



## REHABILITATION GUIDELINES

**Edward S. Chang, MD**  
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### OFFICE LOCATIONS

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### CLINICAL NURSE

Eileen Perri, BSN  
(703) 797-6918

## **BICEPS TENODESIS**

The rehabilitation guidelines are presented in a criterion based progression program. General time frames are given for reference to the average, but individual patients will progress at different rates depending on their age, associated injuries, pre-injury health status, rehab compliance, tissue quality and injury severity. Specific time frames, restrictions and precautions may also be given to protect healing tissues and the surgical repair/reconstruction.

### **INDIVIDUAL CONSIDERATIONS:**

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### **Phase I – Active/Passive Range of Motion Phase (Weeks 1- 2)**

#### **Goals:**

- Minimize shoulder pain and inflammatory response
- Achieve gradual restoration of passive range of motion (PROM)
- Enhance/ensure adequate scapular function

#### **Precautions/Patient Education:**

- Active ROM of elbow permitted. No weight >1 lb.
- No excessive external rotation range of motion (ROM) / stretching. Stop when you feel the first end feel.
- Use of a sling to minimize activity of biceps
- Ace wrap upper forearm as needed for swelling control
- No lifting of objects with operative shoulder
- Keep incisions clean and dry
- No friction massage to the proximal biceps tendon / tenodesis site
- Patient education regarding limited use of upper extremity despite the potential lack of or minimal pain or other symptoms

#### **Activity:**

- Shoulder pendulum hang exercise
- Gentle AROM elbow flexion/extension and forearm supination/pronation.
- AROM wrist/hand
- Begin shoulder PROM all planes to tolerance /do not force any painful motion
- Scapular retraction and clock exercises for scapula mobility progressed to scapular isometric exercises



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- Ball squeezes
- Sleep with sling as needed supporting operative shoulder, place a towel under the elbow to prevent shoulder hyperextension
- Frequent cryotherapy for pain and inflammation
- Patient education regarding postural awareness, joint protection, positioning, hygiene, etc.
- May return to computer based work

**Milestones to progress to phase II:**

- Appropriate healing of the surgical incision
- Full PROM of shoulder and elbow
- Completion of phase I activities without pain or difficulty

**Phase II – Active Range of Motion Phase (Week 3-6)**

**Goals:**

- Minimize shoulder pain and inflammatory response
- Achieve gradual restoration of AROM
- Begin light waist level functional activities
- Wean out of sling by the end of the 2-3 postoperative week
- Return to light computer work

**Precautions:**

- No lifting with affected upper extremity
- No friction massage to the proximal biceps tendon / tenodesis site

**Activity:**

- Begin gentle scar massage and use of scar pad for anterior axillary incision
- Progress shoulder PROM to active assisted range of motion (AAROM) and AROM all planes to tolerance
- Lawn chair progression for shoulder
- Active elbow flexion/extension and forearm supination/pronation (No resistance)
- Glenohumeral, scapulothoracic, and trunk joint mobilizations as indicated (Grade I - IV) when ROM is significantly less than expected. Mobilizations should be done in directions of limited motion and only until adequate ROM is gained.
- Begin incorporating posterior capsular stretching as indicated
- Cross body adduction stretch
- Side lying internal rotation stretch (sleeper stretch)
- Continued Cryotherapy for pain and inflammation
- Continued patient education: posture, joint protection, positioning, hygiene.

**Milestones to progress to phase III:**

- Restore full AROM of shoulder and elbow
- Appropriate scapular posture at rest and dynamic scapular control with ROM and functional activities
- Completion of phase II activities without pain or difficulty



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**Phase III - Strengthening Phase (Week 6-12)**

**Goals:**

- Normalize strength, endurance, neuromuscular control
- Return to chest level full functional activities

**Precautions:**

- Do not perform strengthening or functional activities in a given plane until the patient has near full ROM and strength in that plane of movement
- Patient education regarding a gradual increase to shoulder activities

**Activity:**

- Continue A/PROM of shoulder and elbow as needed/indicated • Initiate biceps curls with light resistance, progress as tolerated
- Initiate resisted supination/pronation
- Begin rhythmic stabilization drills
- External rotation (ER) / Internal Rotation (IR) in the scapular plane
- Flexion/extension and abduction/adduction at various angles of elevation
- Initiate balanced strengthening program
  - Initially in low dynamic positions
  - Gain muscular endurance with high repetition of 30-50, low resistance 1-3 lbs)
    - Exercises should be progressive in terms of muscle demand / intensity, shoulder elevation, and stress on the anterior joint capsule
    - Nearly full elevation in the scapula plane should be achieved before beginning elevation in other planes
    - All activities should be pain free and without compensatory/substitution patterns
    - Exercises should consist of both open and closed chain activities
    - No heavy lifting should be performed at this time
- Initiate full can scapular plane raises with good mechanics
- Initiate ER strengthening using exercise tubing at 30° of abduction (use towel roll)
  - Initiate sidelying ER with towel roll
  - Initiate manual resistance ER supine in scapular plane (light resistance)
  - Initiate prone rowing at 30/45/90 degrees of abduction to neutral arm position
  - Begin subscapularis strengthening to focus on both upper and lower segments
  - Push up plus (wall, counter, knees on the floor, floor)



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- Cross body diagonals with resistive tubing IR resistive band (0, 45, 90 degrees of abduction Forward punch
- Continued cryotherapy for pain and inflammation as needed

**Milestones to progress to phase IV:**

- Appropriate rotator cuff and scapular muscular performance for chest level activities
- Completion of phase III activities without pain or difficulty

**Phase IV – Advanced Strengthening Phase (Week 12)**

**Goals:**

- Continue stretching and PROM as needed/indicated
- Maintain full non-painful AROM
- Return to full strenuous work activities
- Return to full recreational activities

**Precautions:**

- Avoid excessive anterior capsule stress
- With weight lifting, avoid military press and wide grip bench press.

**Activity:**

- Continue all exercises listed above
- Progress isotonic strengthening if patient demonstrates no compensatory strategies, is not painful, and has no residual soreness
- Strengthening overhead if ROM and strength below 90 degree elevation is good
  - Continue shoulder stretching and strengthening at least four times per week
    - Progressive return to upper extremity weight lifting program emphasizing the larger, primary upper extremity muscles (deltoid, latissimus dorsi, pectoralis major)
      - Start with relatively light weight and high repetitions (15-25)
  - May initiate pre injury level activities/ vigorous sports if appropriate / cleared by MD

**Milestones to return to overhead work and sport activities:**

- Clearance from MD
- No complaints of pain
- Adequate ROM, strength and endurance of rotator cuff and scapular musculature for task completion
- Compliance with continued home exercise program