

Patient Guide to Biceps Tendon Ruptures at the Shoulder

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What is the biceps tendon and how does it tear?

The biceps tendon is attached to the biceps muscle which is the big muscle on the front of your arm (Figure 1). The biceps muscle is a big muscle which becomes slender and then turns into tendon at the shoulder and at the elbow. At the elbow it attaches on to one of the forearm bones, so when the muscle contracts it pulls the arm up (or flexes the elbow). The main function of the biceps muscle is to flex the elbow, and it is used every time you bend your elbow for activities such as lifting, eating or reaching behind your head.

The biceps muscle also turns into a thin tendon about the size of a pencil as it gets close to the shoulder joint (Figure 1). It runs in a groove in the arm bone (the humerus) near the shoulder, then goes through a gap between the rotator cuff tendons (see Patient Guide to Rotator Cuff Tendinitis). From there it goes into the joint where it attaches to the top of the socket and a specialized cartilage called the labrum (see Patient Guide to Labrum Tears).

It is not known exactly why the biceps tendon at the shoulder begins to wear and eventually tear. For some reason the tendon over time begins to saw through like a rope, until it eventually breaks. Oftentimes the individual did not know there was a problem with the tendon until it pops or tears. It usually tears near the place where it enters the joint between the rotator cuff tendons or it tears inside the joint. The biceps tendon usually tears when you are using the arm stressfully, such as picking something up or pulling hard on some object.

What are the symptoms of a biceps tendon tear?

Typically the arm becomes tender and sore in the front where the biceps muscle is located. When the tendon tears, because there is tension on it, it will recoil down into the upper half of the arm. Where it ends up is often sore and tender for up to 7 to 14 days. Since the biceps muscle no longer has any tension on it, the muscle balls up in the upper half of the muscle. This area of swelling can be easily seen and felt in the arm, and it sometimes is tender. This swelling is called Popeye arm since it makes the muscle look suddenly bigger. Occasionally there will be tenderness or pain at the shoulder where the tendon has torn. Also, sometimes there may be some bruising along the front of the arm where the torn tendon has bled a little bit. This usually goes away over a couple weeks.

What is the treatment for biceps tendon tears at the shoulder?

The initial treatment is to try to diminish any pain and swelling in the arm. This is best done by putting ice on the area of tenderness for 20 to 30 minutes several times a day (see Patient Guide to Icing Techniques). Also, medicines such as acetaminophen (tylenol) or aspirin like medicines (called non-steroidal anti-inflammatory drugs) such as ibuprofen, naproxen, Aleve, Advil, Voltaren, Celebrex, Vioxx, among others. These medicines should be taken for as long as the soreness persists, which is usually a couple weeks. It is important for your elbow and shoulder to not get stiff, so range of motion and stretching of the elbow and shoulder should begin within a day or so of the tear. It is important to avoid getting a stiff shoulder (see Patient Guide to Frozen Shoulder), so you should stretch at least once a day. If you feel your shoulder getting stiff you should consult your physician.

What is the recovery time for biceps tendon ruptures?

Most of the time the pain and swelling subside within a couple weeks, and sometimes sooner. It is recommended that you return to activity as the pain allows, and return to full activity usually takes two to four weeks. There may be residual soreness in the biceps muscle for a longer period of time (up to six weeks) but it should subside over time. There may also be some soreness in the muscle as you return to activity and that should be expected. You should not be experiencing stiffness and inability to use the arm for longer than a few weeks. If you are having problems you should contact your physician. Most people recover full strength of the shoulder and arm with no limitations. Sometimes physical therapy is indicated to have the therapist demonstrate some stretching or strengthening techniques, but a majority of biceps tendon ruptures do not need therapy.

When is surgery indicated?

Surgery is rarely needed for ruptures of the biceps tendon at the shoulder. This is because the biceps muscle and tendon have little function at the shoulder. This is not the case with the biceps tendon at the elbow where the biceps provides a significant amount of strength to bend the elbow. In the shoulder the biceps tendon does not serve any purpose for providing strength, and most people recover after a biceps tendon tear at the shoulder with no limitations in strength or function. As a result, operating on a ruptured biceps tendon is almost never done. Surgery to get rid of the Popeye arm is rarely indicated, and the patient must trade a loss of the lump for a scar on the front of the shoulder.

There are some instances where surgery upon the biceps tendon might be indicated. Sometimes the tendon is torn part of the way through and is painful. In that case the tendon tear is completed by the surgeon at the time of surgery, and the end of the tendon is sewn into the bone near the shoulder.