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## **Distal biceps tendon repair**

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.



#### Phase I (7-10 days after surgery)

Rehabilitation appointments	Once a week for the first 4-6 weeks
Rehabilitation goals and priorities	<ul> <li>Fit with Bledsoe hinge elbow brace</li> <li>Edema management</li> <li>Wound/Scar management</li> <li>Sling for showering</li> </ul>
Suggested therapeutic exercises	<ul> <li>Perform all exercises in Bledsoe brace with extension block at 50 degrees.</li> <li>Active elbow extension to 50 degrees</li> <li>Active pronation with elbow supported or locked in brace at 90 degrees</li> <li>Passive elbow flexion</li> <li>Passive supination with elbow supported or locked in brace at 90 degrees.</li> <li>Shoulder ROM as needed, no aggressive shoulder extension</li> </ul>
Precautions	<ul> <li>No pushing, pulling, or lifting more than 1-2 pounds with involved upper extremity</li> <li>No weightbearing with involved upper extremity</li> </ul>
Orthotic	<ul> <li>Post-operatively: Posterior splint, elbow immobilization at 90° for 5-7 days with forearm in neutral, unless otherwise indicated by surgeon</li> <li>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° inbetween exercise session</li> </ul>



#### Phase II (2-3 weeks after surgery)

Rehabilitation appointments	Once a week for the first 4-6 weeks post-op
Rehabilitation goals and priorities	<ul> <li>Adjust extension block weekly, increasing 10 degrees per week</li> <li>Scar management</li> <li>Edema management</li> <li>Light activities per restrictions with affected upper extremity per tolerance</li> </ul>
Suggested therapeutic exercises	<ul> <li>Perform all exercises in Bledsoe brace with extension block</li> <li>Active elbow extension to extension block</li> <li>Active pronation with elbow supported or locked in brace at 90 degrees</li> <li>Passive elbow flexion</li> <li>Passive supination with elbow supported or locked in brace at 90 degrees.</li> <li>Shoulder ROM as needed, no aggressive shoulder extension</li> <li>Sub-maximal pain-free shoulder isometrics</li> </ul>
Precautions	<ul> <li>No pushing, pulling, or lifting more than 1-2 pounds with involved upper extremity</li> <li>No weightbearing with involved upper extremity</li> </ul>
Orthotic	<ul> <li>Progress extension block:</li> <li>Week 2 - 40° extension block to full elbow flexion</li> <li>Week 3 - 30° extension block to full elbow flexion</li> </ul>



#### Phase III (4-5 weeks after surgery)

Rehabilitation appointments	<ul> <li>Occupational therapy 1x/week per instructed by therapist</li> </ul>
Rehabilitation goals and priorities	<ul> <li>Adjust extension block weekly, increasing 10 degrees per week</li> <li>Scar management</li> <li>Edema management</li> <li>Light activities per restrictions with affected upper extremity per tolerance</li> </ul>
Suggested therapeutic exercises	<ul> <li>AROM and AAROM for elbow flexion/extension with forearm in neutral</li> <li>AROM and AAROM forearm supination/pronation with elbow at 90°</li> <li>Single plane AROM for elbow flexion, extension, supination, and pronation</li> <li>Sub-maximal pain-free isometrics for elbow flexion and extension with forearm in neutral</li> </ul>
Precautions	<ul> <li>No pushing, pulling, or lifting more than 1-2 pounds with involved upper extremity</li> <li>No weightbearing with involved upper extremity</li> </ul>
Orthotic	<ul> <li>Week 4 - 20° extension block to full elbow flexion</li> <li>Week 5 – 10 degrees extension block to full elbow flexion</li> </ul>



#### Phase IV (6 weeks after surgery)

Rehabilitation appointments	<ul> <li>Occupational therapy 1x/week per instructed by therapist</li> </ul>
Rehabilitation goals and priorities	<ul> <li>Initiate weaning from orthosis in order to perform light activities</li> <li>Scar management</li> <li>Edema management</li> <li>Light activities per restrictions with affected upper extremity per tolerance</li> </ul>
Suggested therapeutic exercises	<ul> <li>Continue program as above</li> <li>May begin combined/composite motions (i.e. extension with pronation)</li> <li>Initiate sub-maximal pain-free supination and pronation</li> </ul>
Precautions	<ul> <li>No pushing, pulling, or lifting more than 1-2 pounds with involved upper extremity</li> <li>No weightbearing with involved upper extremity</li> </ul>
Orthotic	<ul> <li>Week 6 - 0° degrees of extension to full elbow flexion</li> <li>Initiate weaning from orthosis about 1 hour per day</li> </ul>



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### Distal biceps tendon repair

Phase V (8 weeks after surgery)

Rehabilitation appointments	<ul> <li>Occupational therapy 1x/week per instructed by therapist</li> </ul>
Rehabilitation goals and priorities	<ul> <li>Discontinue Bledsoe brace if adequate motor control is achieved and no pain is present.</li> <li>Scar management</li> <li>Edema management</li> <li>Perform activities within restrictions</li> </ul>
Suggested therapeutic exercises	<ul> <li>If significant ROM deficits at 8 weeks, may consider more aggressive management after consultation with referring surgeon to regain ROM, like static progressive orthosis.</li> <li>Progressive resisted exercise program initiated for elbow flexion, extension, supination, pronation – progressing to low resistance, high repetition as tolerated. 2-3lbs weights max.</li> </ul>
Precautions	<ul> <li>No pushing, pulling, or lifting more than 5 pounds with involved upper extremity</li> <li>No weightbearing with involved upper extremity</li> </ul>
Orthotic	<ul> <li>Discontinue Bledsoe brace if adequate motor control is achieved and no pain is present</li> </ul>



# Distal biceps tendon repair Phase V (12-14 weeks after surgery)

Rehabilitation appointments	Discontinue therapy if appropriate or 1-2 more appointments if needed
Rehabilitation goals and priorities	Full return to all activities
Suggested therapeutic exercises	<ul> <li>Specific sports strengthening or work strengthening</li> <li>Consider work hardening program</li> <li>Initiate weight bearing as tolerated</li> </ul>
Precautions	No restrictions