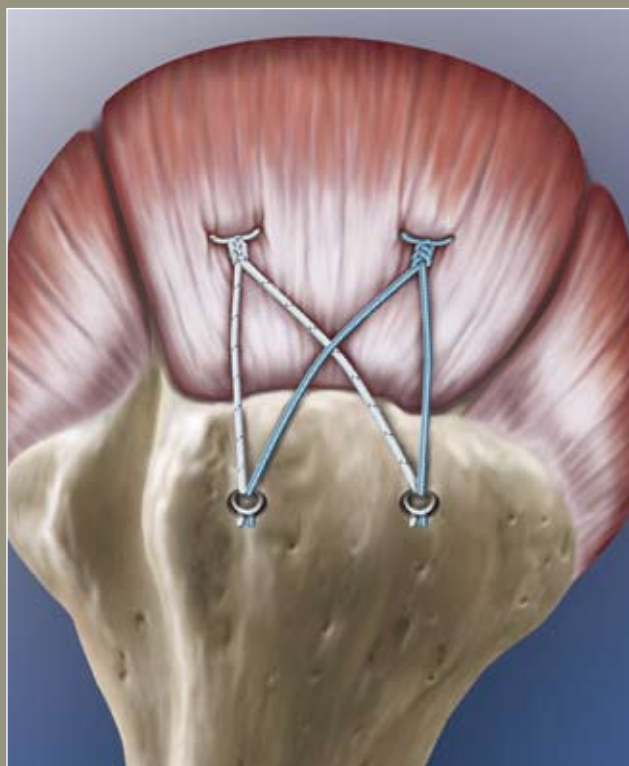




SutureBridge™ Double Row Rotator Cuff Repair
using the Bio-PushLock™ and Bio-Corkscrew® FT

Surgical Technique



SutureBridge Rotator Cuff Repair

SutureBridge Double Row Rotator Cuff Repair using the Bio-PushLock and Bio-Corkscrew FT



Assess the size and mobility of the tear using a KingFisher™ Suture Retriever/Tissue Grasper to determine whether a U or L-shaped component exists. In the case of large tears extending to the superior aspect of the glenoid, margin convergence suturing is performed to reduce the tear volume and strain on the repair.

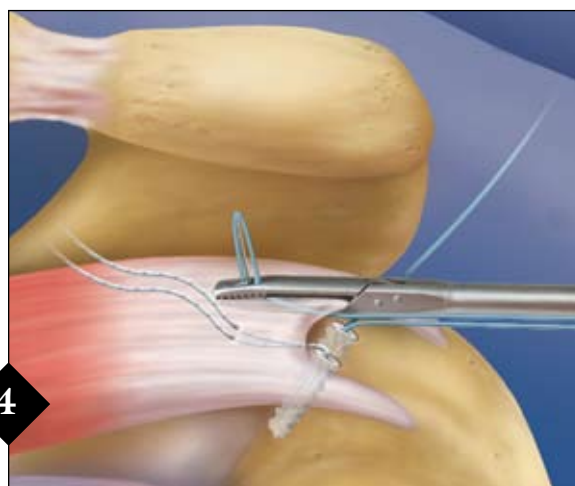
Create a bleeding bed for enhanced tendon to bone healing. This may be accomplished with a motorized burr to perform a light dusting of the greater tuberosity or by using a Chondro Pick to microfracture the footprint and maximize vascular channels. Avoid complete decortication of the bone, to maximize suture anchor fixation.



Prepare pilot holes for the two Bio-Corkscrew FT anchors in the medial row. Use a Bio-Corkscrew FT Punch, at a 45° “deadman” angle, adjacent to the articular margin of the humerus. Advance the punch to the laser line. Tapping is typically not required.

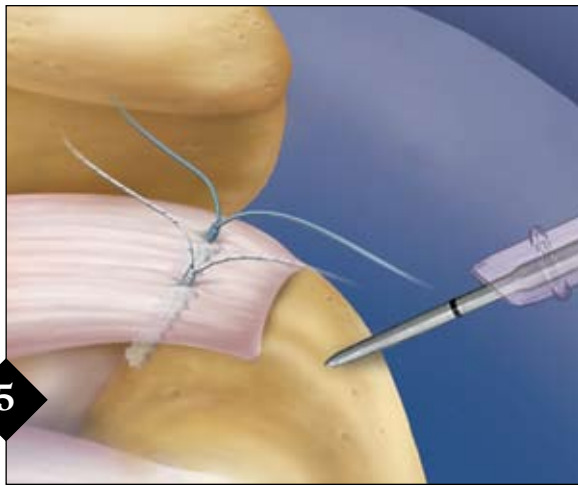


Place both Bio-Corkscrew FT anchors. These anchors will assure full contact of the detached tendon along the medial footprint of the greater tuberosity.



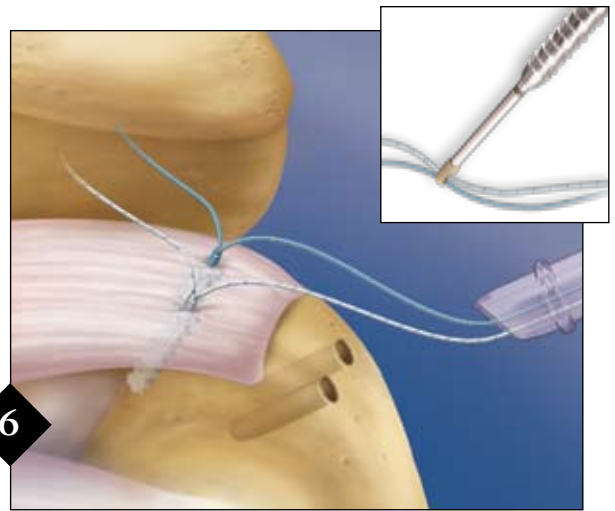
Remove one strand of suture from each anchor (preferably opposite colors). Using a KingFisher, retrieve one of the four remaining sutures through the lateral (or anterolateral) cannula and pass it through the tendon using the Scorpion™ Suture Passer.

Repeat for the three remaining sutures to create a horizontal mattress configuration. Maintain a soft tissue bridge of one to two centimeters between the mattress stitches.

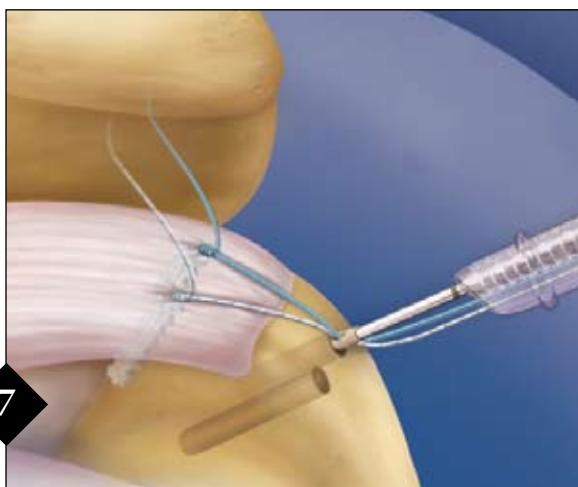


Tie the medial row but do not cut the FiberWire® tails. These tails will be draped over the lateral aspect of the tendon and held in place with two knotless PushLock anchors.

Prepare pilot holes for the Bio-PushLock directly in line with the medial anchors and approximately 5-10 mm distal to the lateral edge of the greater tuberosity. It may be necessary to increase abduction or to rotate the arm for optimal PushLock placement.

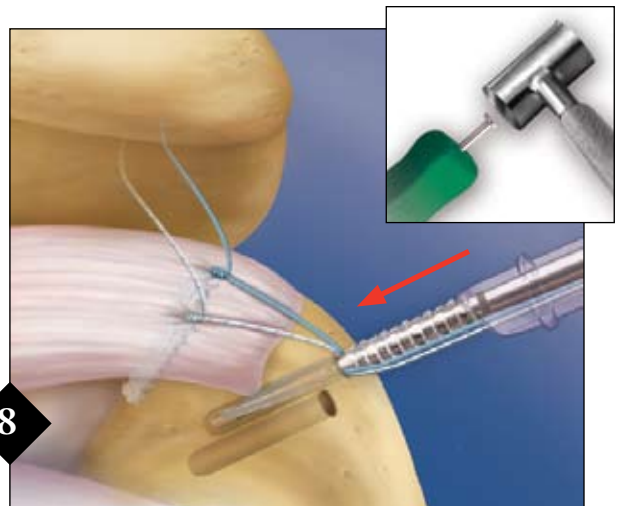


Retrieve one FiberWire strand from each Bio-Corkscrew FT through the lateral (or anterolateral) Crystal Cannula®. Thread both FiberWire strands through the Bio-PushLock eyelet on the distal end of the driver.



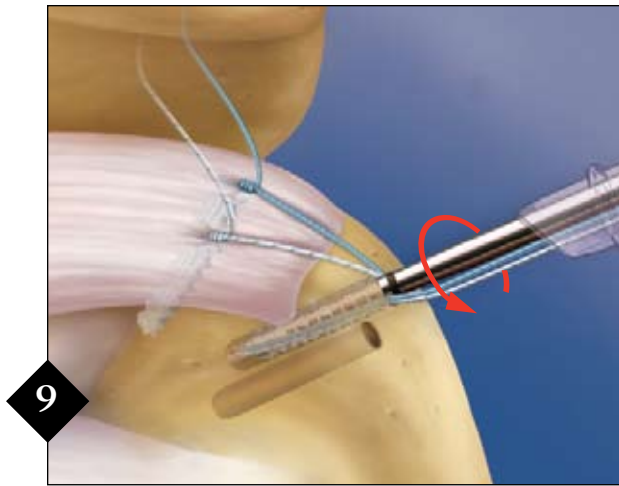
Bring the distal tip of the Bio-PushLock to the edge of the pilot hole while holding onto the suture tails. This will reduce the tendon to its desired position on the footprint.

Note: The knot stack from the medial anchors is tensioned flat against the tendon, minimizing potential impingement issues from the suture.



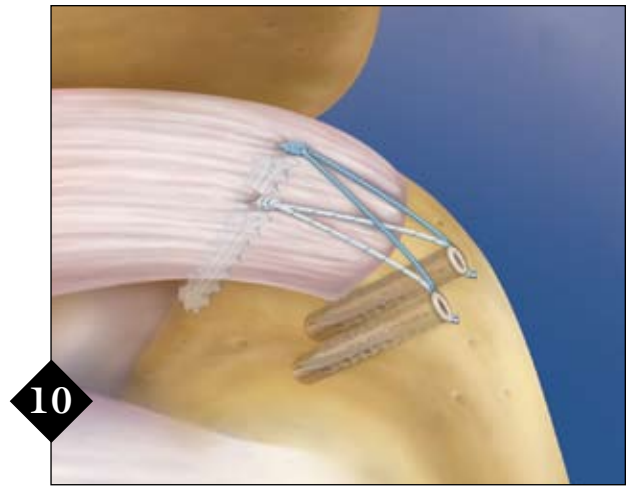
Completely advance the driver into the pilot hole beyond the first laser line, until the anchor body contacts bone. Evaluate tissue tension. If it is determined that the tension is not adequate, the driver can be backed out and tension readjusted. Alternatively, additional tension may be applied, while leaving the driver in place, by pulling on each suture strand independently.

Use a mallet to tap the anchor body into the pilot hole until the second laser line is flush with the humerus.



Turn the driver counterclockwise six full turns to disengage the eyelet from the driver shaft.

Cut the sutures flush using an open ended FiberWire Suture Cutter.



Repeat steps 6-9 for the second Bio-PushLock.

Surgical Pearl

An option for large tears is to retain all of the Bio-Corkscrew FT sutures (instead of removing one from each anchor). These additional sutures can be passed through the tendon and tied to obtain additional medial fixation. The extra suture tails are then either cut or fixed laterally with the PushLock anchors. Each PushLock eyelet can support as many as four suture tails.

Ordering Information

Implants/Disposables:

Bio-Corkscrew FT, 5.5 mm x 15 mm, w/two #2 FiberWire	AR-1927BF
Bio-PushLock, 4.5 mm x 18.5 mm	AR-1922B
Scorpion Needle	AR-13990N
Crystal Cannula, 5.75 mm I.D. x 7 cm	AR-6560

Accessory Instruments:

Bio-Corkscrew FT Punch, reusable	AR-1927PB
Bio-Corkscrew FT Punch, disposable	AR-1927PBS
Punch/Tap for Bio-Corkscrew FT, reusable	AR-1927CTB
Punch for 4.5 mm PushLock	AR-1922P
Scorpion Suture Passer, 16 mm	AR-13990
KingFisher Suture Retriever/Tissue Grasper	AR-13970SR
Suture Cutter, open ended	AR-11794L

Other implant sizes and materials are available.

Please contact your Arthrex Sales Representative for more information.

SutureBridge

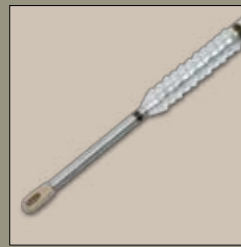
A transosseous equivalent SutureBridge that enhances footprint compression and promotes tendon healing to bone can be achieved with minimal knot tying. The repair consists of a tied medial row constructed with two Bio-Corkscrew FT anchors, combined with knotless lateral fixation using two Bio-PushLocks.

The result is a quick, secure and low profile repair with maximized contact between tendon and bone. The construct provides stability in rotation and protects a broad healing zone from synovial fluid infiltration.

Developed in conjunction with Neal ElAttrache, M.D., and James Tibone, M.D., at Kerlan-Jobe Orthopaedic Clinic, Los Angeles, California.



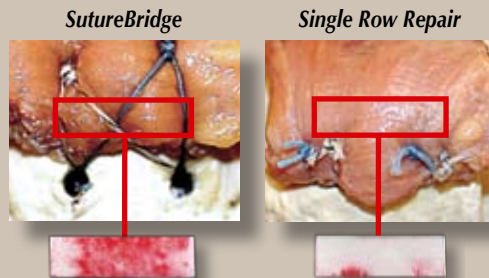
Bio-Corkscrew FT



Bio-PushLock

...the Science Behind the Technology

Pressure sensitive Fuji film studies show greater tendon compression for the SutureBridge vs. a standard single row repair.



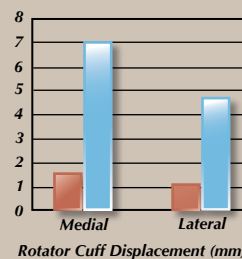
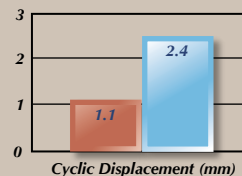
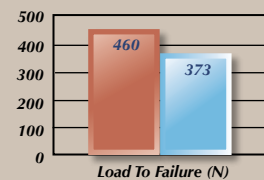
A matched-pair cadaveric study compared the SutureBridge to a standard single row repair using two Bio-Corkscrew FT anchors and four simple stitches.

The SutureBridge averaged a **23% higher load to failure** and a **54% reduction in gap formation** under cyclic loading.

■ SutureBridge
■ Single Row

Two reference points were marked on the rotator cuffs (medial and lateral) and the specimens were subjected to a total of 120° of internal and external rotation. Displacement of the points was measured.

The average displacement was 76% less with the SutureBridge.



Data on file.



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