Biceps Tenodesis Rehabilitation Program

The GLSM Biceps Tenodesis Rehabilitation Program is an evidence-based and soft tissue healing dependent program allowing patients to progress to ADL’s, vocational, and sports-related activities as quickly and safely as possible. Individual variations will occur depending on surgical details and patient response to treatment.

This program is outlined for a Biceps tenodesis performed with or without another debridement type procedure (Subacromial decompression, Acromioplasty, Distal Clavicle Excision).

If performed with a rotator cuff repair, follow the appropriate rotator cuff rehabilitation program.

Contact us at 1-800-362-9567 ext. 58600 if you have questions.

| Factors Influencing Post-op Progression | Tissue quality and soft tissue healing: age, smoking, diabetes |
|                                        | Applying appropriate loads based on time frames and healing |
|                                        | Patient response to treatment (pain, inflammation, edema) |

### General Program Outline

#### Sling

3-4 wks. D/C based on MD approval

May be used up to 6 wks during ADL’s and work activities as a precaution

#### ROM guidelines

**Elbow / forearm**

- **PROM:** Initiate day 2. Progress as tolerated. Goal: wk 2 full ROM
- **AAROM / AROM:** Initiate day 7. Progress at tolerated. Goal: wk 2-3 full ROM

**Shoulder**

- **PROM / AAROM:** Initiate day 7. Progress as tolerated. Goal: wk 5-6 full ROM
- **AROM:** Initiate at wk2. Limit elevation 0-90 deg for 4 wks. Goal: wk 6-8 full ROM
  - Avoid compensatory scapular substitution during shld elevation

#### Strengthening

**Elbow / forearm**

- No isolated resisted biceps contraction for 6 wks
  - No resisted concentric elbow flexion
  - No resisted eccentric elbow extension
  - No resisted forearm supination
- Triceps strengthening at wk 4
- Bicep strengthening bilateral arm supported wk 6, bilateral un-supported wk7, unilateral un-supported wk 8
- Goal is full strength by 12-16 wks

**Shoulder / scapula**

- Initiate wk 1 with sub-max isometric with gradual progression
- Progression to full RTC and scapula-thoracic strengthening at wk 6
- Emphasis on muscle endurance and strengthening for RTC and scapulothoracic
- No overhead strengthening until wk 10-12
  - When implemented, emphasis on endurance and short lever arm
- Goal is full strength by 12-16 wks

#### Rhythmic stabilization

- Initiate wk 2 sub-max in protected positions with gradual progression

#### Return to activity

- Desk work: 2-4 wks
- Personal care and low level ADL’s (no resisted lifting): 4-6 wks
- ADL requiring moderate lifting: 2-4 months
- Sports activities: 3-6 months

3/2011
# Biceps Tenodesis Rehabilitation Program

## Phase I: 0-6 wks

**Protected phase with Gradual Return of ROM**

### Goals
- Protect anatomic repair
- Patient education regarding activity limitations
- Adequate pain control
- Initiate gentle ROM and therapeutic exercise based on guidelines

### Patient Education
- No resisted isolated biceps contraction for 6 wks (elbow flexion, forearm supination)
- No lifting or carrying of objects >1 lb. No lowering of objects > 1 lb
- No turning door knobs, using a screw driver, opening a jar
- No quick or sudden movements. No behind the back movements

### Sling
- 3-4 weeks. D/C based on MD approval
- May use up to 6 wks during ADL’s and work activities as a precaution

### Modalities
- Ice 15 minutes 3-5x/day, more often as needed for pain control
- IFC for pain management/inflammation control

### HEP initiate at wk 1 post-op
- Postural education to avoid forward head / rounded shoulders
- Active or assisted pendulum, AROM elbow / wrist / hand, gripping
- Shoulder PROM, AAROM: flexion, scaption, ER (in scapular plane)
- Thoracic AROM mid-range extension seated or standing
- Active scapular retraction with depression

### ROM guidelines
- Avoid compensatory scapular shrug during shld elevation

#### Elbow / forearm
- PROM: Initiate day 2. Progress as tolerated. Goal: wk 2 full ROM
- AAROM / AROM: Initiate day 7. Progress at tolerated. Goal: wk 2-3 full ROM

#### Shoulder
- PROM / AAROM: Initiate day 7. Progress as tolerated. Goal: wk 5-6 full ROM
- AROM: Initiate at wk2. Limit elevation 0-90 deg for 4 wks. Goal: wk 6-8 full ROM

### Treatment Interventions
- No isolated biceps resistance. Initial emphasis on ROM per guidelines and pain control.
- Facilitate thoracic extension and proper posture. Initiate active scapular mobility
- Initiate sub-max GH and RTC activation exercises based on guidelines
- Initiate sub-max rhythmic stabilization in protective positions

#### 4 key exercises (max LT/MT, inhibit UT):
- Sidelying ER
- Sidelying flexion
- Prone ext
- Prone hor abd ER

#### Wk 1: Elbow / forearm AROM
- Shld AROM elevation, ER/IR in scapular plane per tolerance
- Active thoracic ext, scapular retraction, GH isometric

#### Wk 2: Shld AROM elevation 0-90 deg only, ER/IR scap plane, AAROM ER/IR in 60 deg ABD UBE forward only, supine protraction, prone row, side-lying ER, bilateral ER with scapular retraction for LT activation
- Manual scap resist for LT in side-lying
- Rhythmic stabilization: sub-max supine shld 30/30/30 position

#### Wk 3: Shld AROM elevation 0-90, ER/IR in 90 deg ABD. Emphasis on endurance
- Prone rows, prone hor abd, prone ext

#### Wk 4: Shld AROM elevation per tolerance
- Low load long duration stretch (TERT) if significant hypomobility
- Rhythmic Stabilization: sub-max progress to bilateral 90 deg flexion
- Triceps strengthening

### Cryotherapy
### Biceps Tenodesis Rehabilitation Program

<table>
<thead>
<tr>
<th>Phase II: 6-12 wks</th>
<th>Restore Full ROM and Initiate Strengthening Phase</th>
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<tbody>
<tr>
<td><strong>Goals</strong></td>
<td>Adequate pain management</td>
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<tr>
<td></td>
<td>Increase AROM to be equal bilaterally</td>
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<td>Increase muscle strength and endurance. Integrate biceps resistance</td>
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<td></td>
<td>Increase activity tolerance</td>
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<tr>
<td><strong>Modalities</strong></td>
<td>Cryotherapy, IFC for pain management</td>
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<tr>
<td><strong>ROM guidelines</strong></td>
<td>No limitations. Full AROM expected by 8 wks</td>
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<tr>
<td><strong>Treatment Interventions</strong></td>
<td>Facilitate regaining functional ROM with normal movement patterns by wk 8</td>
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<td></td>
<td>Emphasis on scapular stabilization and rotator cuff strengthening and endurance</td>
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<td></td>
<td>Initiate biceps strengthening exercises</td>
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<td>Progression of rhythmic stabilization exercises</td>
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<td>Implement overhead strengthening (light weight, elbow bent for short lever arm) wk 10 if needed</td>
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<td>Active warm-up: pendulum, UBE forward / reverse</td>
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<td>ROM activities as needed: Low load long duration stretch (TERT), GH mobilizations, PROM with end range stretch, AAROM</td>
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<td>Therapeautic exercise: scapula-thoracic, GH, RTC, total arm strengthening</td>
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<td>S-T: Chest press(+), rows full ROM, press downs, scaption (Moseley)</td>
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<td>prone ext, prone hor abd neutral, resisted wall slides for lower trapezius</td>
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<td></td>
<td>GH: flexion, prone hor abd w/ER (press downs, scaption) Townsend extension with scapular retraction</td>
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<td>RTC: sidelye ER, isotonic ER/IR, bilateral ER with SPRI</td>
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<td>Total arm strengthening: triceps, biceps curls bilateral (elbow supported)</td>
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<td>Rhythmic stabilization: unilateral 90 flexion</td>
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<td>Wk 7:</td>
<td>Biceps curls bilateral (elbow un-supported), isotonic resisted supination/pronation</td>
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<td>Wk 8:</td>
<td>Biceps curls unilateral un-supported, lat pull downs, isokinetic ER/IR mod neutral, Rhythmic stabilization: CKC &lt; BW</td>
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<td>Wk 9:</td>
<td>Single arm press and rows, isokinetic supination/pronation</td>
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<td>Wk 10:</td>
<td>Isotonic ER/IR 90/90 position, Isokinetic ER/IR 90/90 position, prone ball walk outs</td>
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<td>Wk 11:</td>
<td>Overhead strengthening circuit (if needed) with focus on endurance (1-5 lbs) and short lever arm, Resisted PNF patterns</td>
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<td><strong>Cryotherapy</strong></td>
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<tr>
<th>Phase III: 12-16 wks</th>
<th>Strengthening and Conditioning Phase, Return Back to Activity</th>
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<tbody>
<tr>
<td><strong>Goals</strong></td>
<td>Progress muscle strength, endurance, and power</td>
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<td>Initiate higher level activities depending on functional demands and MD approval</td>
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<td><strong>Treatment Interventions</strong></td>
<td>Continue to target scapulothoracic, glenohumeral, rotator cuff, and total arm strengthening and endurance</td>
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<td>Progress overhead strengthening circuit (if needed) to higher weights continuing with short lever arm</td>
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<td>Progress proprioceptive/kinesthetic activities</td>
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<td>Plyometrics: bilateral progress to unilateral</td>
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<td><strong>Return to Sports</strong></td>
<td>Based on MD approval, full ROM, minimal pain at rest and activity, isokinetic strength scores of 90%.</td>
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<td>Return to interval throwing program 3 months</td>
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<td>Return to pitching off a mound 4.5 months</td>
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<td>Return to golf 3-4 months</td>
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<td>Return to basketball / volleyball 4 – 5 months</td>
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Ellenbecker T, Bailie D. Rehabilitation after surgical treatment of the long-head biceps tendon.


