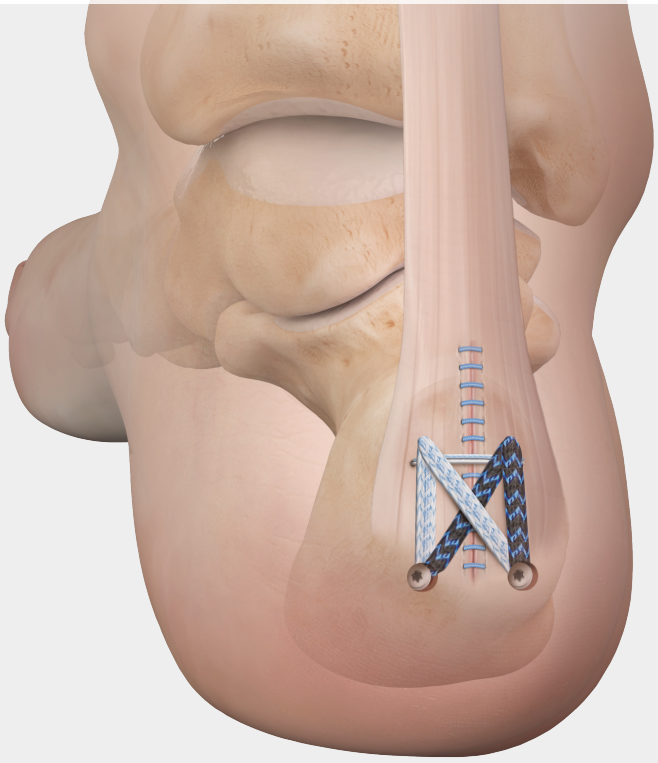
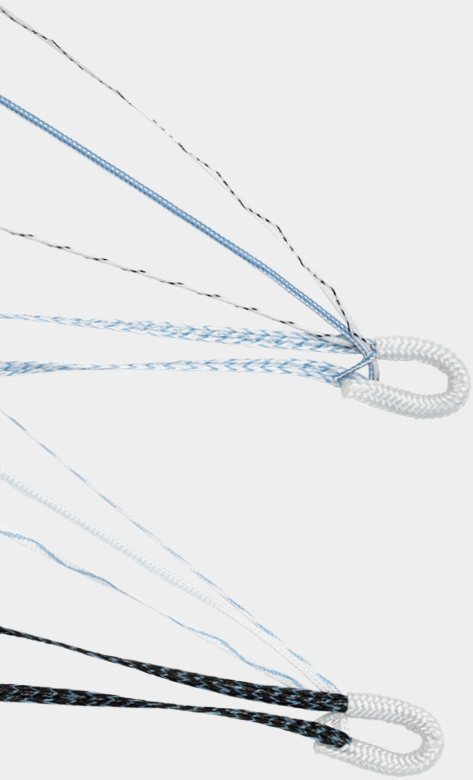
FiberTak® Achilles SpeedBridge™ Repair Implant System With Knotless Ripstop

Surgical Technique

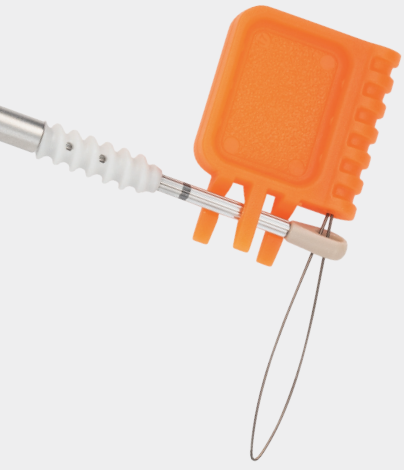


Arthrex®



2.6 mm Knotless FiberTak DX anchor w/ 1.7 mm collagen-coated FiberTape suture

DX 3.9 mm BioComposite SwiveLock anchor



FiberTak® Achilles SpeedBridge™ Repair Implant System

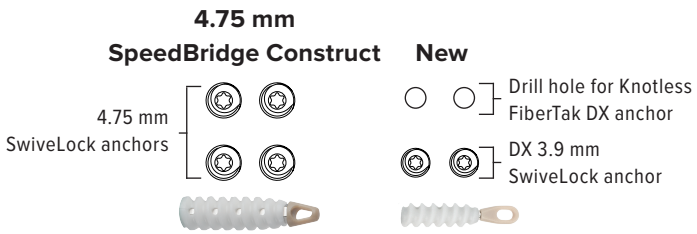
New!

Introduction

The ***new*** FiberTak Achilles SpeedBridge implant system is a novel concept in Achilles reattachment following Haglund's debridement. This repair enables an hourglass pattern of FiberTape® suture and knotless ripstop to be laid over the tendon's distal end in a completely knotless 4-anchor configuration. The Achilles SpeedBridge repair provides rigid tendon fixation with improved tendon-to-bone opposition, allowing for immediate postoperative weightbearing and range of motion.[1]

Features and Benefits

- ***New*** 2.6 mm Knotless FiberTak DX anchors and DX 3.9 mm BioComposite SwiveLock® anchors
- **25%** less material than the original SpeedBridge construct[2]

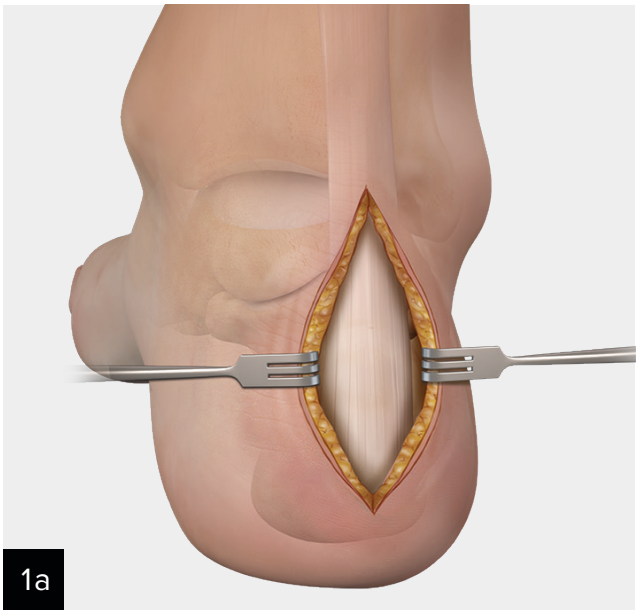


- Double the biomechanical strength of the 4.75 mm SwiveLock SpeedBridge construct, with knotless tensionable technology[2]
- Shorter inserters with laser line and window to assist in depth of DX 3.9 mm BioComposite SwiveLock anchors
- ***New*** 1.7 mm collagen-coated FiberTape suture with differentiating colors
- Hexalobe driver on DX 3.9 mm BioComposite SwiveLock anchors for high insertional torque in hard bone[3]

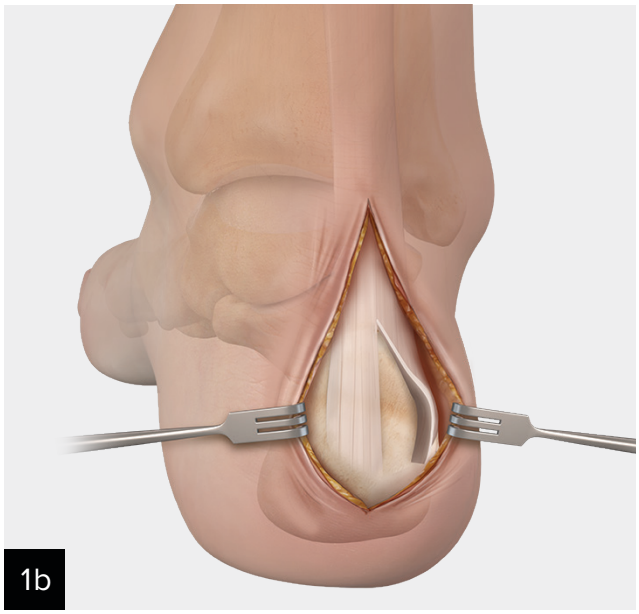
FiberTak® Achilles SpeedBridge™ Repair Implant System

New!

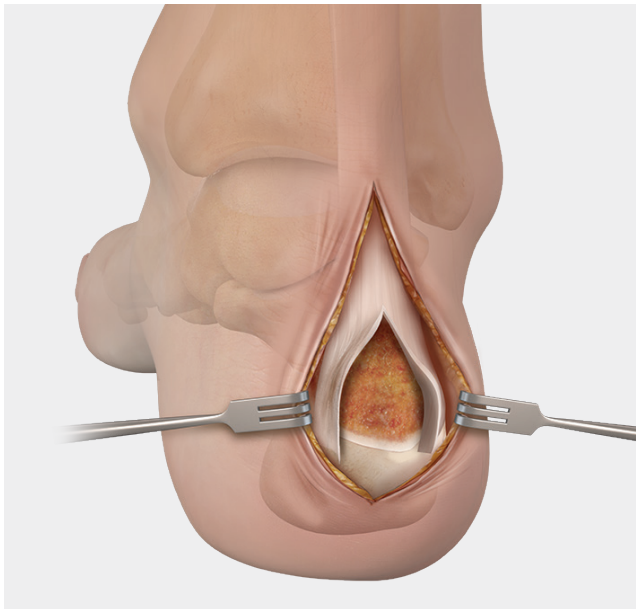
AR-9928BCK-DX



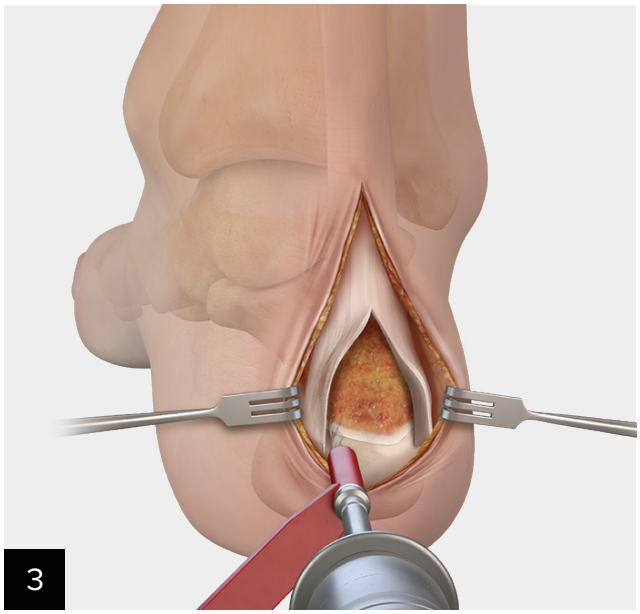
With the patient in a prone position, make a direct midline incision posteriorly. Carry the incision down to the calcaneus and Achilles tendon insertion. Split the Achilles tendon at the midline incision, full thickness, from posterior to anterior. Debride to remove all tendinopathic tissue.

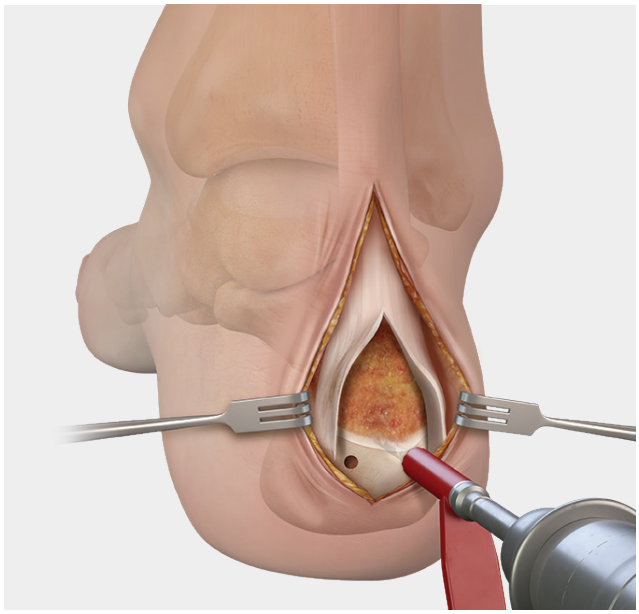


Release the Achilles tendon distally and reflect medially and laterally to expose the whole calcaneal tuberosity with a Haglund's prominence. Take care to maintain some medial and lateral attachments to assist with the accurate restoration of the Achilles' length. In some cases, complete tendon debridement may require complete tendon detachment.

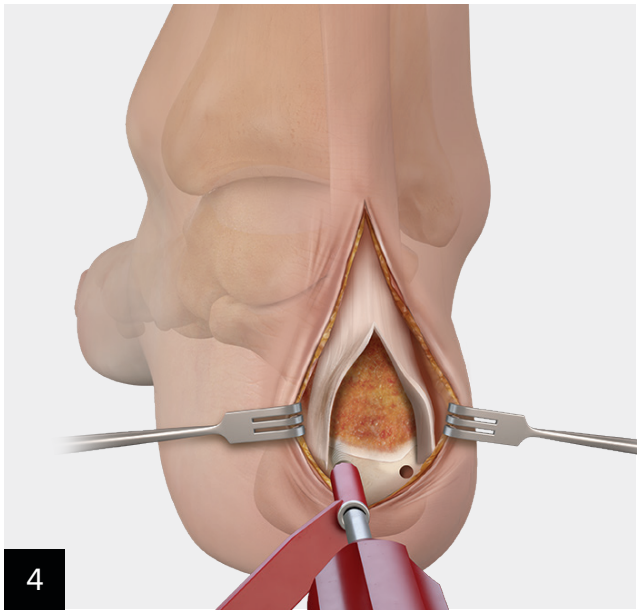


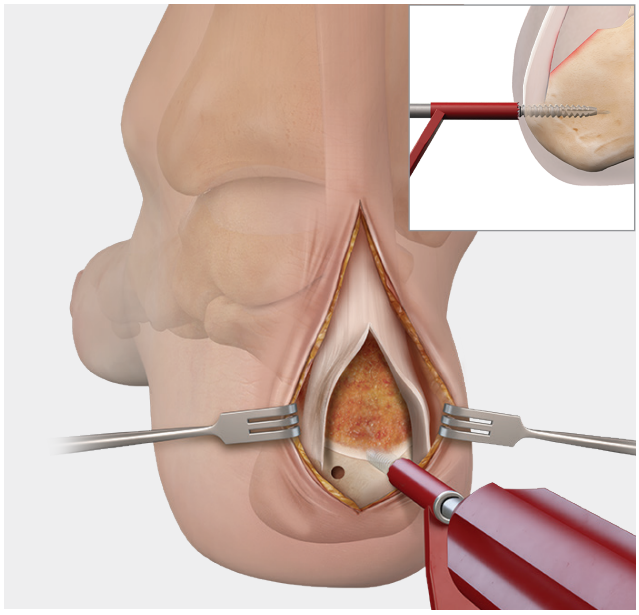
Remove the Haglund's prominence using a microsagittal saw and osteotome. Take care to chamfer off the medial and lateral sides of the calcaneus so as not to leave a prominence that is palpable under the skin, which can create difficulties with footwear.



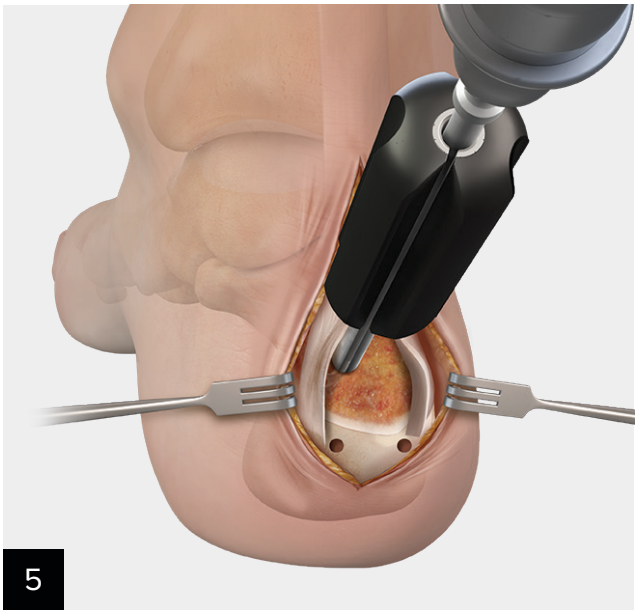


Using the 3.9 mm SwiveLock® guide and 2.6 mm drill, drill to the positive stop on the drill, where it meets the back of the guide, for both the medial and lateral insertion points. Ensure the drill guide is adjacent to bone and parallel to the bottom of the foot.

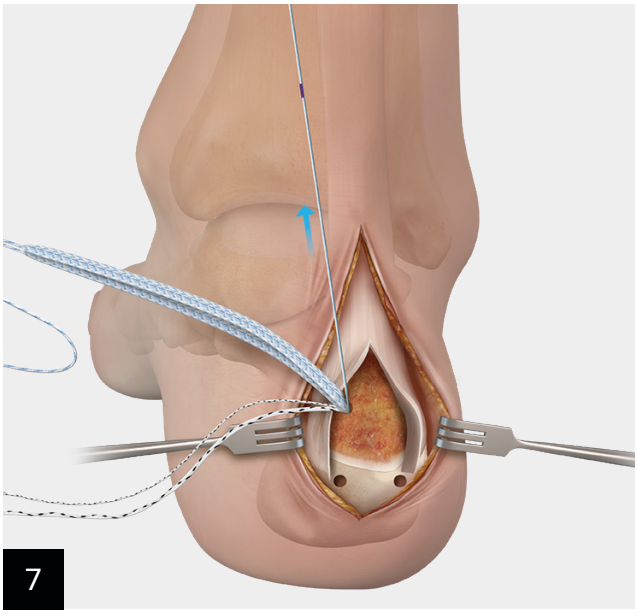




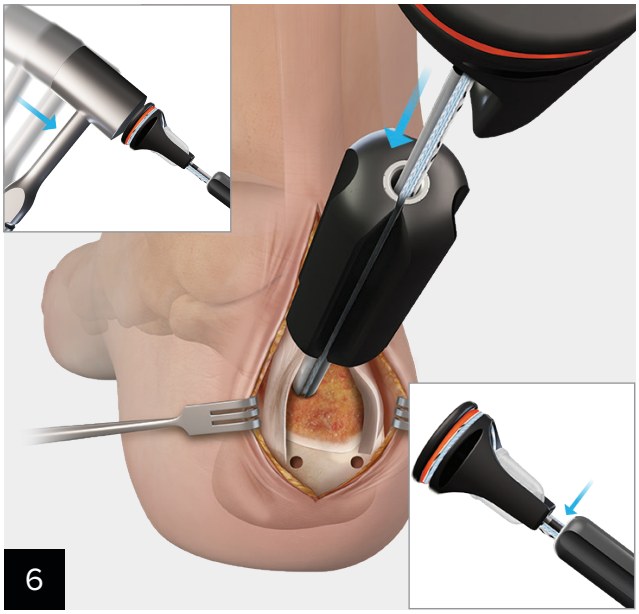
Use the 3.9 mm tap, and tap the bone tunnel down to where the laser marking meets the back of the drill guide. This placement ensures accurate tap depth.



Place the black handle FiberTak® guide slot-side down so the proximal anchors do not converge with the distal anchors about 1 cm proximal to the distal insertion of the Achilles tendon and central to each half of the tendon. The guide's beveled edge will help place the anchors in the correct plane when placed on the calcaneus where the Haglund's deformity has been removed.

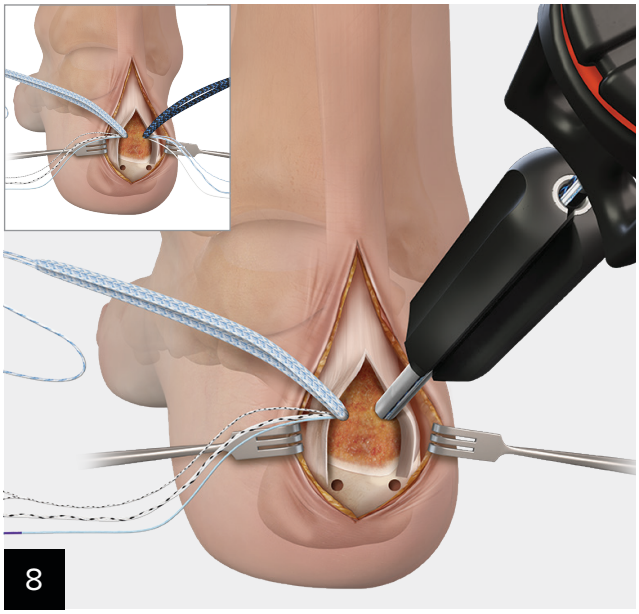


Pull gently on the suture to ensure the anchor is in good bone, but **do not** fully set the anchor.

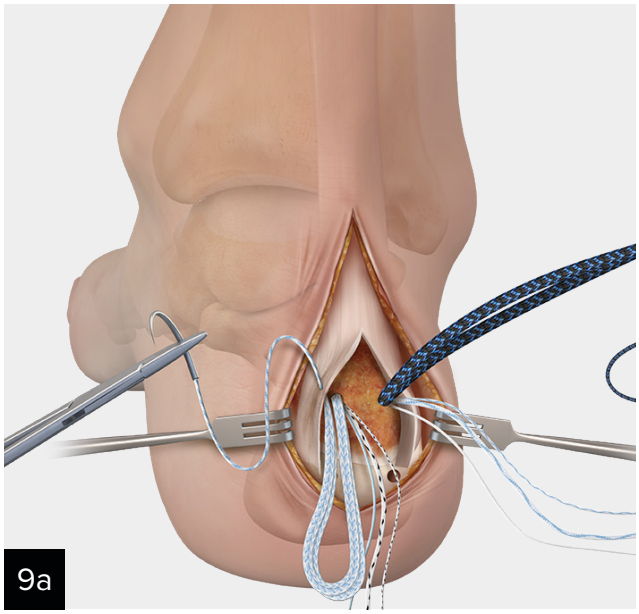


Keeping the position of the guide, drill with the long 2.6 mm drill to the positive stop where it meets the back of the guide. Remove the drill, leaving the guide in place, and insert the 2.6 mm Knotless FiberTak DX anchor. Mallet inserter handle until its large laser line meets the back of the guide.

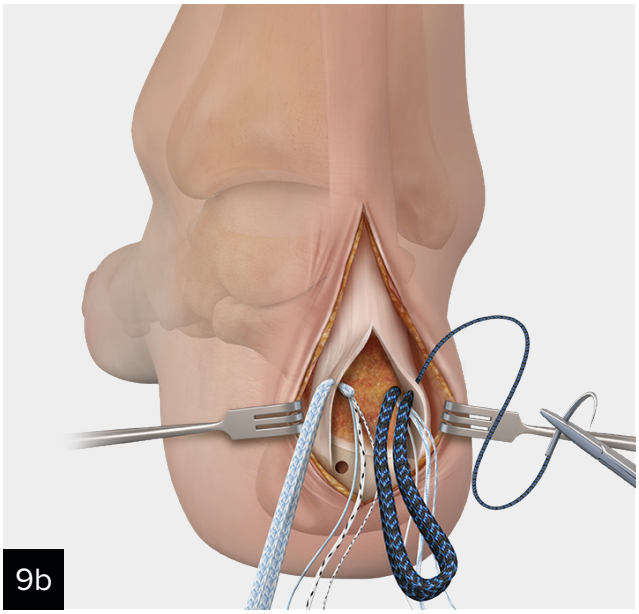
Note: Do not mallet flush to a positive stop on the guide, as this will plunge the guide and anchor too deep and create a hole too large for the anchor.



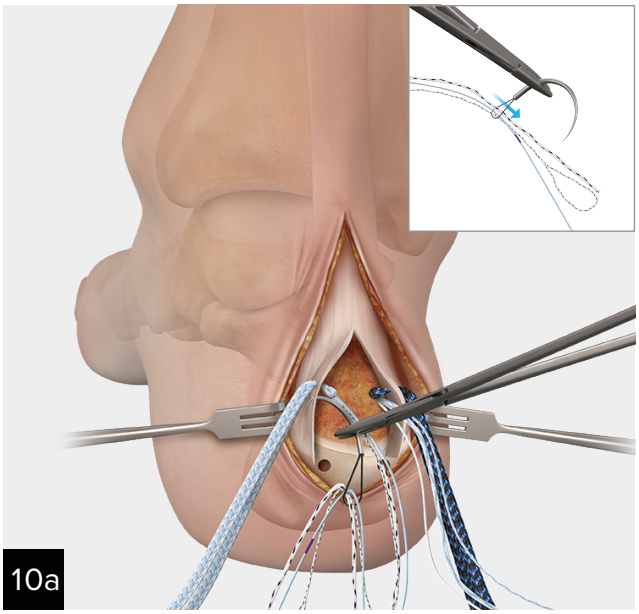
Repeat the steps for the second anchor and drill and insert the second 2.6 mm Knotless FiberTak® DX anchor. **Optional:** You may self-punch this anchor without drilling. Do not use in hard bone. Pull gently on the second anchor's sutures to make sure the anchor is in good bone, but **do not** fully set the anchor.



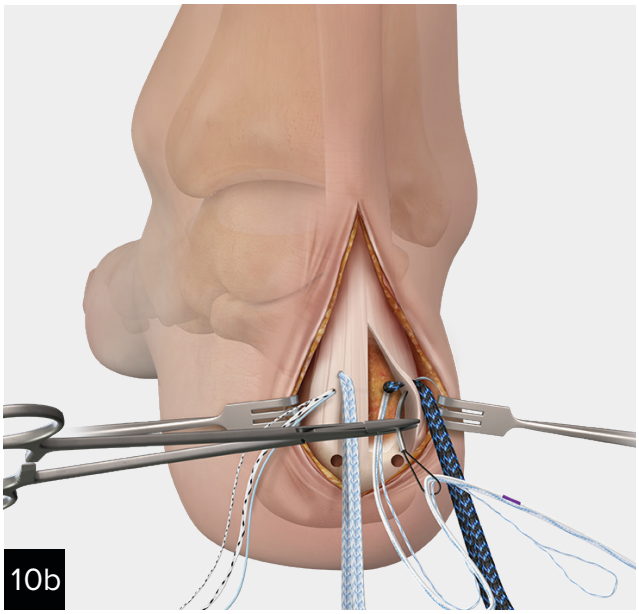
Separate the swedged FiberTape® sutures with needles from the knotless repair sutures. Suture management is key. Pass the **blue** 1.7 mm collagen-coated FiberTape suture with attached needle through the medial tendon split.



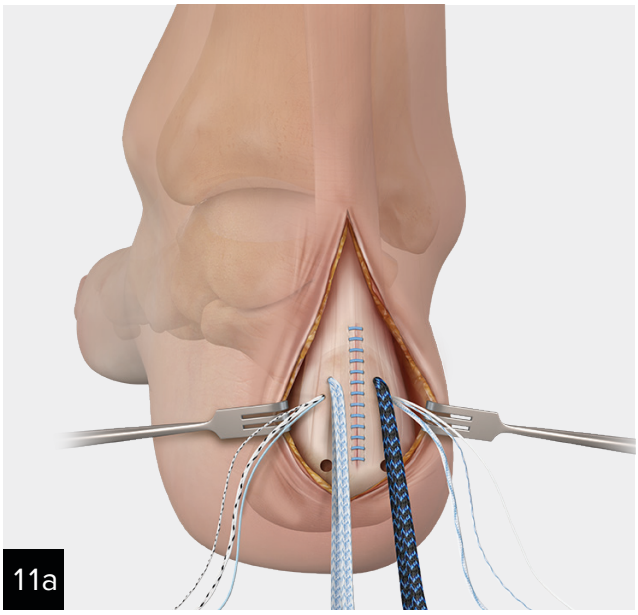
Next, pass the **black/blue** 1.7 mm collagen-coated FiberTape suture with attached needle though the lateral tendon split. Ensure both FiberTape sutures are equally spaced and will approximate tendon back to bone. Once the FiberTape sutures are passed through the tendon, cut the needles off at the swedge, leaving 2 separate ends on each FiberTape suture.



Take the free needle with the nitinol loop and load all 3 knotless sutures from the medial anchor through the nitinol loop and pass through the medial tendon split, just distal and slightly medial to the **blue** FiberTape® sutures.

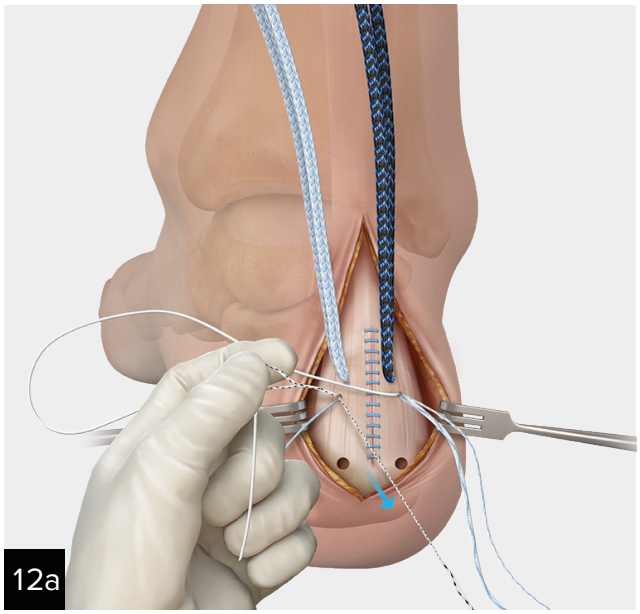


Repeat step 10a on the lateral side, but passing through the lateral tendon split just distal and slightly lateral to the **black/blue** FiberTape suture.

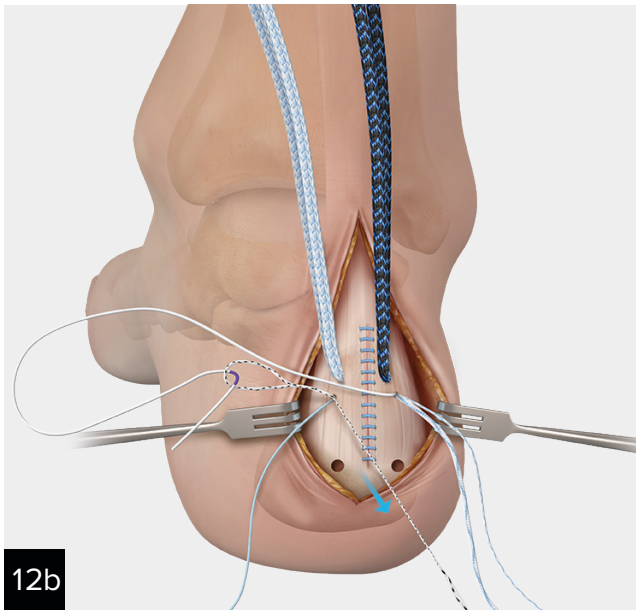


Close the Achilles tendon split.

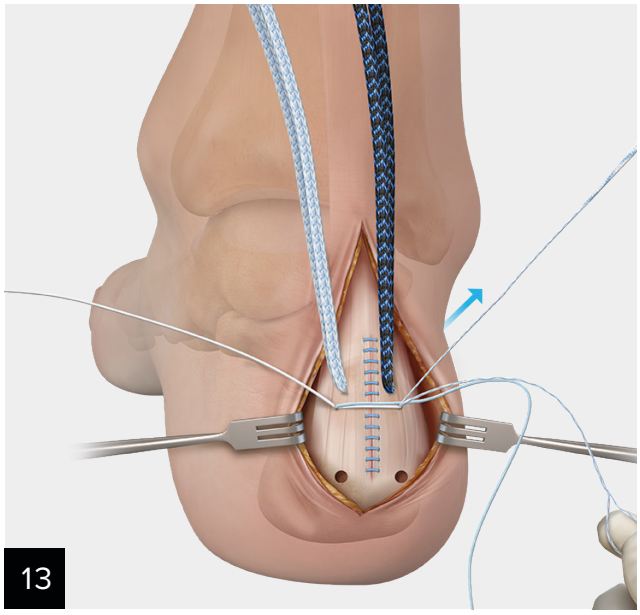
Using the loop end of the **white/black** shuttling suture from the medial anchor, load the **white** knotless suture from the lateral anchor through the looped end and double over at the purple marking on the **white** knotless suture.



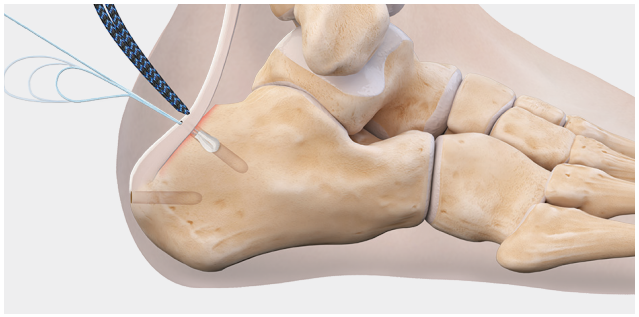
Pinch and hold at the loop and purple marking. With the tape end of the white/black shuttling suture, pull axially in line with the insertion of the anchor until resistance is met and then use short jigs until the working knotless suture is shuttled all the way through the anchor.



To avoid any twisting of remaining suture, ensure the white knotless working suture is cinched with care by holding it as it moves down to tissue. **Do not tension** all the way down before shuttling the contralateral sutures.



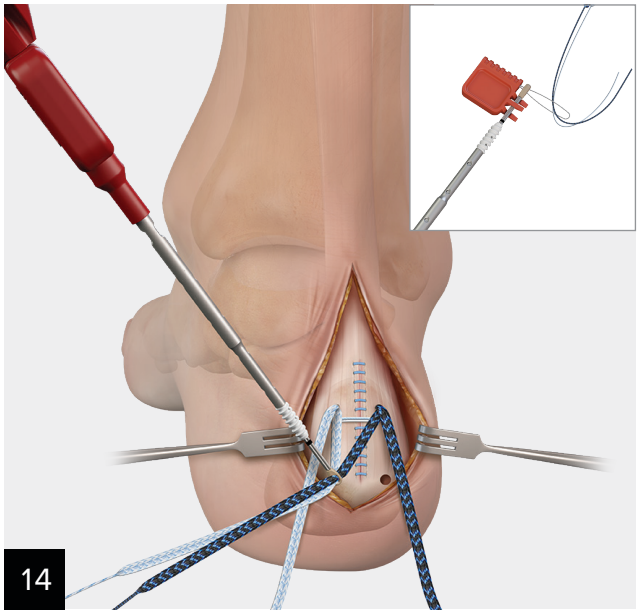
Using the loop end of the white/blue shuttling suture on lateral side, load the blue knotless suture through the looped end and double over at the purple marking on the blue knotless suture. Pinch and hold at the loop and marking.



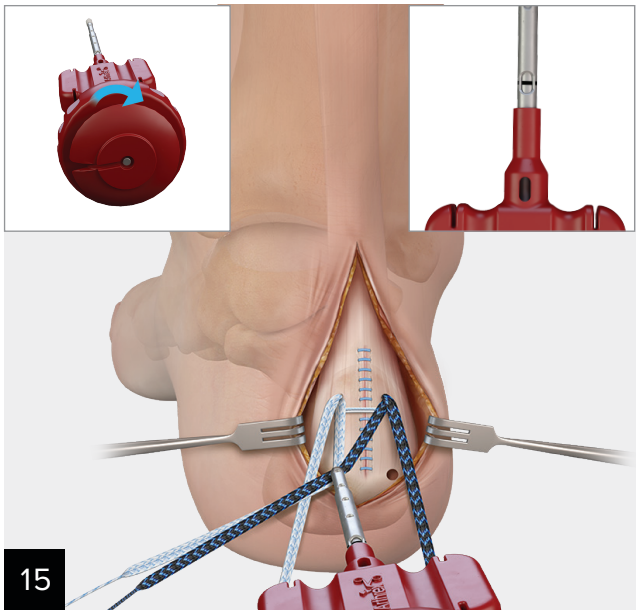
With the tape end of the white/blue shuttling suture, pull axially in line with the insertion of the anchor until resistance is met. Use short jigs until the working knotless suture is shuttled all the way through the anchor.

Ensure that the blue knotless working suture is then cinched with care to avoid any twisting of remaining suture by holding it as it moves down to the tissue.

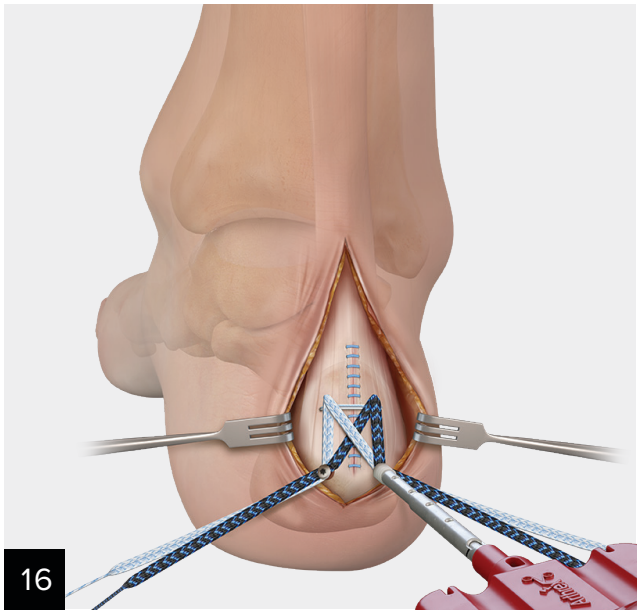
Complete final tensioning of the knotless ripstop and cut the excess suture.



Using the orange tab on the DX 3.9 mm BioComposite SwiveLock® anchor, pull one **black/blue** tail and one **blue** tail of the FiberTape® sutures through the eyelet to load the anchor. Align the anchor in the same trajectory to which the distal holes were drilled and tapped previously, with the eyelet holes facing up and down.

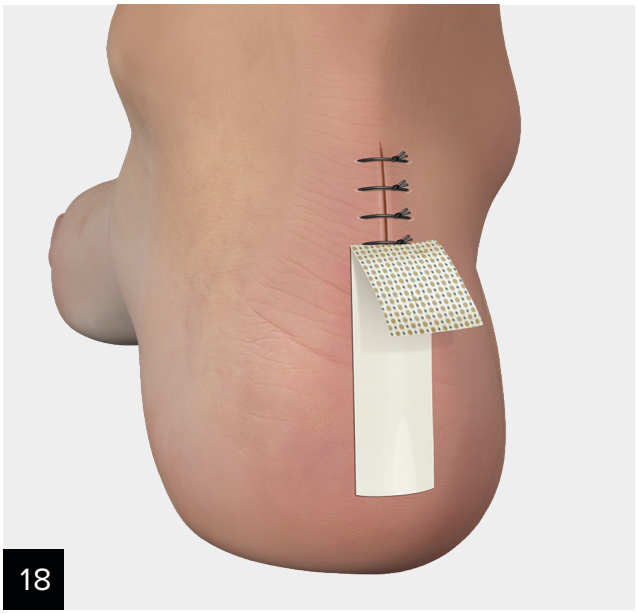


Insert the DX 3.9 mm BioComposite SwiveLock anchor and gently mallet to where the tip of the anchor meets bone. Hold the paddle and twist the handle of the inserter until the laser line on the inserter meets the laser line in the window of the inserter, ensuring the anchor is 2 mm countersunk. Remove the inserter.



Repeat the previous step for the second DX 3.9 mm BioComposite SwiveLock anchor.

Cut the tails on the distal row flush to the SwiveLock anchor and the FiberTak® Achilles SpeedBridge™ repair is complete.



Close the incision. Remove the 2 in × 5 in single-layer JumpStart® wound dressing from the sterile package. If needed, cut the dressing to a size that extends 1 cm to 2 cm beyond the top and bottom of the incision. Apply saline or hydrogel to the dotted side. Place the dressing over the incision, dotted side down, so the dots are in direct contact with the incision. Cover the back side of the JumpStart wound dressing with moistened gauze to maintain a moist environment and keep batteries activated.

Ordering Information

BioComposite Knotless Achilles SpeedBridge™ Repair With JumpStart® Antimicrobial Wound Dressing Implant System

Product Description	Item Number
Knotless DX FiberTak® Anchor, w/ 1.7 mm FiberTape® loop, blue MTS w/ needle, 2.6 mm Knotless FiberTak DX Anchor, w/ 1.7 mm FiberTape loop, black/blue MTS w/ needle, 2.6 mm BioComposite SwiveLock® Suture Anchors, 3.9 mm, qty. 2 Bone Tap Slotted Drill Guide Drill Guide Drill Bit, 2.6 mm (long and short), AO quick connect Free Needle w/ Nitinol Loop JumpStart Single-Layer Dressing, 2 in × 5 in	AR-**9928BCK-DX**

PEEK Achilles SpeedBridge Repair With JumpStart Antimicrobial Wound Dressing Implant System, 3.9 mm

Product Description	Item Number
PEEK SwiveLock Suture Anchor, w/ 1.7 mm FiberTape loop, blue MTS w/ needle, 3.9 mm PEEK SwiveLock Anchor, w/ 1.7 mm FiberTape loop, black/blue MTS w/ needle, 3.9 mm PEEK SwiveLock Suture Anchors, 3.9 mm, qty. 2 Bone Tap Drill Guide Drill, 2.6 mm JumpStart Single Layer Dressing, 2 in × 5 in	AR-**9928P-CP**

BioComposite Achilles SpeedBridge Implant System, 3.9 mm

Product Description	Item Number
BioComposite SwiveLock Suture Anchor, w/ 1.7 mm FiberTape loop, blue MTS w/ needle, 3.9 mm BioComposite SwiveLock Anchor, w/ 1.7 mm FiberTape loop, black/blue MTS w/ needle, 3.9 mm BioComposite SwiveLock Suture Anchors, 3.9 mm, qty. 2 Bone Tap Drill Guide Drill, 2.6 mm	AR-**9928BC-CP**

Achilles SpeedBridge™ Repair Implant System With JumpStart® Antimicrobial Wound Dressing

JumpStart wound dressings are an easy-to-use, conformable, and protective solution for the postoperative management of surgical incisions. This advanced wound dressing uses Advanced MicroCurrent Technology® to provide sustained, broad-spectrum antimicrobial efficacy, including protection against antibiotic- and biofilm-resistant pathogens.[4]

Embedded islands of elemental silver and zinc create microcell batteries designed to generate electrical currents. These microcurrents stimulate cell migration and re-epithelialization, which are essential for wound healing.[5]

Advanced MicroCurrent Technology is a trademark of Vomaris Wound Care, Inc.

Included in Implant System

Product Description	Item Number
JumpStart Single-Layer Dressing, 2 in × 5 in	ABS-**4025**

References

1. Arthrex, Inc. Data on file (APT-01462, APT-00924, APT-01140). Naples, FL; 2007-2019.
2. Arthrex, Inc. Data on file (APT-05964). Naples, FL; 2023.
3. Arthrex, Inc. Data on file (APT-06030). Naples, FL; 2023.
4. Park SS, Kim H, Makin IR, Skiba JB, Izadjoo MJ. Measurement of microelectric potentials in a bioelectrically-active wound care device in the presence of bacteria. *J Wound Care*. 2015;24(1):23-33. doi:10.12968/jowc.2015.24.1.23
5. Banerjee J, Das Ghatak P, Roy S, et al. Improvement of human keratinocyte migration by a redox active bioelectric dressing. *PLoS One*. 2014;9(3):e89239. doi:10.1371/journal.pone.0089239

Arthrex®

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 and/or outcomes.

Arthrex manufacturer, authorized representative, and importer information (Arthrex eIFUs)

US patent information

arthrex.com