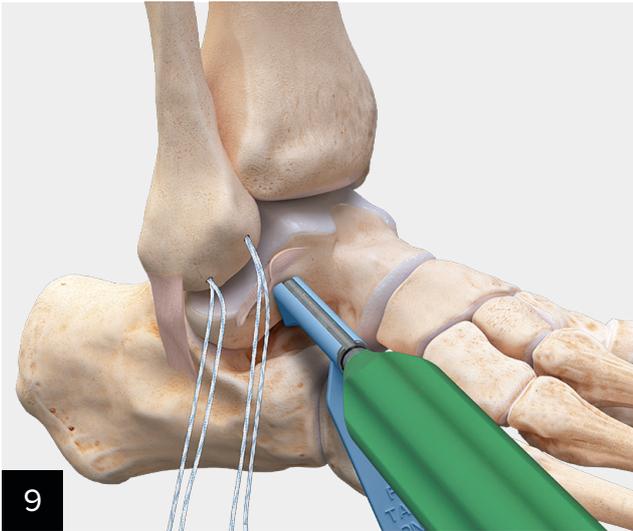
Repeat steps with the second DX FiberTak® anchor, placed about 2 cm from the distal tip of the fibula. After firmly placing the second anchor in the bone, the *Internal/Brace* procedure can be performed.



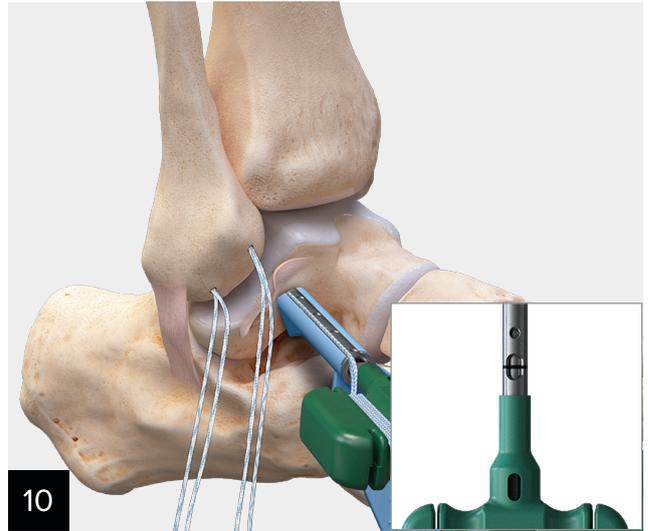
Position the talar offset guide firmly within the sinus tarsi, which is roughly 2 cm from the lateral talar process. Angle the guide approximately 40° to 45° to the sagittal plane and parallel with the longitudinal line of the foot (4:30 position on clock face for right foot, 7:30 for left foot). Insert a K-wire into the white insert of the guide for cannulated drilling, or remove the white insert if solid drilling is preferred.



Through the talus offset guide, proceed to use the 3.4 mm drill for the 4.75 mm SwiveLock® anchor.



9 Through the guide, tap the tunnel to the laser line on the 4.75 mm tap (green handle).



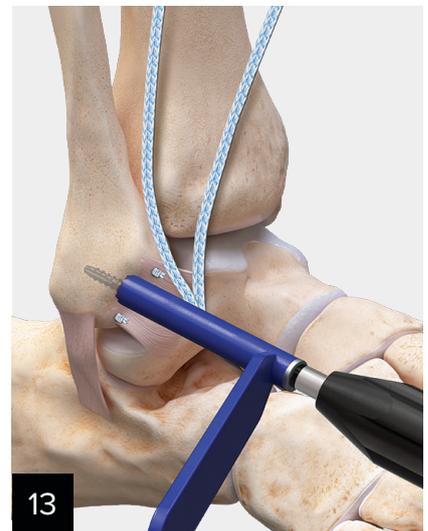
10 Insert the preloaded 4.75 mm SwiveLock® anchor and collagen-coated FiberTape® suture into the talar hole through the offset guide. Hold the square tab in place and turn the pear-shaped driver until you see the laser line in the window of the inserter. When the line appears, the anchor is flush. When the line is centered, the anchor is countersunk.



11 With the foot in maximum dorsiflexion and eversion, using the 1.3 mm SutureTape and needles from the DX FiberTak® anchors, proceed to pass the sutures through the soft tissue and tie them down to the fibula to complete the Brostrom repair.



12 Measure 15 mm from the distal tip of the fibula and proceed to drill with a 3.4 mm drill.



13 Use the 3.5 mm tap (black handle) and tap through the guide to prepare the bone tunnel for the 3.5 mm SwiveLock anchor.



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Pass both limbs of the collagen-coated FiberTape® suture through the eyelet of the 3.5 mm SwiveLock® anchor.



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Cut the excess collagen-coated FiberTape suture to complete the *Internal Brace* procedure.

Tensioning: With the foot in neutral inversion/eversion with approximately 10° to 15° of plantar flexion, place the eyelet at the drill hole and mark the FiberTape suture at the laser line. **Slide the eyelet to the line and insert into the drilled hole.** **Optional:** Prior to final tensioning, insert the tip of a small curved hemostat between the FiberTape suture and ATFL.



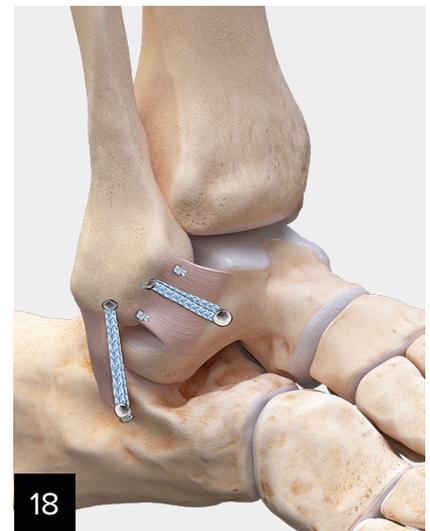
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Final fixation of the Brostrom repair with *Internal Brace* procedure.



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Optional: Final fixation adding a 4.75 mm SwiveLock anchor to the calcaneus augmenting the CFL in addition to the ATFL repair. When adding this limb from a single anchor in the fibula, make sure to place the anchor in the fibula just slightly inferior to the anatomic insertion of the ATFL.



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Alternative option if two independent constructs are preferred.

Ordering Information

InternalBrace™ Kit, **Standard**, BioComposite

Product Description	Item Number
BioComposite SwiveLock® w/ Collagen-Coated FiberTape® Suture, 4.75 mm BioComposite SwiveLock Anchor, 3.5 mm Drill, 2.7 mm Drill, cannulated, 2.7 mm Drill, 3.4 mm Drill, cannulated, 3.4 mm Drill Guide w/ Metal Insert for Talus Drill Guide w/ Metal Insert Bone Tap Guidewire w/ Trocar Tip Guidewire Sleeve Suture Passing Wire Free Needle JumpStart® Single-Layer Dressing, 2 in × 5 in	AR-1788J-CP

InternalBrace Kit, **Plus**

Product Description	Item Number
BioComposite SwiveLock w/ Collagen-Coated FiberTape Suture, 4.75 mm BioComposite SwiveLock Anchor, 4.75 mm Drill, 3.4 mm Drill, cannulated, 3.4 mm Drill, 4.0 mm Drill Guide w/ Metal Insert for Talus Drill Guide w/ Metal Insert Bone Tap Guidewire w/ Trocar Tip Guidewire Sleeve Suture Passing Wire Free Needle JumpStart Single-Layer Dressing, 2 in × 5 in	AR-1789J-CP

InternalBrace Kit, **Standard**, PEEK

Product Description	Item Number
PEEK SwiveLock w/ Collagen-Coated FiberTape Suture, 4.75 mm PEEK SwiveLock Anchor, 3.5 mm Drill, 2.7 mm Drill, cannulated, 2.7 mm Drill, 3.4 mm Drill, cannulated, 3.4 mm Drill Guide w/ Metal Insert for Talus Drill Guide w/ Metal Insert Bone Tap Guidewire w/ Trocar Tip Guidewire Sleeve Suture Passing Wire Free Needle JumpStart Single-Layer Dressing, 2 in × 5 in	AR-1788PJ-CP

InternalBrace Kit, **Mini**

Product Description	Item Number
PEEK SwiveLock w/ Collagen-Coated FiberTape Suture, 3.5 mm PEEK SwiveLock, 3.5 mm Drill, 2.7 mm Drill, cannulated, 2.7 mm Drill, 3.4 mm Drill Guide w/ Metal Insert for Talus Drill Guide w/ Metal Insert Bone Tap Guidewire w/ Trocar Tip Guidewire Sleeve Suture Passing Wire Free Needle JumpStart Single-Layer Dressing, 2 in × 5 in	AR-1787PJ-CP

Optional Instruments

Product Description	Item Number
Drill Bit, 4.0 mm	AR-1788-40S
Bone Tap, cannulated, AO, 3.5 mm	AR-1788T-35S
Bone Tap, cannulated, AO, 4.75 mm	AR-1788T-475S

DX FiberTak® Suture Anchor

Product Description	Item Number
DX FiberTak SutureTape Suture Anchor w/ 1.3 mm SutureTape and Tapered Point Needles, 26.2 mm ½ circle	AR-8990ST
DX FiberTak Suture Anchor w/ #1 FiberWire® Suture and Diamond Point Needles, 26.2 mm ½ circle	AR-8990

DX FiberTak Disposables Kit

Product Description	Item Number
Guidewire, 1.35 mm Guidewire, 1.6 mm FiberTak Drill Sleeve	AR-8990DS



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.

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