

Distal Biceps Repair

Using the BicepsButton™ and Tension-Slide Technique
Surgical Technique



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Background

Distal biceps tendon repair using the BicepsButton and tension-slide technique allows the surgeon to tension and repair the biceps tendon through a single anterior incision. The combination of the cortical button fixation coupled with an interference screw creates a strong, anatomic repair.



Distal biceps repair implant system

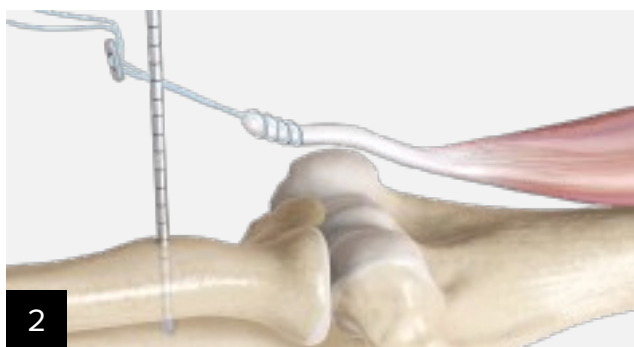
Surgical Technique

Place the patient in a supine position on the operating room table under a general anesthesia with a tourniquet applied but not regularly inflated. Make a 4 cm transverse incision approximately 3 cm distal to the elbow flexion crease. Identify the lateral antebrachial cutaneous nerve and retract it laterally. Identify the retracted distal end of the biceps tendon and deliver it through the incision. Debride the end of the tendon to remove any degenerative or diseased tissue. The tendon should pass through a 7 mm sizing block to ensure that it will fit through an 8 mm bone tunnel.

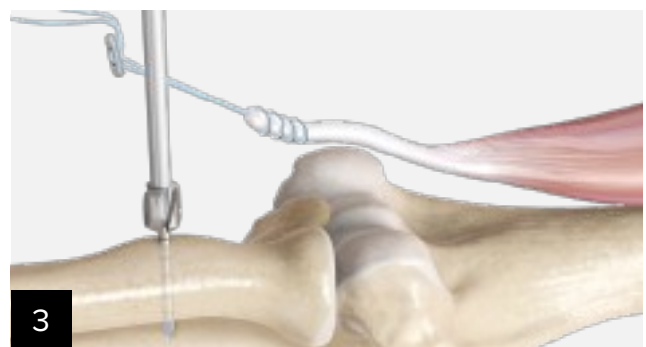
Whipstitch 2.5 cm of the distal end of the biceps tendon using a FiberLoop, making sure to lock the sutures by making the final pass proximal to the previous pass. Cut the FiberLoop near the needle, ensuring adequate length suture limbs. Mark a line on the tendon 1 cm from the end to help visualize the tendon docking into the radial tuberosity.



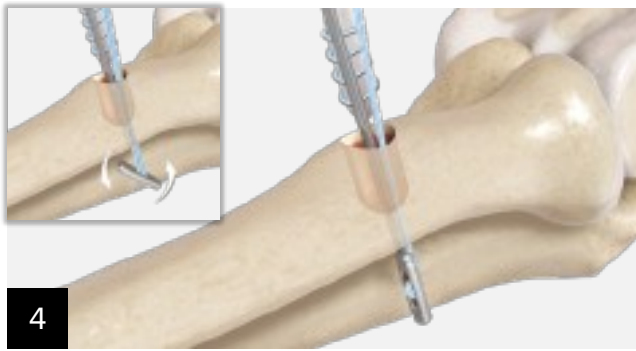
Thread one limb of suture through one side of the BicepsButton and back through the opposite side. Thread the other suture limb through the button in the same manner, starting on the opposite side from the first suture limb. Make certain that the suture limbs are not tangled. Pull on each suture limb simultaneously to ensure that the button slides freely on the sutures.



With the elbow in full extension and full supination, expose the radial tuberosity and debride it of any remaining soft tissue. Drill a 3.2 mm bi-cortical tunnel through the radial tuberosity, aiming 30° ulnar to maximize the distance from the posterior interosseous nerve (PIN). Use fluoroscopy to confirm drill placement in the radial tuberosity.



Drill an 8 mm uni-cortical tunnel over the 3.2 mm guide pin and remove both the pin and reamer. Copiously irrigate the wound to remove bone dust and fragments.



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Hold tension on all 4 suture limbs and insert the tip of the button inserter into the end of the BicepsButton. Maintain tension on the sutures and insert the BicepsButton through both cortices of the radial tuberosity. Flexing the forearm 20° to 30° can aid in button and tendon insertion. Use fluoroscopy to verify that the button is deployed through both cortices. Pull the lever back on the button inserter to release the button.



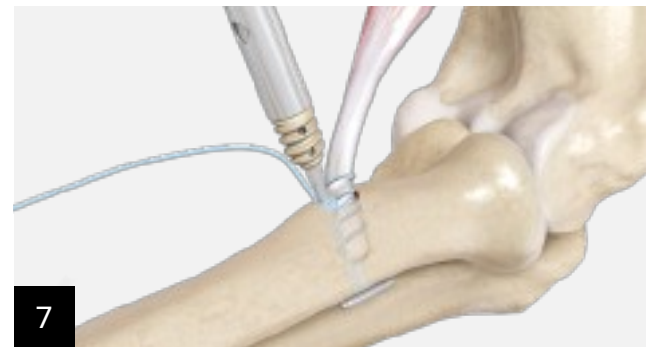
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Pull on the free suture limbs to seat the button against the radius. Use fluoroscopy to confirm button deployment. Grasp each limb of suture and slowly apply tension to dock the tendon into the bone tunnel. The previously marked line may also aid in visual confirmation that the tendon is fully docked into the bone tunnel.



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Once the tendon is fully seated, use a free needle and pass one limb through the tendon and tie a knot, using a knot pusher if necessary.



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Load the 7 mm × 10 mm PEEK tenodesis screw onto the tenodesis driver and load one suture limb through the driver. Insert the screw on the radial side of the bone tunnel, pushing the tendon more ulnar. The screw should seat flush with the anterior cortex.



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Tie the suture limbs over the screw to complete the repair.

Post-Op Protocol

Place the patient in a soft dressing and allow active supination and pronation of the forearm. Active flexion and extension as tolerated is permitted, but patients should lift nothing heavier than a coffee cup for the first 2 weeks.

Ordering Information

Product Description	Item Number
Implants	
BioComposite Distal Biceps Implant System (Includes: BicepsButton Implant, Button Inserter, #2 FiberLoop Suture, 7 mm × 10 mm BioComposite Tenodesis Screw, Disposable Tenodesis Driver, 3.2 mm Drill Pin, Suture Passing Wire, and Free Needle)	AR-2260BC
Distal Biceps Repair Implant System (includes BicepsButton™, button inserter, FiberLoop®, 7 mm × 10 mm PEEK tenodesis screw and BicepsButton™ drill pin)	AR-2260
BicepsButton™, 12 mm	AR-2261
# 2 FiberLoop® with straight needle	AR-7234
PEEK tenodesis screw, 7 mm × 10 mm	AR-1670PS
Required Instruments: Included in Bio-Tenodesis™ Screw System (AR-1675S)	
Driver, for Bio-Tenodesis™ screws	AR-1670DB
Handle, tear drop, with suture cleat	AR-2001BT
Reamer, headed, cannulated, 8 mm	AR-1408
Required Disposables:	
Button inserter	AR-2262
BicepsButton™ drill pin, 3.2 mm	AR-2263
Suture passign wire, nitinol	AR-1255-18
Optional Disposable	
Reamer, low profile, 8 mm	AR-1408LP

This surgical technique has been developed in cooperation with Paul Sethi, M.D., Greenwich, CT and is based on the paper: Sethi P, Cunningham J, Miller S, Sutton K, Mazzocca A. Anatomical Repair of the Distal Biceps Tendon Using the Tension-Slide Technique, Techniques in Shoulder & Elbow Surgery 9 (4): pp. 182-187 (2008).

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