### SHOULDER, KNEE & SPORTS MEDICINE

## **Open Biceps Tenodesis**

#### **Indications for Surgery**

The long head of the biceps muscle attaches to bone at the shoulder and at the elbow via tendons. The biceps muscle is important for bending the elbow and supinating the forearm (rotating the hand to the palm up position). At the shoulder, the biceps tendon runs in a groove on the bone of the humerus (arm), makes an almost 90-degree turn, enters the shoulder joint between subscapularis (front) and supraspinatus (top) rotator cuff tendons, then attaches to the top of the glenoid (socket of the shoulder joint). The biceps is held in the bony groove of the humerus by the transverse humeral ligament and portions of the coracohumeral and superior glenohumeral ligaments. After an injury to these restraining ligaments, the tendon may begin to move in and out of the biceps tendon damages and tears the tendon as it crosses back and forth over the bony edge of the groove. Injury to these restraining ligaments is often associated with a partial or complete tears of the subscapularis or supraspinatus rotator cuff tendons. Over time, or with significant injury mechanism, the biceps tendon can completely rupture or tear.





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If there is no associated rotator cuff tear, complete proximal biceps ruptures can be treated conservatively with physical therapy. This will result in some visual deformity of the biceps in thinner patients but will not limit function. Many patients elect surgical biceps tendon repair or require surgery to repair associated rotator cuff tears.

Partial ruptures and biceps instability typically cause pain and may require surgical intervention to either release the biceps tendon (biceps tenotomy) and complete the tear or remove the damaged portion of the tendon and repair it just below the shoulder joint (biceps tenodesis).



"Popeye's deformity" showing a ruptured proximal biceps

### **Contraindications to Surgery**

- Infection
- Shoulder stiffness
- Inability or unwillingness to complete the postoperative program including immobilizing the shoulder in a sling for six weeks and performing physical therapy two to three times per week for four to six months
- Patients with poor general health which is not sufficient to proceed with surgery

### **Potential Surgical Risks and Complications**

- Infection
- Injury to nerves (numbness, weakness, paralysis) of the shoulder and arm from the nerve block
- Continued or recurrence of pain



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- Re-tear of the proximal biceps tendon
- Detachment of the deltoid muscle (if open surgery is performed)
- Stiffness or loss of motion of the shoulder
- Inability to return to the same level of athletics or work
- Persistent weakness of the shoulder
- Finding of an irreparable tear at the time of surgery
- Finding damage to other structures such as the rotator cuff, labrum, and articular cartilage that may require further treatment at the time of surgery.

#### **Hospitalization and Anesthesia**

- Outpatient surgery (you go home the same day)
- General anesthetic with interscalene block (See Your Surgical Experience booklet)

#### **General Surgical Technique**

After an arthroscopic exam of the shoulder, Dr. Chudik releases the partially torn and unstable bicep tendon. After completing the remainder of the arthroscopic shoulder procedures, Dr. Chudik makes a small, limited incision just below the pectoralis tendon. He then retracts the soft tissue, retrieves the biceps tendon and repairs it at the proper, functional length by reattaching the tendon to the bone along its proper course.



Arthroscopic view of partially torn biceps tendon



Unstable proximal biceps tendon dislocated medially from the biceps groove



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#### **Preoperative Instructions**

- Discontinue birth control pills
- Stop blood thinners such as aspirin, Coumadin<sup>®</sup>, Lovenox<sup>®</sup>, Xarelto<sup>®</sup> according to the prescribing doctor's directions
- Stop anti-inflammatory medicines such as ibuprofen, Advil<sup>®</sup>, Motrin<sup>®</sup>, Naprosyn<sup>®</sup>, Alleve<sup>®</sup>, etc.)
- Stop nutritional supplements and drinks like Vitamin C, ginseng, ginkgo biloba, etc.
- Stop smoking for surgery and during the first six weeks postoperatively to allow proper tissue healing

### Do not eat or drink anything from midnight, the evening before surgery

#### **Post-operative Course**

- You will use a sling at all times except for bathing, dressing and exercises for six to eight weeks following surgery, especially while you sleep. This prohibits driving.
- You **will not** be allowed to actively move your repaired shoulder or elbow (moving it with its own shoulder muscles) for at least six to eight weeks following surgery in order to protect the repair and allow healing.
- You may feel more comfortable sleeping sitting upright (on a couch or recliner chair) after surgery.
- Keep the wound clean and dry for three days following all arthroscopic surgery and 10 to 14 days following open surgery. You may shower lightly after three days (all arthroscopic) and 14 days (open surgery), but wounds cannot be submerged under water for three weeks.
- Driving after six to eight weeks.
- Return to school/sedentary work in less than one to two weeks as long as you are in your sling and do not use the extremity. No typing, writing or purposeful movement.
- Physical therapy should begin two to three days after surgery and continue for four to six months. The success of rotator cuff repair is highly dependent on the post-operative rehabilitation. It is crucial to follow through on and maintain a proper therapy schedule.

### **Return to Activity**

You may return to unlimited activities when there is no pain and full shoulder range of motion, muscle strength and endurance, and functional use has been restored. This usually requires four to six months for an isolated biceps tenodesis surgery. Dr. Chudik will tell you when it is safe to resume all activities. Dr. Chudik has special protocols for returning to throwing and golf.



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#### Scheduling Surgery

Contact Dr. Chudik's surgery scheduler at 630-324-0402 or *contactus@chudikmd.com* to:

- Schedule the date and location of surgery (the hospital will call the day before with the confirmed arrival time)
- Schedule a pre-operative appointment
- Schedule a post-operative appointment to remove sutures and review post-operative instructions

### Notify My Office if Symptoms Worsen





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