

DISTAL BICEPS TENDON RUPTURE

DESCRIPTION

Complete rupture of the elbow attachment of the biceps muscle. The biceps muscle attaches to bone via tendons - 2 at the shoulder and one in the elbow. This uncommon injury happens when the tendon pulls off the bone just below the elbow. The tendon usually pulls completely off the bone, though there may be partial tearing of the tendon from the bone. Rarely, the muscle may tear at the muscle-tendon junction. The biceps muscle is important for bending the elbow and rotating the wrist. Rupture of this tendon may result in about 30% loss of elbow bending strength, and about 40% loss of strength in turning the palm up with wrist rotation.

FREQUENT SIGNS AND SYMPTOMS

- Pain, tenderness, swelling, warmth and/or redness at the elbow, usually in the front of the elbow. The pain is worse with elbow function against resistance and straightening the elbow.
- Bulge can be seen and felt in the arm
- Bruising in the elbow and/or forearm after 24 hours.
- Limited motion of the elbow.
- Weakness with attempted elbow bending (lifting, carrying) or rotation of the wrist (using a screwdriver)
- Crepitation (a crackling sound) when the tendon or elbow is moved or touched

CAUSES

- Sudden force straightening the elbow while the biceps is contracted and the elbow bent
- Direct blow or injury to the elbow (rarely)

RISK INCREASES WITH

- Sports that involve contact, as well as throwing sports, gymnastics, weight-lifting and body building
- Heavy labor work
- Poor physical conditioning (strength/flexibility)
- Inadequate warm-up prior to practice or play

EXPECTED OUTCOME

Usually requires surgery to re-insert the tendon into bone to optimize recovery of strength and function. Four to 8 months are necessary for complete healing prior to return to sports or heavy lifting.

POSSIBLE COMPLICATIONS

- Weakness of elbow bending and forearm rotation, especially if treated non-surgically
- Prolonged disability
- Re-rupture of the tendon after surgery
- Risks of surgery including infection, bleeding, injury to nerves, elbow and/or wrist stiffness and/or loss of motion, weakness of elbow bending and/or wrist rotation

GENERAL TREATMENT CONSIDERATIONS

Initial treatment consists of medication and ice to relieve the pain and a sling may be recommended for comfort. Definitive treatment requires surgery to repair the tendon back to bone. Biceps muscle contraction prevents the tendon from healing to the bone without surgery. The resultant weakness without surgery may be acceptable for sedentary individuals, but usually is not acceptable to athletic and active individuals. Thus, in sports medicine, there is no role for non-surgical treatment. Surgical treatment usually involves sewing the tendon back to bone, followed by immobilization in a cast or brace for varying periods of time. After surgery and immobilization, physical therapy is usually needed to regain elbow and wrist motion and strength.

MEDICATION

- Non-steroidal anti-inflammatory medications such as aspirin and ibuprofen (do not take within 7 days of surgery) are used to reduce inflammation. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset or an allergic reaction occurs. Other minor pain relievers, such as acetaminophen may also be used.
- Pain relievers are usually prescribed after surgery. Use only as directed and only as much as you need.

HEAT AND COLD:

- Cold is used to relieve pain and reduce inflammation. Cold should be applied for 10 - 15 minutes every 2-3 hours for inflammation and pain, and immediately after any activity which aggravates your symptoms. Use ice packs or an ice massage.
- Heat may be used prior to performing stretching and strengthening activities prescribed by your physician, physical therapist or athletic trainer. Use heat pack or a warm soak.

NOTIFY OUR OFFICE IF

- Symptoms get worse or do not improve in 2 weeks despite treatment
- You experience pain, numbness, or coldness in the hand
- Blue, gray or dusky color appears in the fingernails
- Any of the following occur after surgery:
 - Increased pain, swelling, redness, drainage or bleeding in the surgical area.
 - Signs of infection (headache, muscle aches, dizziness, or a general ill feeling with fever)
- New, unexplained symptoms develop. Drugs used in treatment may produce side-effects.