

UVA HAND CENTER - THERAPY

Distal Biceps Re-Insertion Rehabilitation Protocol

Post-Op to Week 3:

- Pt is immobilized in 90 degrees of flexion, neutral rotation and wrist in a position of comfort, either a cast or brace/splint may be used.
- HEP includes
 - ✓ edema control with elevation and compression garments as needed
 - ✓ Tendon gliding exercises for digital motion, thumb AROM.
 - ✓ Wrist AROM keeping the forearm in neutral
 - ✓ Shoulder pendulum and AROM exercises in the elbow brace or cast.
- Patient may use sling for comfort or when around crowds to alert others of his surgery.

Week 3-Week 6:

- Patient is seen in therapy to be fit for and instructed in use of dynamic elbow flexion bracing.
- Typical progression includes gradually increase extension as tolerated (not extending past 30 degrees of flexion until 6 weeks post-op)
 - ✓ Week 3 ROM -60dg extension stop –
 - ✓ Week 4 ROM -45dg extension stop
 - ✓ Week 5 ROM -30dg extension stop
 - ✓ Week 6 ROM Extension as tolerates.
- Pt's HEP includes active extension to the extension limit set by therapist, allowing dynamic traction to pull patient's elbow into Full Flexion

(REMOVE FLEXION LOCK (zip tie) AT INITIATION OF PROTECTIVE MOTION)

- Pt begins gentle forearm rotation AROM with elbow in 90 degrees of elbow flexion.
- A posterior elbow splint may be fabricated for sleeping.
- Patient may wear sling in shower to protect arm and maintain hygiene.
- Typically patient is seen 1-3x per week for progression.

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Week 6-Week 8:

- Gradually restore full extension as tolerated by patient.
- Add sub-maximal wrist flexion/extension isometrics with elbow locked in 90 degrees of flexion and forearm in neutral.
- Begin gentle grip and pinch strengthening with elbow in 90 degrees flexion.
- Typically patient is seen 1-3x per week for progression.

Distal Biceps Re-Insertion Rehabilitation Protocol

Week 8-9

- Discontinue protective splint and begin AROM of elbow.
- Begin sub-maximal shoulder isometric exercises in extension, external rotation, internal rotation, abduction and adduction
 - ✓ **(NO SHOULDER FLEXION ISOMETRICS UNTIL WEEK 9)**
- Typically patient is seen 1-3x per week for progression.

Week 9-12:

- Continue wrist isometrics, grip and pinch strengthening and add gentle shoulder flexion isometrics.
- Typically patient is seen 1-3x per week for progression.

Week 12 to 6 months:

- Begin gradual isotonic strengthening of elbow and forearm.
- Gradually return to function, consider formal work conditioning program for high demand workers.
- Typically patient is seen 1-3x per week until full grip/UE strength required for ADL/Work is achieved.

Biceps Tendon Repair HEP Stage 1 (Weeks 1-3)

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You have undergone surgery to repair your ruptured biceps tendon. This is one of the tendons that helps you to bend your elbow. Tendons take longer to heal than most structures, and for that reason your tendon repair won't be strong enough to tolerate any use until you are 8 weeks post operatively. Until then we must protect your elbow by keeping you in a "protected" position in your splint.

AT NO TIME SHOULD YOU REMOVE YOUR SPLINT OR ACTIVELY BEND YOUR ELBOW – THIS WILL CAUSE RUPTURE OF YOUR REPAIRED TENDON!!

- Your splint will immobilize your elbow in 90 degrees of flexion.
- At this time your Home Exercise Program includes
 - ✓ Edema (swelling) control with elevation and compression garments as needed
 - ✓ Tendon gliding exercises for finger and thumb motion.
 - ✓ Gentle wrist AROM keeping the forearm in neutral (thumb up) position.
 - ✓ Shoulder pendulum and AROM exercises with the elbow brace or cast in place.
- You may use your sling for comfort or when around crowds to alert others of his surgery, but come out at home in safe situations to allow your shoulder to relax and remain mobile.

Biceps Tendon Repair HEP Stage 2 (Weeks 3-6)

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Now that you are 3 weeks out from surgery, we need to start getting your elbow moving in a careful controlled manner. Remember, the tendon will not be strong enough for any use until you are 8 weeks post operatively, so continue to protect your arm at all times.

Only remove your splint as instructed by your therapist, and support your injured with the “good” arm at all times.

- At today’s therapy visit you will be fit for and instructed in use of a dynamic elbow brace
- Your new Home Exercise Program includes passively (using your uninjured arm) bending your elbow (you may need to release the top two straps) (see figure a). Perform 10 repetitions hourly during the day.
- Then you will actively straighten your elbow, against the elastic band, to the extension limit set by your therapist. Allow the elastic band to pull your elbow into the maximum flexion allowed by splint (See figure b and c). Perform 10 repetitions hourly during the day.



a

b

c

- You may begin gentle wrist and forearm rotation motion (palm up/down) with elbow supported by “good” arm and furthest two straps released (See photos below) Perform 10 reps hourly.



Flexion

Extension

Supination

Pronation

- You will also need to continue bending your fingers and thumb to make sure that they do not become stiff while your arm is “out of action”. (refer to handouts given by your therapist for details).
- You may remove your splint to shower, but you must keep your arm supported in your fabric sling to do so. **DO NOT USE YOUR INJURED ARM TO SHOWER – THIS WILL CAUSE YOUR TENDON REPAIR TO RUPTURE!**

AT NO TIME SHOULD YOU ACTIVELY BEND YOUR ELBOW

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Biceps Tendon Repair HEP Stage 3 (Weeks 6-8)

Now that you are 6 weeks post operatively, you need to start preparing your arm for active use again. You still must wear your splint at all times to protect the tendon repair, and you must continue the ROM exercise from stage 2 (actively straightening and letting the rubber band traction bend your elbow).

- We will now start to work on gently strengthening your WRIST with isometric exercises while keeping your splint locked in 90 degrees and forearm in the neutral (thumb up) position. (See photos below)
- You will need to start gentle grip and pinch strengthening with elbow in 90 degrees flexion as instructed by your therapist.

AT NO TIME SHOULD YOU ACTIVELY BEND YOUR ELBOW – THIS WILL CAUSE RUPTURE OF YOUR REPAIRED TENDON!!

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Biceps Tendon Repair HEP Stage 4 (Week 8)

Now that you are 8 weeks post operative, your tendon repair is strong enough to allow you to begin gentle ROM out of your splint and for LIGHT use for daily life. At no time should you lift, pull, or use the arm for heavy activities – you can still rupture the tendon repair if you do these tasks too soon.

- You may discontinue wearing your protective splint at this point. You may want to wear your sling at work to keep you from accidentally using your injured arm for tasks that are still too vigorous.
- You may now begin gentle SHOULDER isometric exercises As noted in the photos below:



Shoulder Extension



Shoulder Abduction



Shoulder Adduction



Shoulder External Rotation



Shoulder Internal Rotation

AT NO TIME SHOULD YOU LIFT ANYTHING OVER 1# WITH YOUR INJURED ARM!!

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Biceps Tendon Repair HEP Stage 4 (Weeks 9-12)

- Continue your wrist isometrics, grip and pinch strengthening HEP.
- You can now add gentle shoulder flexion isometrics as noted in the photo below.

AT NO TIME SHOULD YOU LIFT ANYTHING OVER 1# WITH YOUR INJURED ARM– THIS WILL CAUSE RUPTURE OF YOUR REPAIRED TENDON!!

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Biceps Tendon Repair HEP Stage 5 (12 weeks – 6 months)

Now that you are 12 weeks post surgery, you can now use your arm for most functional tasks. However, you will notice that your injured arm is much weaker than your uninjured side. Be careful as you start to use the arm normally, gradually increasing your use without causing pain.

We will now start you on a program of functional strengthening your arm to allow you to return to full strength. Your therapist will tailor a unique program of HEP tasks for you to perform on a TID basis.

Depending on the intensity of your job or other activities, you may need more formal progression of your strengthening program, including a work conditioning program. If you have concerns about whether you will be able to return to full duty, please discuss this with your therapist and we will tailor a return to work program to fit your needs.