

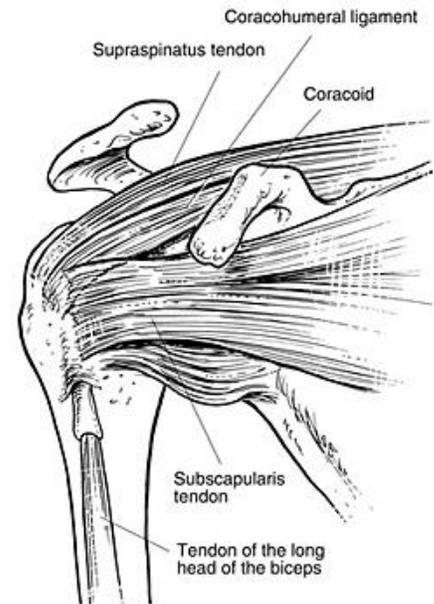
## About Shoulder Biceps Tenodesis

### What is Shoulder Surgery for Biceps Tenodesis?

The Biceps muscle makes an attachment to the shoulder next to the rotator cuff tendons, and works with the rotator cuff muscles to lift and rotate the arm and elbow. Pain, weakness and stiffness commonly occur when the biceps tendon is injured at the shoulder. In some patients the tendon can tear from its insertion, causing a visible deformity called “popeye arm.”

With severe biceps tendon injuries, many patients require surgery to fix the problem. In these cases, the biceps tendon cannot be connected to the shoulder blade where it normally connects. Instead it is reattached to the top of the humerus, so it can have a solid connection point for contraction of the muscle. This is called a tenodesis, for repairing the tendon to a new location.

The repair is performed through a small open incision, after using Arthroscopy (arthro=joint, scope= camera), to look inside the shoulder joint.



### Preparing for surgery

We'll have you stop certain medications before surgery, such as aspirin or anti-inflammatory medications (Ibuprofen, Naprosyn, Advil, Motrin, Celebrex, etc.) one week before surgery since they can cause bleeding. Depending on your age and medical history, we may have you see your regular physician and undergo some blood tests and an EKG before surgery.

### What you can expect on the day of surgery

The surgery is performed in an outpatient setting, which means you can go home the same day. We'll have you show up at the outpatient surgery center about one hour and a half before your surgery. The nurses will register you, shave and prep the surgery area, and place an IV and start the preventative antibiotics.

Shoulder surgery is done under general anesthesia, which means you will be completely asleep and then wake up comfortably after the procedure is completed. Most patients also have an additional nerve block, to help keep the shoulder numb and comfortable for about 12-18 hours after surgery. The anesthesia doctor will also talk to you before surgery to review your medical history and answer any questions.

After surgery is over, you'll remain at the surgery center for about an hour to wake up from anesthesia. A friend or family member will have to drive you home to be safe, and someone should plan to be with you for at least the first 24 hours.

### When you get home from surgery

We like patients to relax at home for about 1-2 days. You'll be able to get up a bit and go to the kitchen or bathroom, but it's wise to rest and relax for at least a few days. In order to start driving, you'll need to be off of the narcotic pain medications, and you have to be able to control a car safely.

You'll be wearing a special sling to stabilize the shoulder and limit the motion of the arm for 4-6 weeks. The tenodesis needs to be protected until adequate healing of the tendon to bone occurs. If you are careful and sitting down, you may remove the sling and keep the arm in your lap. Waist level activities such as keyboarding or writing are reasonable, as long as you are careful and do not lift the arm. Whenever you are up and around, and also while sleeping, you must keep the sling on.

### **Recovery and Physical Therapy**

You will come back to see us in the office one week after surgery. At that visit we'll make sure your incisions are healing well and remove your stitches. We'll plan to keep you in the sling for a total of 4 weeks after surgery.

A strong commitment to rehabilitation is important to achieve a good outcome after biceps tenodesis. A supervised physical therapy program is necessary to regain strength and function in the shoulder.

Rehabilitation progresses in stages. Initially, you'll be in the abduction sling for the first 4 weeks. After 4 weeks, we'll arrange supervised physical therapy to start motion of the shoulder and elbow. The first phase is just to work on range of motion exercises without any strengthening. After 4-6 weeks of PT, a light strengthening program will be started. This isn't heavy weight training, but specific arm, elbow and shoulder strengthening to gradually restore strength. Most patients have a functional range of motion and adequate strength by 4 to 6 months after surgery, and complete recovery may take even a year after surgery.

### **Getting back to work and sports after Biceps Tenodesis**

Getting back to work depends on the demands of your job. Sitting up for desk work can usually be started around a few days after surgery, especially if you can keep the arm at your side and use an ice pack at your desk. Before you can return to heavy work it will likely be 4-6 months. The same goes for heavy overhead sports or weight training.

In order to be able to return to sports and fitness, you'll need to take an active role in your rehabilitation to have good strength, endurance, flexibility and balance. You will need to work consistently on the exercises you learn in physical therapy. Usually at about the 6 month mark, you'll have good flexibility and strength and will be able to gradually return to sports and fitness. It's always wise to incorporate the exercises you did in physical therapy as part of your own exercise program.

### **Long-term prognosis after surgery**

After biceps tenodesis, 80% to 95% of patients achieve a satisfactory result, defined as adequate pain relief, restoration and improvement of function, and patient satisfaction with the procedure. Certain factors decrease the likelihood of a satisfactory result, such as pain or degeneration at other parts of the shoulder, such as the rotator cuff.

In general, the best chance for a good result after biceps tenodesis is to follow instructions to allow the tendon to heal in the new location, then be diligent in physical therapy with the exercises you are shown.

### **Possible risks and complications**

All surgery has risks of bleeding, infection, damage to nerves and arteries, stiffness, blood clots, and persistent pain. These complications are uncommon after arthroscopic shoulder surgery.

A significant concern after shoulder surgery is to regain full flexibility, and about 1-2% of patients have difficulty tolerating the physical therapy and require a second operation to break up the scar tissue. After tenodesis a small percentage of patients can have persistent pain in the muscle belly of the biceps.

The risk of severe complications from general anesthesia, such as death, heart attack or stroke, are very low, especially for patients with good general health.

### **Questions?**

If you have any questions, be sure to call us at 925-600-7020.