SpeedBridge™ Knotless Rotator Cuff Repair
Surgical Technique
Rotator cuff repair with the SpeedBridge double-row, transosseous-equivalent technique, using fully threaded SwiveLock® anchors combined with FiberTape® suture, creates a quick and secure knotless construct with only 2 suture-passing steps.

Trusted by physicians since 2008, the success of this technique has been proven in multiple publications and has shown significant improvements in patient-reported outcomes that were durable at a minimum of 5 and 10 years postoperatively.1,2

Advantages of SpeedBridge Repair vs #2 Suture Knot-Tying Repairs

- Knotless, low-profile repair construct without risk of knot impingement
- Less likely to result in full-thickness rotator cuff retears3
- Increased repair construct strength (482 N)4
- More consistent and reproducible RC repair constructs5
- 200% more footprint compression and 30% higher tissue pull-through resistance with FiberTape suture6
- Procedural time savings of 28% compared to knot-tying repairs7

SpeedBridge repairs with SwiveLock anchors are adaptable and can conform to traditional rotator cuff repair techniques with the additional benefits of tensionable knotless suture fixation.

*ArthroFLEX is a registered trademark of LifeNet Health.
SwiveLock® Suture Anchors
The Most Trusted Knotless Anchor System for Tendon and Ligament Repair

- More than 8 million SwiveLock anchors implanted worldwide since 2006
- Used in more than 20 different procedures
- Biomechanical, clinical, and cost-effectiveness studies are available in a number of peer-reviewed publications

Features

- BioComposite, PEEK, and titanium options
- Sizes range from 3.9 mm through 6.25 mm for rotator cuff repair
- Cannulated and vented
- Standard, self-punching, and tensionable knotless versions

SwiveLock anchor diameter options (shown in actual size)

Cross section of a vented BioComposite SwiveLock anchor 8 weeks postimplantation in a canine model, showing bony ingrowth in the vents and center cannulation

Optional Fixation

Controlled tendon reduction under direct visualization using Tensionable Knotless SwiveLock Suture Anchors

Interconnected Anchors for Double-Pulley Knotless Fixation

#2 Eyelet Suture for Simple or Mattress Stitch Knotless Fixation
SpeedBridge™ Technique: Medial Row
Prepare a bone socket using a punch. Insert the SwiveLock® anchor, which is preloaded with FiberTape® suture, into the prepared medial bone socket until the anchor body makes contact with bone.

Hold the thumb pad steady and rotate the driver handle clockwise until the anchor body is flush with the bone. Unwind the FiberTape suture from the thumbpad. Remove the rubber tab from the driver handle and unwind the sutures. Remove the driver.

Load the single #2 suture end of the FiberTape suture onto a Scorpion™ suture passer and pass it through the rotator cuff. Pull the #2 suture to smoothly lead both FiberTape suture limbs through the tissue.

Cut off the spliced #2 suture tail, allowing each FiberTape suture limb to be separated for lateral fixation. Tension each FiberTape suture limb independently to remove any potential slack from under the tendon.
SpeedBridge™ Technique:
Lateral Row Fixation
Retrieve one FiberTape® suture tail from each medial anchor and preload them through the SwiveLock® anchor eyelet. Using a punch, prepare a bone socket about 5 mm to 10 mm lateral to the edge of the tuberosity.

Bring the eyelet of the implant to the edge of the bone socket and remove slack from each of the FiberTape suture limbs individually. Apply tension to the FiberTape sutures so that the tissue is reduced and compressed to the bone.

Completely advance the driver into the bone socket, beyond the first laser line, until the anchor body contacts bone. Evaluate suture tension. If tension is not adequate, back the driver out and readjust the tension.

Make sure the tip of the anchor body is in contact with bone. Hold the thumb pad steady and rotate the driver handle clockwise to insert the anchor body until it is flush with the bone.

Cut the FiberTape suture tails with a FiberTape cutter. Repeat these steps for the second lateral anchor.

Note: Do not attempt to apply tension to the sutures with the eyelet in the bone socket.
SpeedBridge™ Technique: Knotless Double-Pulley
SpeedBridge™ Technique: Knotless Double-Pulley

Tendon reduction under direct visualization and tensionable knotless medial fixation can be achieved with the Knotless Double-Pulley. The tensionable knotless sutures are shuttled through the cuff separately from the FiberTape sutures to help prevent twists in the construct on the underside of the rotator cuff.

Insert the Knotless SwiveLock® anchor into the medial row and pass the FiberTape® suture. Load the single end of a FiberLink™ suture onto a Scorpion™ suture passer and pass inside the FiberTape sutures.

Retrieve the single end of the FiberLink suture from a superior portal to improve the shuttling angle through the tissue. Retrieve the Knotless SwiveLock sutures and load them into the loop of the FiberLink suture. Pull the FiberLink suture to shuttle and pass the sutures through the tissue. Repeat for the other medial row anchor.

Knotless SwiveLock Suture Layout

(a) Blue Repair Stitch
(b) White/Black Shuttle Stitch
   • Flat SutureTape (pull end)
   • Round Suture loop (loading end)
(c) Two White/Black TigerTape sutures spliced into one #2 TigerWire® suture
(d) White/Black Repair Stitch
(e) White/Blue Shuttle Stitch
   • Flat SutureTape (pull end)
   • Round Suture loop (loading end)
(f) Two Blue/White FiberTape sutures spliced into one #2 FiberWire® suture
Retrieve the posterior blue repair suture (a) and the anterior looped end of the white/blue shuttle suture (e) from the lateral cannula. Feed the end of the repair suture through the loop of the shuttle suture and fold at the ink-mark indicator. Pull the tape suture tail of the white/blue shuttle suture (e) to shuttle the repair suture into the knotless mechanism.

**Note:** Pull the repair suture, but do not tighten it completely until the second repair suture is shuttled.

Repeat the previous steps using the anterior white/black repair suture and the posterior looped end of the white/black shuttle suture.
Tension the two repair sutures, reducing and fixating the tendon to the bone. Tension the FiberTape® suture limbs independently to remove any potential slack from under the tendon. Cut the repair sutures flush once adequate fixation is achieved. Refer back to Lateral Row Fixation to complete repair.
SpeedBridge™ Technique:
Dog-Ear Fixation
Retrieve the knotless sutures from the lateral cannula. Load the blue repair suture onto a Scorpion™ suture passer and pass through tissue.

Tension the repair suture, reducing and fixating the tendon to the bone. Cut the repair suture flush once adequate fixation is achieved.

**Double-Pulley With Dog-Ear Fixation**

**NOTE:** If using Knotless SwiveLock anchors and additional lateral fixation is not required, pull one end of the shuttle stitch to remove the FiberTape® sutures and cut the repair stitch using a FiberTape suture cutter.
This closed-eyelet, twist-in knotless anchor can be used as the lateral row of the SutureBridge™ repair. Additionally, it can be combined with FiberTape® suture for SpeedFix™ and SpeedBridge™ repairs.

<table>
<thead>
<tr>
<th><strong>BioComposite</strong></th>
<th><strong>Item Number</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Knotless, 4.75 mm x 19.1 mm, w/ white/black TigerTape Loop and blue #2 suture</td>
<td>AR-2324KBCTT</td>
</tr>
<tr>
<td>Knotless, 4.75 mm x 19.1 mm, w/ white/black TigerTape Loop and blue #2 suture</td>
<td>AR-2324KBCC</td>
</tr>
<tr>
<td>Knotless, 5.5 mm x 19.1 mm, w/ blue #2 suture</td>
<td>AR-2323KBCCC</td>
</tr>
<tr>
<td>3.9 mm x 17.9 mm</td>
<td>AR-2326BCC</td>
</tr>
<tr>
<td>4.75 mm x 19.1 mm</td>
<td>AR-2324BCC</td>
</tr>
<tr>
<td>4.75 mm x 22 mm, w/ two #2 TigerWire CL suture (1 white/blue, 1 white/black)</td>
<td>AR-2324BCC-2</td>
</tr>
<tr>
<td>4.75 mm x 22 mm, w/ two #2 TigerTail® sutures (1 white/black, 1 blue/black)</td>
<td>AR-2324BCCT-2</td>
</tr>
<tr>
<td>4.75 mm x 19.1 mm, w/ blue FiberTape Loop</td>
<td>AR-2324BCCT</td>
</tr>
<tr>
<td>4.75 mm x 19.1 mm, w/ white/black TigerTape Loop</td>
<td>AR-2324BCCTT</td>
</tr>
<tr>
<td>5.5 mm x 22 mm, w/ two #2 TigerTail sutures (1 white/black, 1 blue/black)</td>
<td>AR-2323BCT-2</td>
</tr>
<tr>
<td>5.5 mm x 19.1 mm</td>
<td>AR-2323BCC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>PEEK</strong></th>
<th><strong>Item Number</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Knotless, 4.75 mm x 19.1 mm, w/ blue FiberTape Loop and white/black #2 suture</td>
<td>AR-2324KPCCT</td>
</tr>
<tr>
<td>Knotless, 4.75 mm x 19.1 mm, w/ white/black TigerTape Loop and blue #2 suture</td>
<td>AR-2324KPCTT</td>
</tr>
<tr>
<td>Knotless, 4.75 mm x 19.1 mm, w/ blue #2 suture</td>
<td>AR-2324KPSLC</td>
</tr>
<tr>
<td>Knotless, 5.5 mm x 19.1 mm, w/ blue #2 suture</td>
<td>AR-2323KPSLC</td>
</tr>
<tr>
<td>3.9 mm x 17.9 mm</td>
<td>AR-2326PSLC</td>
</tr>
<tr>
<td>4.75 mm x 19.1 mm</td>
<td>AR-2324PSLC</td>
</tr>
<tr>
<td>4.75 mm x 19.1 mm, w/ two #2 TigerTail sutures (1 white/black, 1 blue/black)</td>
<td>AR-2324PSLC-2</td>
</tr>
<tr>
<td>4.75 mm x 19.1 mm, w/ blue FiberTape Loop</td>
<td>AR-2324PCT</td>
</tr>
<tr>
<td>4.75 mm x 19.1 mm, w/ white/black TigerTape Loop</td>
<td>AR-2324PCTT</td>
</tr>
<tr>
<td>5.5 mm x 22 mm, w/ two #2 TigerTail sutures (1 white/black, 1 blue/black)</td>
<td>AR-2323PSC-2</td>
</tr>
<tr>
<td>5.5 mm x 19.1 mm</td>
<td>AR-2323PSC</td>
</tr>
</tbody>
</table>
Eliminate the need for pre-punching a bone socket with the SwiveLock SP (self-punching) anchor, which combines a titanium tip with a BioComposite, PEEK, or titanium anchor body. This self-punching design can help save valuable OR time, while still easing the precision of the final construct. Combine the SwiveLock SP anchor with FiberTape suture to complete a SpeedFix or SpeedBridge knotless rotator cuff repair.

<table>
<thead>
<tr>
<th>BioComposite Item Number</th>
<th>PEEK Item Number</th>
<th>Titanium Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.75 mm × 24.5 mm (a) AR-2324BCM</td>
<td>4.75 mm × 24.5 mm (a) AR-2324PSLM</td>
<td>4.75 mm × 19.1 mm (c) AR-2324SLM</td>
</tr>
<tr>
<td>5.5 mm × 24.5 mm (a) AR-2323BCM</td>
<td>5.5 mm × 24.5 mm (a) AR-2323PSLM</td>
<td>5.5 mm × 19.1 mm (c) AR-2323SLM</td>
</tr>
</tbody>
</table>

**Recommended FiberTape Suture Options for SwiveLock C and SP Anchors**

- 36 in (blue) tape, w/ each end tapered to #2 FiberWire suture, 54 in AR-7237
- 7 in (blue) tape, w/ each end tapered to #2 FiberWire suture, collagen coated AR-7237-7B
- 7 in (white/black) tape, w/ each end tapered to #2 TigerWire suture, 30 in AR-7237-7T
- 17 in (blue) tape, w/ each end tapered to #2 FiberWire suture, tapered needle, 26.5 mm, ½ circle AR-7237-17N

**FiberTape Suture Instruments Item Number**

- Mini FiberTape Suture Retriever w/ Self-Release Handle (SR) AR-12974SR
- Mini FiberTape Suture Retriever w/ Non-Ratcheting Handle AR-12974NR
- Mini FiberTape Suture Retriever w/ Wish-Bone Handle AR-13974W
- FiberTape Suture Retriever w/ SR Handle AR-13971SR
- FiberTape Suture Retriever w/ NR Handle AR-13971NR
- FiberTape Suture Retriever w/ Wish-Bone Handle AR-13971W

- Penetrator FiberTape Suture Retriever, 15˚ up curved AR-2167-3
- Penetrator FiberTape Suture Retriever, straight AR-2167ST-3
- Penetrator FiberTape Suture Retriever w/ Wishbone Handle, 15˚ up curved AR-2167W-3
- Penetrator FiberTape Suture Retriever w/ Wishbone Handle, straight AR-2167STW-3
- FiberTape Suture Cutter AR-13250
- FiberTape Suture Cutter w/ WishBone Handle AR-13250W
Implant Systems | Item Number
---|---
Knotless, BioComposite SwiveLock C Implant System w/ SCORPION-multifire Needle | AR-2600SBS-10
Two Knotless 4.75 mm SwiveLock anchors w/ 1 preloaded FiberTape® Loop (1 blue, 1 white/black) for medial row
Two Knotless 4.75 mm SwiveLock anchors w/ 1 #2 Suture (1 blue, 1 white/black) for lateral row
Disposable Punch
SCORPION-multifire Needle
Knotless, BioComposite SwiveLock C Implant System w/ SCORPION-multifire Needle | AR-2600SBS-11
Two Knotless 4.75 mm SwiveLock anchors w/ 1 preloaded FiberTape® Loop (1 blue, 1 white/black) for medial row
Two Knotless 5.5 mm SwiveLock anchors w/ 1 #2 Suture (1 blue, 1 white/black) for lateral row
Disposable Punch
SCORPION-multifire Needle
BioComposite SwiveLock® C Implant System w/ SCORPION-multifire Needle | AR-2600SBS-8
Two 4.75 mm SwiveLock C anchors w/ 1 preloaded FiberTape® Loop (1 blue, 1 white/black) for medial row
Two 4.75 mm SwiveLock C anchors for lateral row
Disposable punch
SCORPION-multifire needle
BioComposite SwiveLock C Implant System w/ SCORPION-multifire Needle (a) | AR-2600SBS-9
Two 4.75 mm SwiveLock C anchors w/ 1 preloaded FiberTape® Loop (1 blue, 1 white/black) for medial row
Two 5.5 mm SwiveLock C anchors for lateral row
Disposable punch
SCORPION-multifire needle
BioComposite SwiveLock C Implant System | AR-2600SBS-4
Two 4.75 mm SwiveLock C anchors w/ 1 preloaded FiberTape Loop (1 blue, 1 white/black) for medial row
Two 4.75 mm SwiveLock C anchors for lateral row
Disposable punch
BioComposite SwiveLock SP Implant System | AR-2600SBS-5
Two 4.75 mm SwiveLock C anchors w/ 1 preloaded FiberTape Loop (1 blue, 1 white/black) for medial row
Two 5.5 mm SwiveLock SP anchors for lateral row
Disposable punch
PEEK SwiveLock C Implant System | AR-2600SBS-6
Two 4.75 mm SwiveLock C anchors w/ 1 preloaded FiberTape Loop (1 blue, 1 white/black) for medial row
Two 4.75 mm SwiveLock C anchors for lateral row
Disposable punch
PEEK SwiveLock SP Implant System | AR-2600SBS-7
Two 4.75 mm SwiveLock C anchors w/ 1 preloaded FiberTape Loop (1 blue, 1 white/black) for medial row
Two 5.5 mm SwiveLock SP anchors for lateral row
Disposable punch

SpeedBridge™ Implant Systems

SpeedBridge implant systems facilitate a more convenient and efficient SpeedBridge repair. Implant systems are packaged in a single “peel-pack” blister and contain all SwiveLock implants and sutures required to perform a typical 4-anchor SpeedBridge repair. These systems are also available with the self-punching (SP) eyelet option.
References


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.

View U.S. patent information at www.arthrex.com/corporate/virtual-patent-marking
© 2021 Arthrex, Inc. All rights reserved. | www.arthrex.com | LT1-000170-en-US_B