

This rehabilitation program is designed to return the individual to their full activities as quickly and safely as possible, following biceps tenotomy. Modifications to this guideline may be necessary dependent on physician specific instruction or other procedures performed. This evidence-based guideline is criterion-based; time frames and visits in each phase will vary depending on many factors. The therapist may modify the program appropriately depending on the individual's goals for activity following this surgery.

This guideline is intended to provide the treating clinician a frame of reference for rehabilitation. It is not intended to substitute clinical judgment regarding the patient's post-operative care based on exam/treatment findings, individual progress, and/or the presence of concomitant procedures or post-operative complications. If the clinician should have questions regarding post-operative progression, they should contact the referring physician.

**Precautions:**

- If patient has a concomitant injury/repair treatment will vary- consult with surgeon.
- No active ROM of the elbow

| Phase                               | Suggested Interventions   | Goals/Milestones for Progression  |
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| <p><b>Phase I</b><br/>Weeks 0-2</p> | <p><i>Specific Instructions:</i></p> <ul style="list-style-type: none"> <li>• Use of sling for discomfort, wean out as discomfort allows. Ace wrap or tubi-grip around arm/bicep from hand to upper arm for 2 weeks.</li> <li>• PT ordered per physician discretion</li> </ul> <p><i>Suggested Exercises:</i></p> <ul style="list-style-type: none"> <li>• Shoulder Pendulums</li> <li>• PROM shoulder all planes as tolerated</li> <li>• PROM elbow flexion/extension, pronation/supination</li> <li>• AROM wrist and hand</li> <li>• Cervical spine stretching               <ul style="list-style-type: none"> <li>- Upper Trapezius, Levator Scapulae, Scalenes</li> </ul> </li> <li>• Posture training               <ul style="list-style-type: none"> <li>- Scapular glides</li> <li>- Scapular retractions</li> <li>- Scapular clock</li> <li>- Progressing towards scapular isometrics</li> </ul> </li> <li>• Stress ball squeezes</li> <li>• Maintain cardiovascular health using walking, exercise bike</li> </ul> <p><i>Modalities</i></p> <ul style="list-style-type: none"> <li>• Ice, IFC (control pain and inflammation)</li> </ul> | <p><i>Goals of Phase:</i></p> <ol style="list-style-type: none"> <li>1. Initiate PROM</li> <li>2. Pain control</li> <li>3. Edema control</li> <li>4. Incisional healing</li> </ol> <p><b>AVOID:</b></p> <ol style="list-style-type: none"> <li>1. AROM of elbow or shoulder</li> <li>2. No excessive Shoulder external rotation, stop at first end feel.</li> <li>3. No Lifting of objects</li> </ol> <p><i>Criteria to Advance to Next Phase:</i></p> <ol style="list-style-type: none"> <li>1. Incisional Healing</li> <li>2. Full PROM to elbow and shoulder</li> <li>3. Completion of phase 1 activities without pain or difficulty.</li> </ol> |

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|                                       | <p><i>Mobilization</i></p> <ul style="list-style-type: none"> <li>• Thoracic Spine and costovertebral joints</li> <li>• Begin gentle scar mobilization</li> </ul>   |  |
| <p><b>Phase II</b><br/>Weeks 2-4</p>  | <p><i>Suggested Exercises:</i></p> <p>Shoulder</p> <ul style="list-style-type: none"> <li>• AAROM dowel in all planes/table slides→AROM</li> <li>• Pulleys (Normal Scapulohumeral Rhythm must exist to decrease Impingement)</li> <li>• Begin posterior capsule stretching as indicated: side lying shoulder IR stretch, and cross body adduction stretch</li> </ul> <p>Elbow/hand:</p> <ul style="list-style-type: none"> <li>• Sub-max isometrics elbow flex/extension in neutral shoulder position</li> <li>• Initiate isometric exercises sub-maximal contraction</li> <li>• AAROM of elbow flexion/extension, pronation/supination</li> </ul> <ul style="list-style-type: none"> <li>• Maintain cardiovascular health using walking, exercise bike</li> <li>• LE and trunk exercises to be initiated (no bouncing)</li> </ul> <p><i>Modalities:</i></p> <ul style="list-style-type: none"> <li>• Ice, IFC (control pain and inflammation)</li> </ul> <p><i>Mobilizations:</i></p> <ul style="list-style-type: none"> <li>• Joint mobilizations where restricted:</li> <li>• Glenohumeral/scapulothoracic/trunk (PA/Inferior Add in neutral, mild ER, and mild IR)</li> </ul> | <p><i>Goals of Phase:</i></p> <ol style="list-style-type: none"> <li>1. Pain control</li> <li>2. D/C sling</li> <li>3. Improve proper physiologic movement</li> <li>4. Full AROM</li> <li>5. Begin light waist level functional activities</li> </ol> <p><b>AVOID:</b></p> <ol style="list-style-type: none"> <li>1. Lifting with surgical arm</li> </ol> <p><i>Criteria to Advance to Next Phase:</i></p> <ol style="list-style-type: none"> <li>1. Full AROM shoulder and elbow</li> <li>2. Proper scapular mechanics</li> <li>3. Completion of phase II without pain</li> </ol> |
| <p><b>Phase III</b><br/>Weeks 4-6</p> | <p><i>Suggested Exercises:</i></p> <ul style="list-style-type: none"> <li>• Continue interventions from previous phase including shoulder and elbow PROM and AROM</li> <li>• Add wall slides as tolerated in the scapular plane</li> <li>• UBE (elbow below shoulder height with minimal reach and resistance)</li> <li>• Begin to incorporate posterior capsule stretch – Cross body adduction, side lying IR sleeper stretch.</li> <li>• Initiate biceps strengthening, beginning with light resistance <ul style="list-style-type: none"> <li>○ Resisted biceps curls</li> <li>○ Resisted supination/pronation</li> <li>○ Resisted triceps extension</li> </ul> </li> </ul>  | <p><i>Goals of Phase:</i></p> <ol style="list-style-type: none"> <li>1. Normal strength, endurance and neuromuscular control</li> <li>2. Return chest-level functional activities</li> </ol> <p><b>AVOID:</b></p> <ol style="list-style-type: none"> <li>1. Strengthening activities until near full ROM achieved</li> </ol>   |

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|   | <ul style="list-style-type: none"> <li>○ Resisted wrist extension/wrist flexion</li> <li>● Rhythmic stabilizations for the scapular muscles             <ul style="list-style-type: none"> <li>○ ER/IR in scapular plane</li> <li>○ Flexion/extension and abduction/adduction at various angles of elevation</li> </ul> </li> <li>● Initiate muscular endurance gain with high repetition of 30-50 with low resistance of 1-3 lbs.</li> <li>● Begin closed chain strengthening as tolerated (wall, counter, knees, floor)</li> <li>● Initiate prone rows 30/45/90</li> <li>● Initiate prone I's, T's &amp; Y's</li> <li>● Initiate subscapularis strengthening to focus on both upper and lower fiber segments             <ul style="list-style-type: none"> <li>○ Push up plus, cross body diagonals with resistance tubing, IR resistance band (0, 45, 90 degrees of abduction), forward punch</li> </ul> </li> <li>● Side lying ER with towel roll</li> <li>● Full can scapular plane shoulder raise with good mechanics</li> <li>● Continue cryotherapy if needed for pain and inflammation</li> </ul> | <p><i>Criteria to Advance to Next Phase:</i></p> <ol style="list-style-type: none"> <li>1. Full, non-painful AROM to elbow and shoulder</li> <li>2. Good tolerance to strengthening without increase in symptoms</li> </ol>   |
| <p><b>Phase IV</b><br/>Weeks 6 Plus post op</p> | <p><i>Suggested Exercise:</i></p> <ul style="list-style-type: none"> <li>● Continue phase I-III interventions as needed</li> <li>● Focus on proper technique with quality, uncompensated motion</li> <li>● Focus on low load, high repetitions (30-50). Open and closed chain strengthening advancing as able</li> <li>● Resisted PNF diagonals</li> <li>● Maintain cardiovascular health using walking, exercise bike, consider light jogging if indicated.</li> <li>● Progressive return to upper extremity weightlifting program emphasizing the larger, primary upper extremity muscles: deltoid, lats, pectoralis major</li> </ul>   | <p><i>Goals of Phase:</i></p> <ol style="list-style-type: none"> <li>1. Maintain full non painful AROM</li> <li>2. Return to full strenuous work activities</li> <li>3. Return to full recreational activities</li> </ol> <p><b>AVOID:</b></p> <ol style="list-style-type: none"> <li>1. Excessive anterior capsule stress</li> <li>2. With weightlifting – avoid military press with wide grip bench</li> </ol> <p><i>Criteria to Advance to Return to sport/overhead work:</i></p> <ol style="list-style-type: none"> <li>1. Full uncompensated movement</li> <li>2. Satisfactory static stability</li> </ol> |

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|  | <p>Milestones to return to overhead work and sport activity</p> <ol style="list-style-type: none"><li>1. Clearance from MD</li><li>2. No complaints of pain</li><li>3. Adequate ROM, strength and endurance of rotator cuff and scapular musculature for task completion</li><li>4. Compliance with continued HEP.</li><li>5. If starting with UE weightlifting program, emphasize larger primary muscles (deltoid, latissimus dorsi, pec major) –Light weight, high reps.</li></ol> |  |
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