

Marc R. Safran, MD Professor, Orthopaedic Surgery Chief, Division of Sports Medicine

# TRICEPS TENDON RUPTURE

## **DESCRIPTION**

Complete rupture of the triceps tendon (the tendon behind the elbow). This structure is the tendon attachment of the triceps (back of the arm) muscle to the elbow. This structure is important in straightening the elbow or slow the elbow in from bending too quickly. There is loss of continuity between the triceps muscle and the elbow, and thus loss of function of the triceps muscles in trying to straighten the elbow or slow the elbow from bending too quickly.

## FREQUENT SIGNS AND SYMPTOMS

- Pain, tenderness, swelling, warmth and/or redness over the triceps tendon, above the back of the elbow
- A "pop" or rip is often felt at the elbow at the time of injury
- Pain and loss of strength with attempting to straighten the elbow (bench press or push ups)
- Crepitation (a crackling sound) when the tendon is moved or touched
- Inability to straighten the elbow against gravity such as trying to reach overhead
- Bruising at the triceps tendon and elbow after 48 hours
- Loss of firm fullness when pushing on the area where the tendon ruptured (a defect between the ends of the tendon where they separated from each other).

#### **CAUSES**

- Strain from sudden increase in amount or intensity of activity or overuse of the triceps muscles and tendon
- Direct blow, laceration (cut) or injury to the triceps tendon.

### RISK INCREASES WITH

- Sports that require sudden, explosive triceps contraction, such as off road mountain bike or motor cycle riding and jumping.
- Weight lifting, particularly bench press and push ups.
- Poor physical conditioning (strength/flexibility weak triceps)
- Steroid use
- Previous cortisone injection
- Untreated or partially treated triceps tendinitis
- Previous triceps tendon injury

## PREVENTIVE MEASURES

- Appropriate warm up and stretching before practice or competition
- Give time for adequate rest and recovery between practices and competition
- Appropriate conditioning:
  - Elbow flexibility, strength and endurance
  - Cardiovascular fitness
- To help prevent recurrence, taping, protective strapping or bracing, or an adhesive bandage may be recommended for several weeks after healing is complete.

# DEPARTMENT OF ORTHOPEDIC SURGERY SPORTS MEDICINE

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#### **EXPECTED OUTCOME**

Usually curable with appropriate treatment with return to sports after 6 to 9 months.

## POSSIBLE COMPLICATIONS

- Permanent weakness of the triceps muscles, especially if untreated
- Re-rupture of the tendon after treatment
- Prolonged disability
- Risks of surgery, including injection, bleeding, injury to nerves, elbow stiffness and loss of motion, elbow weakness, re-rupture

## GENERAL TREATMENT CONSIDERATIONS

Initial treatment consists of medication and ice to relieve the pain, applying a compressive elastic bandage and elevating the injured elbow to reduce swelling. Definitive treatment requires surgery to repair the tendon. Triceps muscle tone and contraction prevents the tendon ends from healing to each other without surgery. Thus, there is no role for non-surgical treatment. Surgical treatment usually involves sewing the ends of the tendon back together and possibly to bone, followed by immobilization in a cast or brace. After surgery, physical therapy is usually needed to regain elbow motion and strength.

## **MEDICATION**

- Non-steroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take if surgery planned in 7 days or less), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact him/her immediately if any bleeding, stomach upset or an allergic reaction occurs.
- Pain relievers may be prescribed as necessary by your physician. Use only as directed.

### **COLD THERAPY**

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.

#### NOTIFY OUR OFFICE IF

- Symptoms get worse 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:
  - Fever, increased pain, swelling, redness, drainage or bleeding in the surgical area.
- New, unexplained symptoms develop. Drugs used in treatment may produce side-effects.