

## Physical Therapy Protocol: DISTAL BICEPS TENDON REPAIR

### RESTRICTIONS:

- NO active flexion or supination for 6 weeks
- NO combined shoulder and elbow extension for 6 weeks
- NO upper body weighted exercises for 3 months

## Phase I: Protection and Early Motion (Weeks 0–6)

### Primary Goals

- Protect the surgical repair and minimize stress on the tendon
  - Control pain and edema
  - Prevent stiffness in adjacent joints
  - Begin gentle, controlled elbow motion
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### Precautions

- **Posterior splint** for 1 week
  - **Hinged elbow brace** x 6 additional weeks
  - **No active elbow flexion or supination**
  - **No lifting or resistance through the operative arm**
  - **Avoid combined shoulder and elbow extension** (tension on repair)
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### Interventions

#### Pain and Swelling Management

- Cryotherapy 15–20 min several times daily x 2 weeks
- Compression sleeve and edema glove if indicated
- Elevation of arm above level of heart whenever feasible

#### Passive and Assisted Motion (1–2 weeks)

- Begin **PROM** elbow flexion/extension
- Gentle forearm pronation/supination with elbow at 90° flexion (to protect repair)
- Shoulder, wrist, and hand AROM as tolerated
- Hinged elbow brace progressive motion
  - Week 3 - 60° to full elbow flexion
  - Week 4 - 45° to full elbow flexion

- Week 5 - 30° to full elbow flexion
- Week 6 - 20° to full elbow flexion

### Scapular and Shoulder Mobility

- Gentle scapular retraction/depression drills
- Shoulder AROM (avoid extension beyond neutral)

### Criteria to Progress to Phase II

- Pain  $\leq$ 3/10 at rest
  - PROM flexion  $\geq$ 120°, extension  $\leq$ 30° contracture
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## Phase II: Active Motion and Early Strengthening (Weeks 6–12)

### Primary Goals

- Restore active range of motion (AROM)
  - Discontinue brace if adequate motor control
  - Initiate gentle strengthening of elbow flexors and supinators
  - Maintain shoulder and scapular strength
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### Precautions

- Avoid resisted flexion or supination x12 weeks
  - Avoid upper body weighted exercises x12 weeks
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### Interventions

#### AROM Progression

- Begin active elbow flexion/extension in pain-free range
- Forearm pronation/supination AROM with elbow flexed 90°
- Gradually restore full extension by ~8 weeks
- Continue shoulder, wrist, and hand strengthening

#### Gentle Isometrics

- Submaximal, pain-free isometrics for:
  - Elbow flexion
  - Forearm supination

- Brachialis and brachioradialis activation (neutral or pronated grip)
- Shoulder girdle stabilization (scapular retraction, serratus punches)

### Criteria to Progress to Phase III

- Full, pain-free AROM (flexion, extension, pronation, supination)
  - No pain with daily light use
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## Phase III: Strengthening and Functional Return (Weeks 12–24+)

### Primary Goals

- Restore full strength and endurance of elbow flexors and supinators
  - Normalize functional and work-related activities
  - Prepare for unrestricted lifting or sport participation
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### Precautions

- Avoid maximal resisted flexion/supination until  $\geq 16$  weeks
  - Limit heavy or eccentric loading until near full strength
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### Interventions

#### Progressive Strengthening

- Begin **light isotonic resistance** (1–3 lb) for:
  - Biceps curls (neutral grip  $\rightarrow$  supinated)
  - Forearm supination against resistance band
  - Elbow extension and wrist flexor/extensor work
- Gradually increase load as tolerated (progress 10–20% per week)

#### Functional Integration

- Multi-plane strengthening incorporating shoulder and scapular stabilizers
- Closed-chain exercises (wall push-ups, planks on elbows if pain-free)
- Endurance training (higher reps, lower load)

#### Return to Work / Sport

- Work simulation tasks (lifting, carrying) under control
- Gradual reintroduction to gym or occupational activity at 4–6 months

- Sport-specific training (e.g., golf swing, throwing) after 5–6 months if cleared

**Expect Strength and endurance recovery to 80–90% of the contralateral limb by ~6 months. Strength will improve up to 1 year.**

**No formal weight or work restrictions after 6 months.**