

Distal biceps tendon repair- Bledsoe: Zachary/Tofte/Kruse

This protocol is intended to provide the clinician with a guideline for the postoperative rehabilitation course of a patient who has undergone **distal biceps tendon repair**. General time frames are given for reference to the average, but individual patients will progress at different rates depending on their age, comorbidities, pre-surgical range of motion, strength, health/functional status, rehabilitation compliance, learning barriers and complications. Specific time frames, restrictions and precautions are given to protect healing tissues and surgical reconstruction.

Postoperative Guidelines

Surgical Indication

S/p repair to distal biceps tendon

Pain and swelling

This procedure can be painful during the recovery period and can cause swelling. It is normal for elbow crease and scar to be swollen 6 months after surgery. Redness does not always indicate infection but a lot of drainage from the wound is usually a sign of infection.

Return to Work

The timeline for returning to work can vary depending on the type of work performed, various accommodations that may be available within your work environment, and any postoperative complications. Your surgeon will discuss the timeline for returning to work after consideration of these factors.

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Phase I (7-10 days after surgery)

Rehabilitation appointments	<ul style="list-style-type: none"> Once a week for the first 4-6 weeks
Rehabilitation goals and priorities	<ul style="list-style-type: none"> Fit with Bledsoe Edema management Wound/Scar management Sling for showering
Suggested therapeutic exercises	<ul style="list-style-type: none"> Perform all exercises in Bledsoe brace with extension block at 50 degrees. Active elbow extension to 50 degrees Active pronation with elbow supported or locked in brace at 90 degrees Passive elbow flexion Passive supination with elbow supported or locked in brace at 90 degrees. Shoulder ROM as needed, no aggressive shoulder extension
Precautions	<ul style="list-style-type: none"> No pushing, pulling, or lifting more than 1-2 pounds with involved upper extremity No weightbearing with involved upper extremity
Orthotic	<ul style="list-style-type: none"> Post-operatively: Posterior splint, elbow immobilization at 90° for 5-7 days with forearm in neutral, unless otherwise indicated by surgeon Elbow placed in hinged ROM brace 7-10 days after surgery. Brace set at 50° elbow extension block to full flexion. To keep comfort zone locked brace about 60° in-between exercise session

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Phase II (2-3 weeks after surgery)

Rehabilitation appointments	<ul style="list-style-type: none"> Once a week for the first 4-6 weeks post-op
Rehabilitation goals and priorities	<ul style="list-style-type: none"> Adjust extension block weekly, increasing 10 degrees per week Scar management Edema management Light activities per restrictions with affected upper extremity per tolerance
Suggested therapeutic exercises	<ul style="list-style-type: none"> Perform all exercises in Bledsoe brace with extension block Active elbow extension to extension block Active pronation with elbow supported or locked in brace at 90 degrees Passive elbow flexion Passive supination with elbow supported or locked in brace at 90 degrees. Shoulder ROM as needed, no aggressive shoulder extension Sub-maximal pain-free shoulder isometrics
Precautions	<ul style="list-style-type: none"> No pushing, pulling, or lifting more than 1-2 pounds with involved upper extremity No weightbearing with involved upper extremity For Dr. Kruse patients, NO strengthening until 8 weeks
Orthotic	<ul style="list-style-type: none"> Progress extension block: Week 2 - 40° extension block to full elbow flexion Week 3 - 30° extension block to full elbow flexion

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Phase III (4-5 weeks after surgery)

Rehabilitation appointments	<ul style="list-style-type: none"> Occupational therapy 1x/week per instructed by therapist
Rehabilitation goals and priorities	<ul style="list-style-type: none"> Adjust extension block weekly, increasing 10 degrees per week Scar management Edema management Light activities per restrictions with affected upper extremity per tolerance
Suggested therapeutic exercises	<ul style="list-style-type: none"> AROM and AAROM for elbow flexion/extension with forearm in neutral AROM and AAROM forearm supination/pronation with elbow at 90° Single plane AROM for elbow flexion, extension, supination, and pronation Sub-maximal pain-free isometrics for elbow flexion and extension with forearm in neutral
Precautions	<ul style="list-style-type: none"> No pushing, pulling, or lifting more than 1-2 pounds with involved upper extremity No weightbearing with involved upper extremity For Dr. Kruse patients, NO strengthening until 8 weeks
Orthotic	<ul style="list-style-type: none"> Week 4 - 20° extension block to full elbow flexion Week 5 – 10 degrees extension block to full elbow flexion

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Phase IV (6 weeks after surgery)

Rehabilitation appointments	<ul style="list-style-type: none"> Occupational therapy 1x/week per instructed by therapist
Rehabilitation goals and priorities	<ul style="list-style-type: none"> Initiate weaning from orthosis in order to perform light activities Scar management Edema management Light activities per restrictions with affected upper extremity per tolerance
Suggested therapeutic exercises	<ul style="list-style-type: none"> Continue program as above May begin combined/composite motions (i.e. extension with pronation) Initiate sub-maximal pain-free supination and pronation
Precautions	<ul style="list-style-type: none"> No pushing, pulling, or lifting more than 1-2 pounds with involved upper extremity No weightbearing with involved upper extremity
Orthotic	<ul style="list-style-type: none"> Week 6 - 0° degrees of extension to full elbow flexion Initiate weaning from orthosis about 1 hour per day

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Phase V (8 weeks after surgery)

Rehabilitation appointments	<ul style="list-style-type: none"> Occupational therapy 1x/week per instructed by therapist
Rehabilitation goals and priorities	<ul style="list-style-type: none"> Discontinue Bledsoe brace if adequate motor control is achieved and no pain is present. Scar management Edema management Perform activities within restrictions
Suggested therapeutic exercises	<ul style="list-style-type: none"> If significant ROM deficits at 8 weeks, may consider more aggressive management after consultation with referring surgeon to regain ROM, like static progressive orthosis. Progressive resisted exercise program initiated for elbow flexion, extension, supination, pronation – progressing to low resistance, high repetition as tolerated. 2-3lbs weights max. Per Dr. Kruse, initiate sub-maximal pain-free isometrics for elbow flexion and extension with forearm in neutral
Precautions	<ul style="list-style-type: none"> No pushing, pulling, or lifting more than 5 pounds with involved upper extremity No weightbearing with involved upper extremity
Orthotic	<ul style="list-style-type: none"> Discontinue Bledsoe brace if adequate motor control is achieved and no pain is present

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Phase V (12-14 weeks after surgery)

Rehabilitation appointments	<ul style="list-style-type: none"> Discontinue therapy if appropriate or 1-2 more appointments if needed
Rehabilitation goals and priorities	<ul style="list-style-type: none"> Full return to all activities
Suggested therapeutic exercises	<ul style="list-style-type: none"> Specific sports strengthening or work strengthening Consider work hardening program Initiate weight bearing as tolerated Per Dr. Kruse, progressive resisted exercise program initiated for elbow flexion, extension, supination, pronation – progressing to low resistance, high repetition as tolerated. 2-3lbs weights max.
Precautions	<ul style="list-style-type: none"> No restrictions

References

Cil, A., Merten, S., Steinmann, S. P. (2008). Immediate active range of motion after modified 2-incision repair in acute distal biceps tendon rupture. *American Journal of Sports Medicine*, 37(1), 130-135. <https://doi.org/10.1177/0363546508323749>

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These rehabilitation guidelines were developed collaboratively between UW Health and UnityPoint Health - Meriter Rehabilitation and the UW Health Orthopedic Surgeons.

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