

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

# DISTAL BICEPS TENDON REPAIR

### **INDICATIONS** (Who Needs Surgery, When, Why & Goals)

Patients with complete rupture of the distal biceps tendon from the bone just below the elbow are candidates for surgery to re-attach the tendon to bone. This is because this injury, untreated, results in weakness of elbow bending (approximately 30%) and loss of wrist rotation (40% loss of strength) in turning the palm up. Thus surgery is usually recommended as soon as is reasonable after the injury and often within 3 weeks of injury. Delay in surgery may result in not being able to repair the tendon to bone due to the shortening of the muscle that occurs with time after the injury. The injury usually involves the tendon pulling off from the bone. The goal of surgery is to reattach the tendon to bone to attempt to regain the strength in the elbow and wrist.

## **CONTRAINDICATIONS** (Reasons Not To Operate)

- Infection of the elbow
- Those with no functional impairment (sedentary persons)
- Inability or unwillingness to complete the post-operative program of limiting activity after surgery and completing the rehabilitation necessary.

#### RISKS AND COMPLICATIONS OF SURGERY

- Wound infection
- Bleeding or injury to blood vessels
- Injury to nerves (numbness, weakness, paralysis) of the elbow, forearm and hand, especially the posterior interosseous nerve that supplies the muscles that extend the wrist and straighten the fingers.
- Re-rupture of the tendon from the bone
- Elbow and/or wrist and forearm stiffness and loss of some or all motion at the elbow, wrist and/or forearm.

#### **TECHNIQUE** (What is Done)

Different techniques are in use at this time. Essentially, the tendon is re-attached to the bone. One of the most popular techniques is to make an incision in the front of the elbow to get the torn tendon, then make another incision in the outer elbow to make a trough (hole) in the bone and sew the tendon <u>into</u> the bone using heavy suture (thread). Another technique involves using only one incision in the front of the elbow, roughening the bone where the tendon usually attaches, and inserting bone anchors (screws or devices similar to toggle bolts). These bone anchors are used to sew the tendon <u>onto</u> the bone with heavy sutures.

#### POST-OPERATIVE COURSE

- Management after surgery varies.
- Usually a splint, cast, or brace is applied to the arm from shoulder to hand and wrist for 1-6 weeks
- Keep the arm/elbow elevated above heart level as much as possible for the first 1 to 2 weeks after surgery
- You will be given pain medications by your physician
- A sling may be given for comfort after surgery
- Post-operative rehabilitation and exercises are very important to regain motion and then strength

# DEPARTMENT OF ORTHOPEDIC SURGERY SPORTS MEDICINE

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#### **RETURN TO SPORTS**

- Depends on the type of sport and position, quality of ligaments at the time of repair.
- A minimum of 3 6 months is necessary after surgery before return to sports.
- Full elbow and wrist motion and strength are necessary before returning to sports

#### **NOTIFY OUR OFFICE IF:**

- 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.

Do not eat or drink anything before surgery. Solid food makes general anesthesia more hazardous.