

# Biceps Tenodesis



DR. EASTWOOD

## POSTOPERATIVE PHASE I: Passive ROM Phase (1 to 2-4 Weeks)

### GOALS

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

### PRECAUTIONS/PATIENT EDUCATION

- No AROM of the elbow
- No excessive external rotation 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 hand exercise
- PROM 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
- All 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

*If you have any problems or questions,  
please call your doctor's office (8am-5pm).*

*Answering service for after hours.*

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## POSTOPERATIVE PHASE II:

### Active ROM Phase (4-6 Weeks)

#### 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 ancillary incision
- Progress shoulder PROM to 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 position)
- Continued cryotherapy for pain and inflammation
- Continued patient education: posture, joint protection, positioning, hygiene, etc.

#### MILESTONES TO PROGRESS TO PHASE III

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

## POSTOPERATIVE PHASE III:

# Strengthening Phase (6-10 Weeks)

### 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 cryotherapy for pain and inflammation as needed
- 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 pounds
  - Exercises should be progressive in terms of muscle demand/intensity, shoulder elevation, 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 food mechanics
  - Initiate ER strengthening using exercise tubing at 30° of abduction (use towel roll)
  - Initiate side-lying ER with towel roll
  - Initiate manual resistance ER supine in scapular plane (light resistance)
  - Initiate prone rowing at 30°/45°/90° of abduction to neutral arm position
  - Begin subscapularis strengthening to focus on both upper and lower segments
    - i. Push-up plus (wall, counter, knee on the floor, floor)
    - ii. Cross-body diagonals with resistive tubing
    - iii. IR resistive band (0°, 45°, 90° of abduction)
    - iv. Forward punch

### MILESTONES TO PROGRESS TO PHASE IV

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

## POSTOPERATIVE PHASE IV:

# Advanced Strengthening Phase (10 Weeks+)

### GOALS

- Continue stretching and PROM as needed/indicated
- Maintain full nonpainful 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, presents no pain and has no residual soreness
- Strengthening overhead if ROM and strength below 90° 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/once cleared by surgeon

### MILESTONES TO PROGRESS

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

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