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Joint Preservation

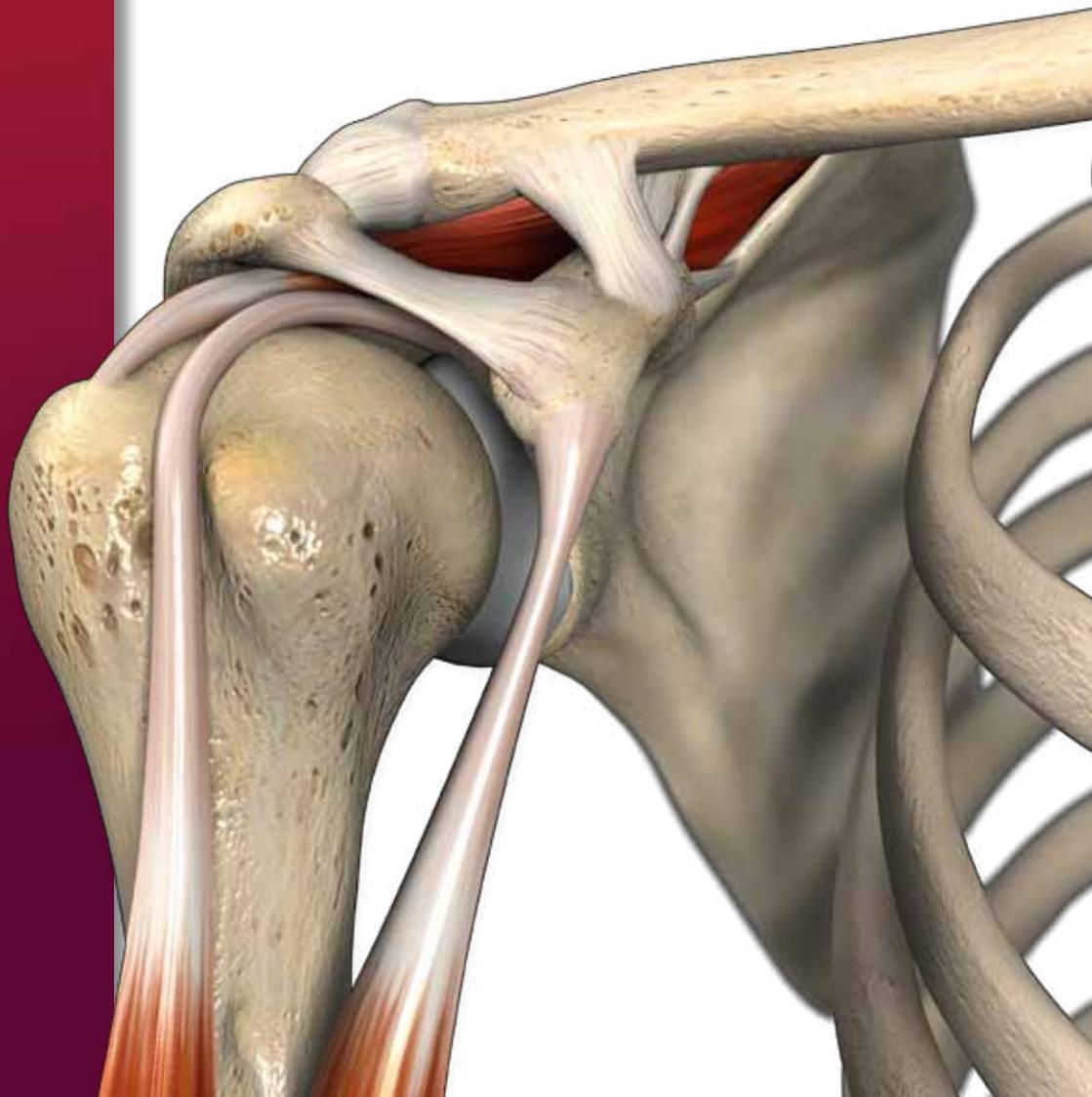
Technique Guide

ReelX STT®

Arthroscopic Proximal Biceps
Tenodesis

J. Martin Leland III, M.D.

*The opinions expressed are those of Dr. Leland
and are not necessarily those of Stryker.*



Arthroscopic Proximal Biceps Tenodesis Using the ReelX STT Knotless Suture Anchor

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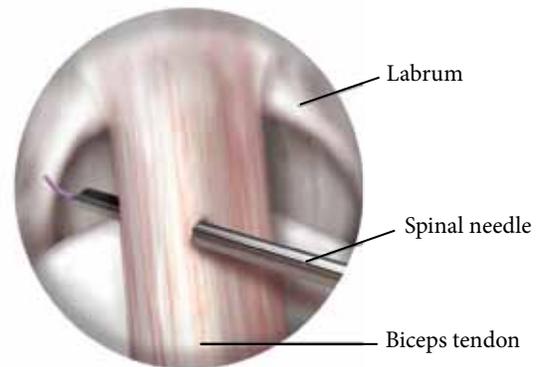
Introduction

The proximal biceps tendon can be a significant source of pain in the shoulder. Partial tears, subluxations out of the groove, unstable SLAP tears and recalcitrant tendinopathy can all cause biceps pathology and resulting disability. Biceps tenotomy is one treatment option for the above mentioned conditions but this can lead to a cosmetic deformity (“Popeye muscle”) and fatigue and cramping with biceps muscle use. Biceps tenodesis is a useful way of treating these conditions without the deformity and muscle fatigue. The tenodesis can be performed arthroscopically in the bicipital groove or mini-open in the sub-pectoral region, through a small incision in the axillary crease. This surgical technique guide describes an arthroscopic proximal biceps tenodesis using a ReelX STT knotless suture anchor.

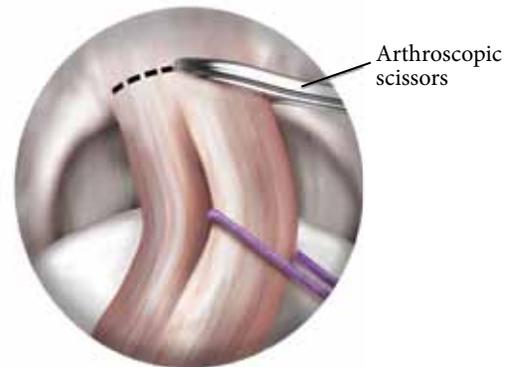


Step 1

- a** Begin with a complete diagnostic arthroscopy of the glenohumeral joint. Once the decision has been made to proceed with the biceps tenodesis, tag the biceps tendon by piercing it with a spinal needle, then run a monofilament suture through the needle.
- b** Pull both ends of the suture out of the anterior portal, then cut the biceps tendon at its attachment to the labrum, using an arthroscopic scissors, biter, or electrocautery.



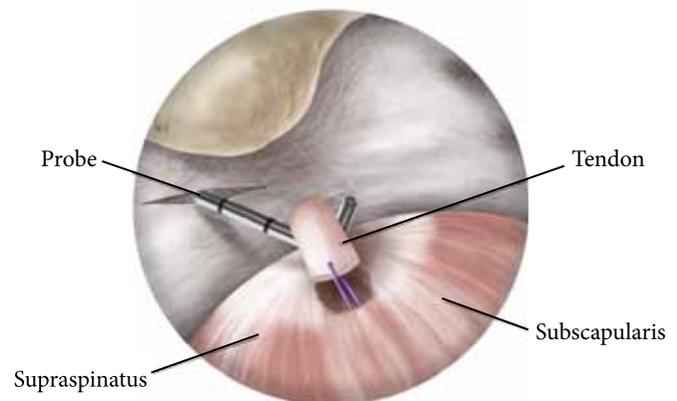
Step 1a.



Step 1b.

Step 2

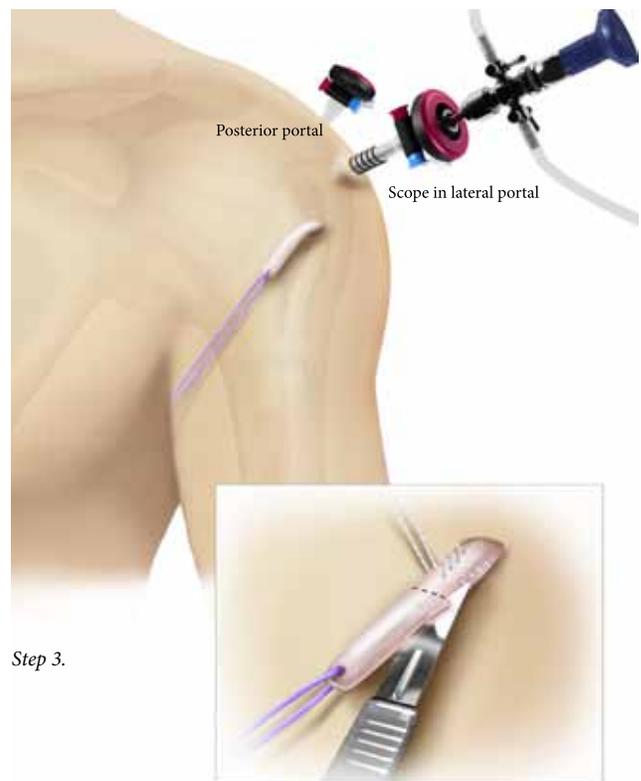
Transfer the scope into the subacromial space and establish a lateral portal. Debride any hypertrophic bursa with a shaver to aide in visualization. Use a probe or shaver to palpate the biceps tendon in the bicipital groove, located just anterolateral to the anterolateral edge of the acromion when the arm is in neutral rotation. Use a shaver to gently debride the tissue overlying the biceps tendon until the tendon is exposed. Establish an anterolateral portal immediately above the biceps tendon using a spinal needle for localization. Pull the biceps tendon out of the anterolateral portal.



Step 2.

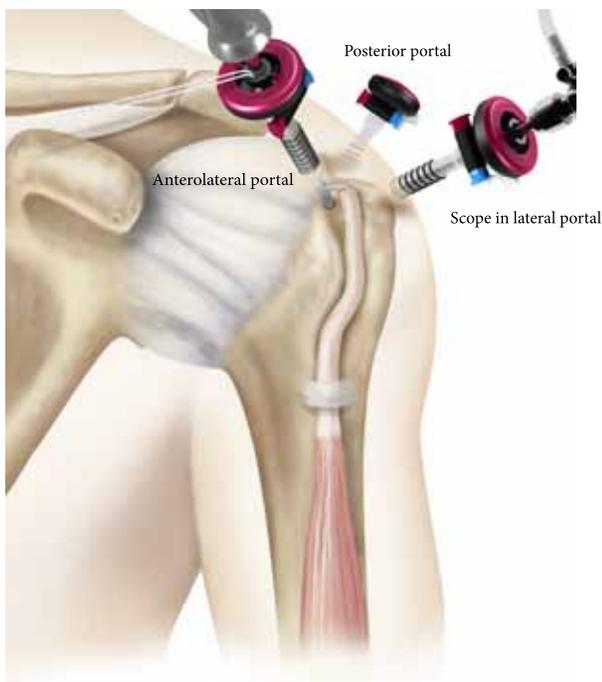
Step 3

In order to perform the biceps tenodesis at the proper tension, approximately 3cm of proximal biceps will need to be removed. Mark the biceps tendon 3cm from its proximal edge and whip-stitch a #2 Force Fiber suture from the marking distally, down one side of the biceps tendon and back up the other side. Cut the biceps tendon at the marking, being careful not to cut either strand of the Force Fiber suture. Allow the tendon to retract back into the shoulder. Slide a 7mm or greater cannula down the Force Fiber suture and into the anterolateral portal.



Step 3.

Step 4

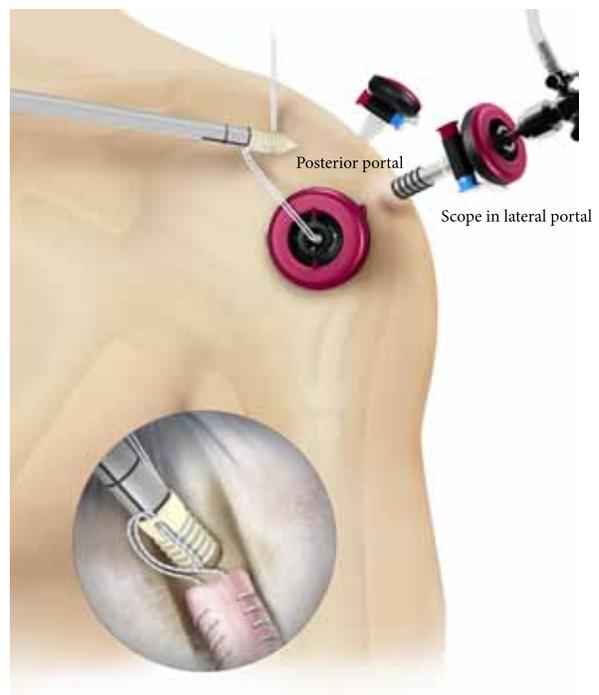


Step 4.

Insert a shaver through the anterolateral cannula and debride the tissue in the bicipital groove where the biceps tendon was first identified. The bicipital groove should be debrided down to exposed humerus while taking care not to injure the Force Fiber sutures or biceps tendon. The scope can be transferred into the lateral portal to aide in visualization if necessary. Insert a 5mm BioZip awl (actual diameter: 3mm) into the anterolateral cannula and create a pilot hole in the bicipital groove.

Step 5

Run the Force Fiber sutures through the ReelX STT device and slide the ReelX STT device down the sutures and into the antero-lateral cannula. Insert the tip of the ReelX STT device into the pilot hole, making sure the vertical laser line on the inserter shaft faces the biceps tendon. Tighten up the Force Fiber sutures so that approximately 10mm of suture remains between the end of the biceps tendon and the implant (sutures shouldn't be completely taught during insertion of the ReelX STT).



Step5.

Step 6

Impact the ReelX STT device until the ReelX STT is seated to the depth of the first of the two laser lines on the insertion shaft. Once seated, remove the white suture from top of the ReelX STT handle and twist the top of the handle with 2 fingers clockwise until the biceps tendon is adjacent to the ReelX STT anchor. This step expands the ReelX STT inside the pilot hole. Each 360° revolution will draw 10mm of suture into the ReelX STT anchor. A maximum of three complete revolutions can be made. Remove the white tether suture entirely from the handle, allowing you to remove the inserter from the ReelX STT implant. Cut the excess Force Fiber sutures as they exit the ReelX STT anchor.

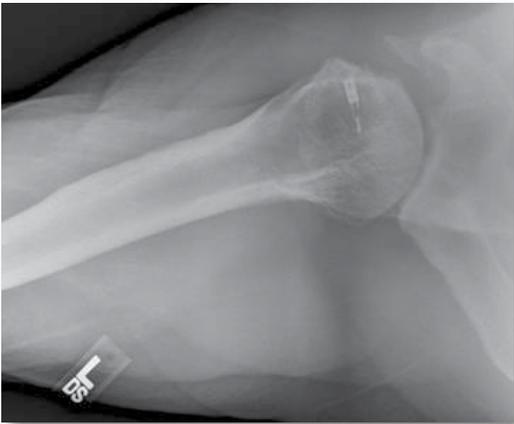


Before tensioning



After tensioning

Step 6.



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PART NUMBER	DESCRIPTION
3910-600-060	STRYKER REELX STT
3910-003-050	AWL, 5MM BIOZIP ANCHOR
3910-900-020	FORCE FIBER, SIZE #2, 38" STRAND WITH ½ CIRCLE TAPER NEEDLE

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