

Alta View Sports Medicine



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## Biceps Tendon Repair at the Elbow

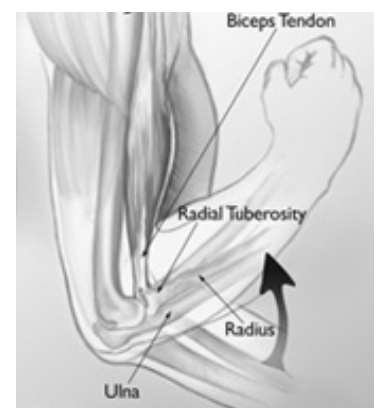
### What to Expect

The biceps brachii muscle forms into a large tendon at the elbow which inserts into the radius bone and gives strength to bending the elbow and rotating the forearm into supination (a “palm up” position). This tendon insertion is referred to as the distal biceps tendon. It most commonly tears from a sudden forceful contraction when the elbow is forced straight against resistance, such as in trying to lift a heavy object. A complete tear involves complete detachment of the tendon off the bone and will not heal with conservative measures. A partial tear may present similar to a complete tear with elbow and biceps muscle pain, but most notably with persistent weakness to elbow flexion and supination. These also are less likely to heal conservatively.

The surgery is performed through a small incision in the upper forearm and is done as an outpatient (you go home the same day). Strong sutures are weaved through the biceps tendon and passed through drill holes in the radius at a location called the radial tuberosity. Other fixation devices such as a small button or suture anchors can also be used to increase the strength of the repair. The goal is to allow the tendon to heal back to the bone over time.

Appropriate rehabilitation is critical to the success of the procedure.

Return to full activity and sports is delayed to allow time for the underlying tendon to heal.



# Phase 1 (0 – 2 weeks postop)

Goals: Control pain, Diminish swelling, Protect the distal biceps tendon repair

- Pain: You will be prescribed pain medication to use after surgery. Use as directed and wean use to as needed. You may begin taking an anti-inflammatory medication (i.e. ibuprofen, naproxen) unless medically contraindicated. Do not drive or use alcohol while taking narcotic pain medication.
- Splint/Dressing: You will be placed in a posterior splint at the end of surgery with your arm bent at 90°. This helps minimize the tension on the tendon repair. Keep it clean and dry. DO NOT remove the splint. You may support your arm/splint in a sling when up and about. You may remove the sling when sitting and elevate your elbow and hand. You will keep this on until your first follow up appointment (10-14 days after surgery).
  - Have someone help you remove and replace the sling around the splint. It is easier to wear button down shirts instead of pullover shirts.
- Driving: make arrangements as you should not drive while wearing a splint and in the early healing phase—usually until about 4 weeks after your surgery. Sudden movements to your elbow could case the tendon repair to fail.
- Schedule your postoperative visit for 10-14 days after surgery. At this visit:
  - Splint removal
  - Suture removal
  - You will be placed in a hinged elbow brace
  - Review of your surgery and rehab plan

## Phase 2 (2 - 4 weeks postop)

Goals: Control pain, Gentle elbow motion in hinged elbow brace, Protect the distal biceps tendon repair

- Brace: You will be placed in a hinged elbow brace which will limit your elbow motion to protect the repair. Your brace settings will be advanced according to the below settings and should not be advanced sooner than as listed. Make sure you understand how to adjust your brace at home.

- Week 3: Full flexion to 40° from full extension
- Week 4: Full flexion to 30° from full extension
- Week 5: Full flexion to 20° from full extension



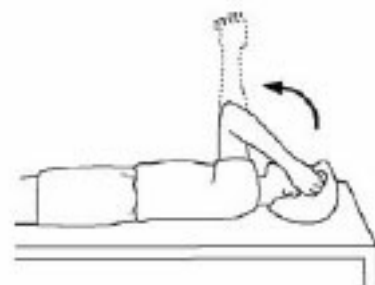
- Sling: Rest your arm in the sling or brace sling strap when not performing exercises in a controlled environment
- Precautions: NO LIFTING or active flexion with your operated arm. You may use your fingers to type beginning on week 4 once you have achieved a “palm down” rotation to your arm without pain.
- Showering: You may remove the elbow brace to shower, but hold your arm in 90° of flexion at all times until you dry off and replace your brace.
- Schedule a clinic visit about 6 weeks from your surgery date

## Exercises

- Shoulder, wrist, finger motion
  - Remove arm from sling to move your shoulder, wrist, and fingers when in a controlled environment
- Shoulder shrug
  - Gently raise shoulders with sling in place
- Gripping/Hand strength
  - Regain grip strength using a squeeze ball

## Exercises continued

- Range of Motion in elbow brace – 5 min 5x/day
  - These exercises may be more easily done while lying on your back with your arm above you. This allows gravity to flex your elbow keeping your arm relaxed during flexion.
- Passive elbow flexion
  - Holding your operative arm at the wrist, use your unaffected arm to flex your operative elbow while keeping your operative elbow relaxed.
- Passive elbow supination (rotating to “palm up” position)
  - Use your unaffected arm to assist your operative arm to rotate “palm up” while keeping your operative elbow relaxed and bent at 90° of flexion.
- Active assisted elbow extension
  - You may actively extend (straighten) your elbow within the limits of your brace. Hold for 5 seconds to allow for stretch, but DON'T PUSH IT.
- Active assisted forearm pronation (rotating to “palm down”)
  - You may actively pronate your forearm with your elbow bent at 90° of flexion. Hold for 5 seconds to allow for stretch, but DON'T PUSH IT. Achieving full pronation may take a few weeks.
- Triceps isometrics
  - With your arm in 90° of flexion, flex your triceps muscles without moving your forearm



## Phase 3 (5-8 weeks postop)

Goals: Advance elbow range of motion, Protect the distal biceps tendon repair

- Brace: Continue to wear your elbow brace until 8 weeks after surgery. You may advance your settings as listed below as tolerated.
  - Week 6: Full flexion to 10° from full extension
  - Week 7: Brace unlocked to allow full flexion and extension
- Sling: Rest your arm in the sling or brace sling strap when not performing exercises in a controlled environment.
- Precautions: NO LIFTING or sudden elbow movements. Your arm may begin to feel good, but sudden stress can delay the healing process.

### Exercises

- Range of Motion in elbow brace – 5 min 5x/day
  - You may begin to actively flex your elbow in the brace. This is more easily done with your arm in front of you parallel to the floor, then progress to elbow at your side against gravity.
    - Active elbow flexion
    - Active elbow supination (rotating to “palm up” position)
    - Active elbow extension
      - You may actively extend (straighten) your elbow within the limits of your brace. Hold for 5 seconds to allow for stretch.
    - Active assisted forearm pronation (rotating to “palm down”)
      - You may actively pronate your forearm with your elbow bent at 90° of flexion. Hold for 5 seconds to allow for stretch. Achieving full pronation may take a few weeks.

## Phase 4 (2-3 months postop)

Goals: Maintain full range of motion, Begin progressive gentle elbow strengthening, Return to functional activity

- Brace: you may wean out of your brace once you have achieved full motion, but not sooner than 2 months after your surgery.
- Precautions: No lifting > 5 lbs. No sudden movements or throwing
- Schedule a clinic visit about 3 months from your surgery date

### Exercises

- Continue active elbow flexion/extension/supination/pronation from Phase 3
- Biceps Isometrics
  - With your elbow held in 90° of flexion, flex your biceps muscle and hold flexed for 5 seconds
- Biceps Curls (high-rep/low-weight < 5 lbs)
- Triceps Curls or Prone Rowing (< 5 lbs)



## Phase 4 (4-6 months postop)

Goals: Maintain full range of motion, Progressive elbow strengthening, Continue elbow stretching

- Upper Extremity Strengthening: may progress your upper body strengthening 10 lbs per week as long as you do not experience any pain during or after lifting
  - Any increase in pain demands a two day rest period
- Overhead athletes (baseball, softball, tennis, etc):
  - Gradual, progressive throwing program
- Return to full sports participation at 5-6 months pending upper extremity strength and satisfactory clinical examination