



ORTHOPAEDIC
SURGERY
Center of Excellence

at Belcher Point
1801 N. Belcher Rd., Suite B
Clearwater, FL 33765
Tel: (727) 724-6169
Fax: (727) 791-0470

Rehabilitation Protocol for Distal Biceps Tendon Repair (Elbow)

Charles E. Abrahamsen, M.D.

GOAL:

To restore range-of motion (ROM), strength, and confidence to the arm while protecting the repair from stretching or rupturing.

FACTS:

1. It requires 4 months for the tendon reattachment to be transformed into a strong and durable repair.
2. If the tendon repair should rupture or stretch during this time period it may not be repairable.
3. This protocol must be followed throughout the first four months to prevent injury to the repair. You must not push or pull strenuously or suddenly for the first 4 months after surgery.
4. Any deviation from this regimen may unnecessarily compromise your final result.

REMINDER:

When you and I agreed to repair your torn biceps tendon you willingly committed yourself to a four month, vigorous, structured, rehabilitation program. You must understand that the end-result depends to a great extent on your discipline, motivation, and perseverance in performing the exercise program. Without your commitment and energy, the surgery is assured to fail to meet your expectations. With your cooperation and dedication you have an excellent chance to regain the strength, stability, and confidence in your arm that you had before your injury.

Some patients are too busy with the demands of work and family to participate in a formal physical therapy program that requires regular attendance at therapy sessions at inconvenient times during the day. Fortunately, in some cases, the majority of the rehabilitation can be done at home or while traveling using free weights or exercise equipment at a health club. A physical therapist's treatment and supervision is recommended for optimal results. Physical therapy visits are typically 3 times a week in the 2nd 4 weeks then twice a week for the 3rd 4 weeks. The following exercise program should be followed **daily on your own** to achieve the goals expected at the end of each time interval. This detailed protocol has been designed as a reference specifically for you, as well as your trainer or physical therapist.

PRE-OPERATIVE REHABILITATION PROGRAM:

Goal: Before surgery it is very helpful to *minimize swelling* and to *regain motion* in your injured elbow. It is also important to *avoid further injury*, which can further damage the tendon, increase the complexity of the upcoming surgery, and even compromise the final result. **Motion** is regained with the opposite (uninjured) arm assisting & supporting the injured forearm. A heating pad for 10 minutes in front of the elbow or behind the elbow can help make exercises easier. **Swelling** is minimized by rest, elevation, and ice after activities that make the arm sore. **Further injury** is best prevented by avoiding lifting, twisting, pushing, or pulling using the injured arm. A sling can help as a reminder not to use the arm and as a support to lessen pain.

TIMING OF POST-SURGICAL VISITS:

1. WEEK 1 (Wound check)
2. WEEK 5 (ROM check)
3. WEEK 9 (Strength-stability check)
4. WEEK 16 (Final check prior to release to sports)
5. ONE YEAR (if necessary)

We are going to carefully monitor your progress at each of these visits.

POST-OPERATIVE REHABILITATION PROGRAM

IMMEDIATELY AFTER SURGERY

As soon as you wake up from anesthesia, you should begin opening & closing your fist, in the recovery room—slowly and deliberately. Do this frequently, at least every hour while awake, for the first 2 days after surgery. Early exercises help avoid stiffness & muscle dysfunction which can delay recovery.

ON ARRIVAL HOME

You are to elevate your elbow (prop it on a pillow or 2) & use ice for the 1st 24 hrs. After that use ice intermittently as needed for pain and swelling. Keep the dressing dry.

WEEK 0-2 (Early Healing & Range of Motion Phase)

1. **WEIGHT BEARING:** Do not use the operated arm to push yourself up from a chair or bed.
2. **WOUND CARE:** You may shower 48 hours after surgery if you cover your arm with a plastic bag. Put a towel around your upper arm so that if water gets into the plastic bag it wets the towel and not your wound. If drainage does occur keep the wound dry and covered. If it doesn't stop within 5 days of surgery call the office. You may get the incisions wet, in a shower, 7 days after surgery. Do not soak the elbow in a bath tub, hot tub, or swimming pool until 2 weeks after surgery. Don't be surprised if bruising develops 3 to 7 days after the operation in the arm or forearm.
3. **GOAL:** By two weeks the knee should move from almost full extension to more than 90 degrees flexion and will likely continue to be sore, stiff, and swollen. The splint & dressing will be removed the 1st post-op visit.

WEEK 2-4 (Begin Physical Therapy)

1. **RANGE OF MOTION:** Passive flexion is begun. Gentle active assisted elbow extension is allowed *if the forearm is supinated*. **Do not** push past the pain. Active pronation is allowed if the elbow is flexed 90 degrees.
2. **ACTIVITY:** Use a sling for support & comfort when not doing exercises.
3. **GOAL:** By four weeks the elbow should extend to -30 degrees and flex to at least 100 degrees. It is not unusual to still have some swelling in the elbow which may limit motion. Do not be discouraged if some swelling persists.

WEEK 4-8 (Begin Strengthening)

1. **RANGE OF MOTION:** Begin AAROM in pronation-supination with the elbow flexed to 90 degrees, elbow & forearm supported on a tabletop. You may begin AAROM in flexion. You may extend the elbow fully if the forearm is supinated.
2. **STRENGTHENING:** Begin isometric elbow flexion strengthening with the elbow flexed and forearm supinated. Isometric pronation is also allowed in this position. Try to exercise 1/2 hour twice a day. **Do not** do any strengthening exercise that causes pain.

3. **GOAL:** By eight weeks the range of motion of the elbow should be nearly equal the normal side and feel well enough to resume light use—bathing & dressing.

WEEK 8-16 (Activity Specific Training)

1. **STRENGTHENING:** You may begin using free weights, 1 or 2 pounds at first, for elbow curls. Use a hammer to strengthen forearm pronation. Begin isometric elbow supination. By 12 weeks you may use any weight equipment in a gym that feels comfortable. “Test” the weigh before performing the 1st repetition. **Eccentric training** (lowering a weight) helps remodel (& thus strengthen) the repair.
2. **GOAL:** By 16 weeks the elbow should feel well enough to begin to resume full unrestricted activities and sports including tennis, racquet ball, football, baseball, softball, basketball, soccer, wrestling, volleyball, skating, boxing, and water and snow skiing, **provided that there is full strength, full ROM, and no swelling or pain.**
3. **COMMENT:** It may take between six months and a year to regain full confidence in the reconstructed knee. Confidence can only be regained by using the knee and subjecting it to the demands of the sport that you desire to return to.

ANSWERS TO COMMON QUESTIONS:

How long will I be in the hospital?

Surgery is performed as an outpatient. Patients go home 4-5 hours after surgery when they can eat and walk with assistance.

How long does the surgery take to perform?

The surgery usually requires 1-2 hours to perform.

When can I drive a car?

When you feel safe and confident behind the wheel so you can avoid getting into an accident. Generally, driving is often resumed within the first 2-4 weeks after surgery, but may take longer if you have to work a clutch. Do not drive when you are taking pain pills.

When can I return to work or school?

Motivated people who have a sitting or desk job can usually be back at work by 7-10 days after surgery. Construction workers take 4-6 months.

What is the success rate of the surgery?

95% of patients will have strength & function nearly equal to the normal arm and will be able to return to full unrestricted activities.

Can I reinjure the tendon?

Of course, remember that you tore your own natural tendon, so it is theoretically possible to rupture your repair. Fortunately, rupture of the repair is uncommon. You are more likely to tear the tendon in the other elbow than to re-tear your repair. Eccentric training (lowering weights) and “testing” weights before lifting are the best ways to prevent re-injury.

Can my therapist watch the operation?

Yes, the therapist can call (727) 724-6169 x2 and let our medical assistant know if they would like to observe the surgery. It is a hospital policy the non-medical personal are not permitted in the operating room; this includes family and friends.

If you have any more questions, and you should, please write them down in the space below and ask me.