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Joint Preservation

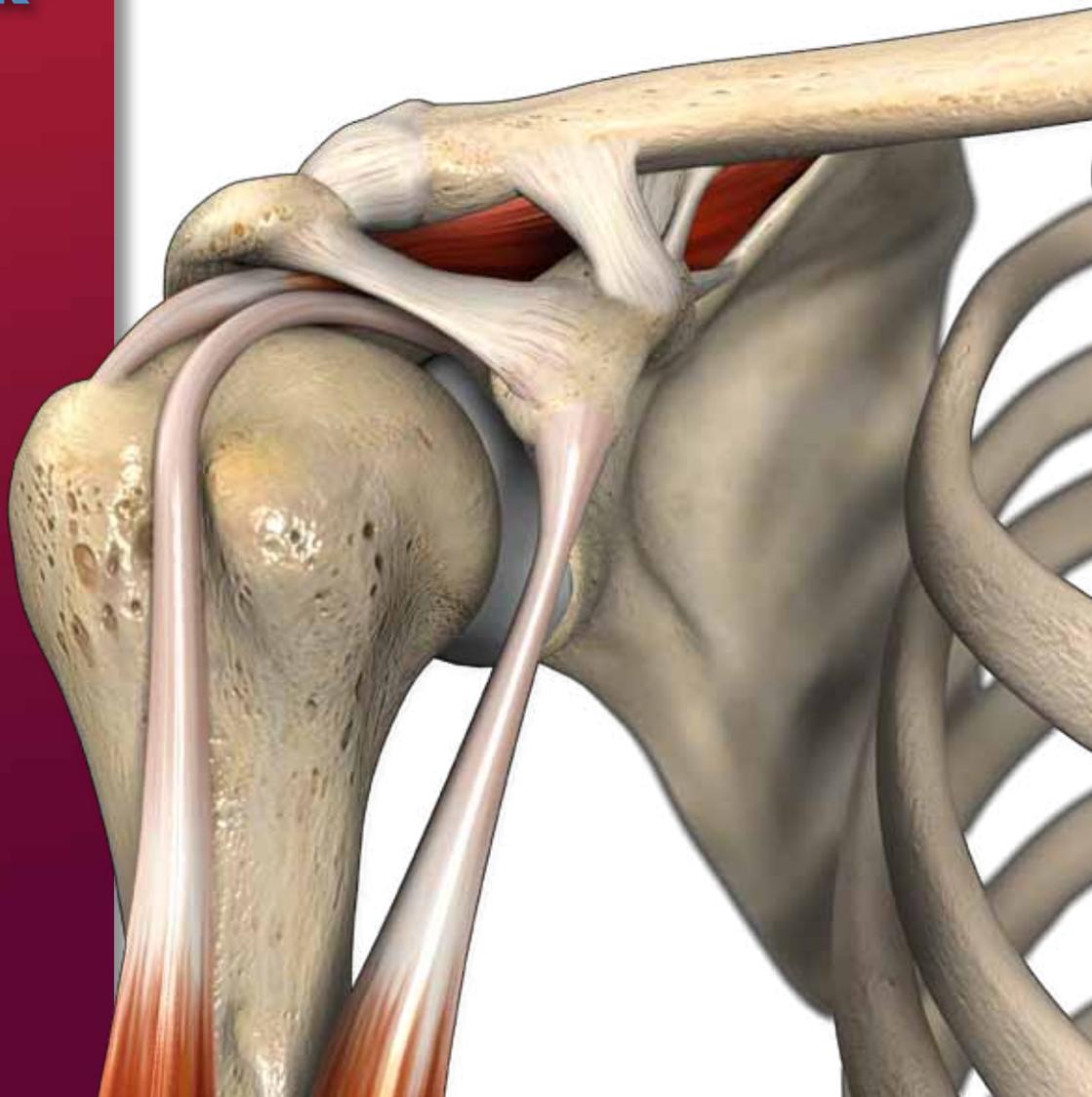
# Technique Guide

**VersiTomic  
G-Lok®**

Sub-Pectoral  
Proximal Biceps Tenodesis

*J. Martin Leland III, M.D.*

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



## Sub-Pectoral Proximal Biceps Tenodesis Using the VersiTomic G-Lok

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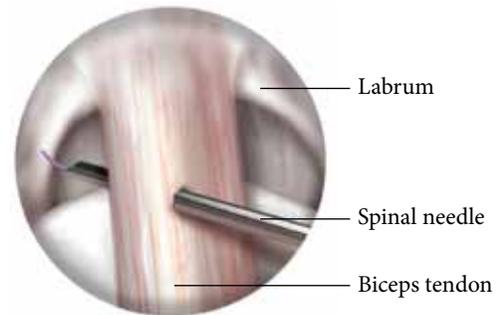
### Introduction



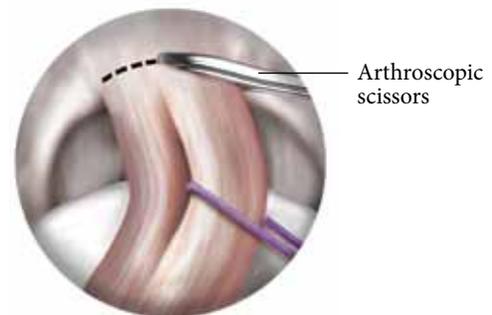
The proximal biceps tendon can be a significant source of pain in the shoulder. Partial tears, subluxations out of the groove, unstable SLAP tears and recalcitrant tendinopathy can all cause biceps pathology and resulting disability. Biceps tenotomy is one treatment option for the above mentioned conditions 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 a sub-pectoral proximal biceps tenodesis using intramedullary G-Lok fixation.

## 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

Make a 3 – 4cm vertical incision on the axillary skin crease centered over the inferior edge of the pectoralis major tendon. Dissect down bluntly until the inferior fibers of the pectoralis major can be palpated. Follow the inferior border of the pectoral tendon laterally to where it inserts onto the humerus. The biceps tendon will be just medial to the humeral insertion of the pectoralis. Pulling on the tagging suture can also provide tension on the biceps tendon and aide in its identification.

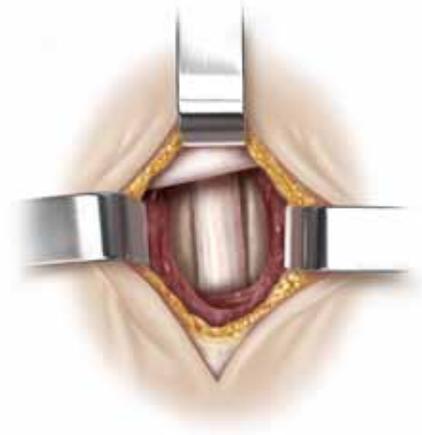


Step 2.

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### Step 3

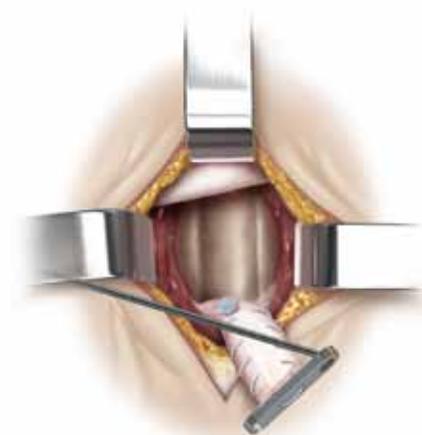
Place retractors and make a longitudinal incision in the bicipital sheath. The biceps tendon will then be able to be visualized and pulled out of the wound.



*Step 3.*

### Step 4

Anatomically, the musculotendinous junction of the proximal biceps is located approximately at the inferior border of the pectoralis major tendon. Tag the biceps tendon at its musculotendinous junction and cut the tendon about 1 cm proximal to the tagging suture. This should result in the removal of approximately 6-7cm of biceps tendon and will allow the tenodesis to be performed with the biceps at the correct tension. Using a running whipstitch technique, a #2 Force Fiber suture should be run from the musculotendinous junction to the proximal end of the biceps tendon, through the 2 center holes of a G-Lok and then back down the other side of the biceps tendon. Tie the two ends of the Force Fiber suture together. This will allow the suture to be tied at the musculotendinous junction and not directly on the G-Lok. Before tying the Force Fiber suture, ensure that the G-Lok is being sewn at the end of the biceps tendon with only 5 millimeters of space between the end of the tendon and the G-Lok.

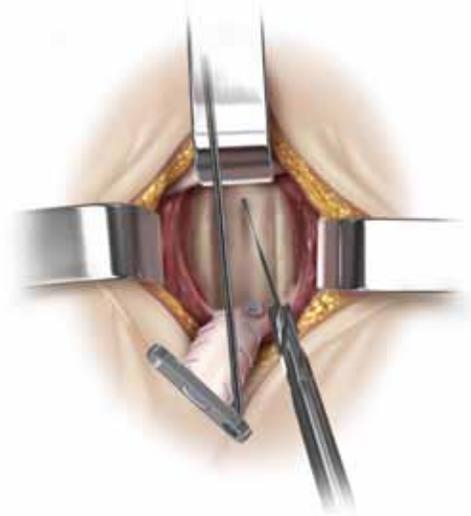


*Step 4.*

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## Step 5

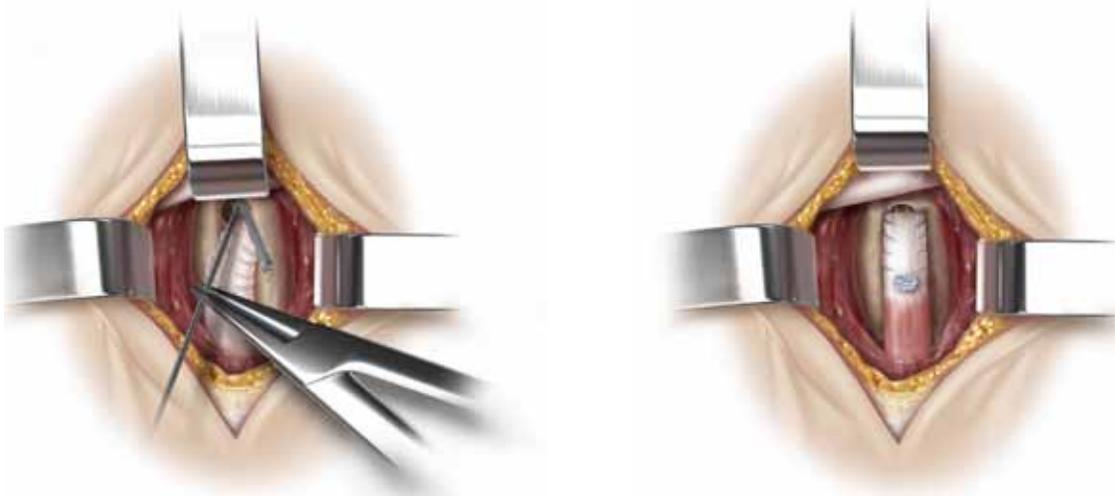
Turn your attention back to the humerus. Retract the pectoralis major superiorly and dissect a 1cm area of periosteum off of the humerus, exposing the bone at the inferior aspect of the bicipital groove. Drill a guidewire through 1 cortex of the humerus and overdrill the guidewire with a 4.5mm drill. Do not perforate the far cortex with either the guidewire or the drill.



Step 5.

## Step 6

Use a needle-driver to grasp the wire attached to the G-Lok approximately 2cm from the G-Lok. Push the G-Lok into the hole in the cortex of the humerus. Once intramedullary, pull back on the wire to confirm that the G-Lok is securely flipped on the inside of the humeral cortex. Pull gently on the wire while unscrewing it in a counter-clockwise direction to remove the wire from the G-Lok. Irrigate and close the wound in layers. The skin is usually closed with a running subcuticular suture.



Step 6.








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<b>PART NUMBER</b>	<b>DESCRIPTION</b>
234-100-000	G-LOK NO LOOP
3910-900-020	FORCE FIBER, SIZE #2, 38" STRAND WITH ½ CIRCLE TAPER NEEDLE
234-040-045	4.5mm VERSITOMIC CANNULATED DRILL

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