Lahey Hospital & Medical Center

Rehabilitation Protocol:

Biceps Tenodesis

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◄ Overview

The long head of the biceps originates at the supraglenoid tubercle of the scapula and superior labrum and inserts at the tuberosity of the radius and fascia of the forearm via the bicipital aponeurosis. Long head of the biceps tendon (LHBT) pathology is often associated with impingement as the tendon is subject to compression under the coracoacromial arch. It is also closely associated with supraspinatus tears. Risk factors for tears of the LHBT include age, participation in overhead sports, smoking and work involving heavy lifting. Acute tears may also occur suddenly in young, healthy individuals.

Both LHBT tenotomy and tenodesis involve severing the LHBT from the intra-articular attachment. With the tenodesis, the LHBT is reattached to the humerus outside of the joint.

The goal of LHBT tenodesis is to provide the patient with pain relief, restore elbow function and provide a satisfactory cosmetic outcome.

◄ Phase I Protective Phase
0−7 Days

Goals

- Protect anatomic repair
- Allow healing
- Initiate early passive range of motion
- Minimize muscular atrophy
- Minimize pain/inflammation
- Promote dynamic stability

Precautions

- Sling for comfort
- **NO** active elbow flexion
- **NO** excessive shoulder External Rotation
- **NO** terminal stretch long head bicep until advised by surgeon
- **NO** resisted supination or resisted elbow flexion
- **NO** lifting

Weeks 0–2

- Sling
- Cryotherapy
- AROM C-spine, wrist and hand
- Gentle ER, otherwise Full PROM all joints as tolerated
- Restore full PROM within 2 -4 weeks
- Pendulums
- Posture
- Manual: Focus on posterior and inferior capsule to prevent impingement

◄ Phase II

Weeks 2 – 6

Goals

- Protect repair
- Restore full AROM
- Increase activity tolerance
- Increase muscle endurance
- D/C Sling

Precautions

- Sling for comfort
- Terminal Biceps stretch as advised by surgeon

- Continue cryotherapy
- Wean from sling
- Continue exercises above
- Restore Full PROM

Week 4

- Progress shoulder AROM, emphasis on mechanics (supine to upright)
- Terminal bicep stretch as advised by surgeon
- Gradual progress to Full Active Elbow Flex/Ext and Full Active supination/pronation
- Joint mobilizations as indicated to progress ROM

◄ Phase III
Weeks 6 - 8

Goals
- AROM equal to non-involved side
- Improve strength and endurance
- Promote dynamic stability
- Initiate biceps strengthening at 6 weeks (eccentric → concentric)

Precautions
- Apply controlled loads to healing tissue
- Monitor pain and swelling
- NO biceps strengthening until 6 weeks

- Cryotherapy
- Progress from posterior capsule stretch from manual to active sleeper stretch/cross body stretch
- Pendulums
- Prone I,T,Y,W with emphasis on mechanics
- Wall pushups
- Resistive band:
  - Shoulder extension
  - IR/ER in scapular plane
  - Serratus punch
  - Rows
- Isotonic:
  - Eccentric Bicep Curls – progress to concentric as tolerated
  - Progress to combined elbow flexion and supination
  - Pronation/supination

Phase III > 9 weeks

Goals
- Progress strengthening with emphasis on mechanics
- Return to sports when cleared by surgeon

Precautions
- Minimize overhead activities
- Weight lifting precautions:
  - Keep hands within sight
  - No military press
  - No wide grip bench press
  - Do not drop elbows below plane of body

AAROM = active-assisted range of motion, ADL = activity of daily living, AROM = active range of motion, PROM = passive range of motion, ER = external rotation, IR = internal rotation, ROM= Range of Motion G/H = glenohumeral

Rehabilitation Protocol for Biceps Tenodesis: Summary Table

Post –op Phase/Goals	Range of Motion	**Therapeutic Exercise**	**Precautions**
Phase I : 0 – 7 days Goals: Protect anatomic repair Allow healing Initiate early passive range of motion Minimize muscular atrophy Minimize pain/inflammation Promote dynamic stability	Gentle PROM in ER Otherwise Full PROM all joints UE as tolerated Restore full PROM within 2 – 4 weeks	Manual: Focus on posterior and inferior capsule to prevent impingement Cryotherapy AROM C-spine, wrist and hand Posture Full PROM all joints UE as tolerated Pendulums	Sling for comfort **NO** active elbow flexion **NO** excessive shoulder External Rotation **NO** terminal stretch long head bicep until advised by surgeon **NO** resisted supination or resisted elbow flexion **NO** lifting
Phase II Weeks 2 - 6 Active Phase Restore full AROM Increase Activity tolerance Increase muscle endurance	**4 Weeks**: Restore Full PROM Progress shoulder AROM, emphasis on mechanics (supine to upright) Terminal bicep stretch as advised by surgeon Gradual progress to Full Active Elbow Flex/Ext and Full Active supination /pronation Joint mobilizations as indicated to progress ROM	Continue cryotherapy Wean from sling Continue exercises above Joint mobilizations as indicated to progress ROM	D/C Sling Terminal bicep stretch as prescribed by surgeon
Phase III **Weeks 6 -8** AROM equal to non-involved side Improve strength and endurance Promote dynamic stability Initiate biceps strengthening	Cryotherapy Progress from posterior capsule stretch from manual to active sleeper stretch, cross body stretch Pendulums Prone I,T,Y,W with emphasis on mechanics Wall pushups Resistive band: Shoulder extension IR/ER in scapular plane Serratus punch Rows Isotonic: Eccentric Bicep Curls – progress to concentric as tolerated Progress to combined elbow flexion and supination Pronation/supination		Apply controlled loads to healing tissue Monitor pain and swelling NO biceps strengthening until 6 weeks
Phase IV **>9 weeks** Progress strengthening with emphasis on mechanics Return to sports when cleared by surgeon	Minimize overhead activities Weight lifting precautions: Keep hands within sight No military press No wide grip bench press Do not drop elbows below plane of body		