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### **BICEPS TENODESIS GUIDELINES**

This guideline is intended to provide guidance in the appropriate progression of a patient following Biceps Tenodesis. It should be used along with sound clinical judgement based on the clinical findings/exam, specific patient progress, and any complications during or after surgery. If additional procedures were performed together with the tenodesis, always defer to the most restrictive precautions. When there are questions about appropriate progression or concerns about a particular patient, clinicians should contact the referring Surgeon.

## Phase 1 (Post op through 4 weeks)

### **GENERAL GUIDELINES AND PRECAUTIONS**

- Sling for everyone (with or without abduction pillow as recommended by MD) to minimize biceps activity. Sling may be removed for basic grooming and exercise sessions, as well as desktop work while arm is supported.
- NO active Elbow motion
- Avoid Active Supination
- Ice and elevation used in combination with medications for inflammation and pain control
- No bathing until after suture removal and wounds healed; may shower with water-proof covering over sutures (Tegaderm/OpSite); Suture removal post op Day 7-10
- Return to work determined by MD/PT dependent on work demands

### **GOALS**

- Patient education regarding precautions, rehabilitation progression
- Minimize pain, swelling and inflammatory response
- Restore passive range of motion (PROM) of elbow and shoulder
- Establish a stable scapula

### **EXERCISES**

- Pendulums with support as needed
- Scapular retractions and clocks emphasis on proper posture
- Ball squeeze/Grip exercises
- Wrist/Hand Active ROM (AROM) exercises
- Passive forearm supination and pronation
- Passive Elbow Flexion/Extension
- Passive Shoulder ROM without limitations unless directed by MD. Move to tolerance, but NO pain. ER ROM should be performed in the scapular plane.
- If available, begin Aquatic Therapy for shoulder ROM at 2-4 weeks –shoulders totally submerged, elbow bent, slow shoulder movement with emphasis on good shoulder biomechanics

#### **CRITERIA TO PROGRESS TO PHASE 2**

- Well healed incision
- Full PROM of shoulder and elbow
- Able to complete Phase 1 activities without difficulty of pain

## Phase 2 (4 weeks to 8 weeks post op)

### **GENERAL GUIDELINES AND PRECAUTIONS**

- Wean from sling/abduction pillow. Sling wear discouraged unless in an uncontrolled environment
- No lifting, pushing or pulling with the affected extremity
- NO RESISTED BICEPS until week 12
- Cryotherapy as needed for pain and inflammation

### **GOALS**

- Minimize swelling and inflammatory response
- Gradual restoration of full AROM with proper mechanics and minimal to no pain
- Wean from sling

#### **EXERCISES**

- Mobilization as needed thoracic, glenohumeral and scapulothoracic if motion is less than expected.
- Passive ROM of the shoulder as needed to restore full motion in all directions emphasis on isolated glenohumeral elevation
- Initiate posterior capsule stretching
  - Cross body adduction stretch
  - Side-lying internal rotation (sleeper) stretch
- Begin Active ROM of the shoulder with a progression from supine to reclined to sitting/standing while achieving proper mechanics and pain free.
- Initiate light strengthening of the rotator cuff and periscapular muscles
  - Minimal manual resistance for isometric ER/IR at 0, 45 and 90 degrees abduction. NO RESISTED BICEPS until week 12
  - Minimal manual resistance for rhythmic stabilization of glenohumeral joint at multiple angles in supine (60, 90, 120 degrees)
  - ER in side-lying
  - Light periscapular strengthening as appropriate (prone rowing, prone shoulder extension)

## **CRITERIA TO PROGRESS TO PHASE 3**

- Full AROM or shoulder and elbow with proper mechanics
- Able to complete all activities in Phase 2 with no difficulty or pain

## Phase 3 (8 weeks to 12 weeks post op)

### **GENERAL GUIDELINES AND PRECAUTIONS**

- Avoid painful movements or activities
- Assure proper mechanics and full AROM before beginning strengthening in any particular plane of movement.
- Strengthening progression should be pain free

### **GOALS**

- Return to full functional activities
- Normal active and passive motion, mechanics and neuromuscular control
- Patient understanding of progression back to full activity

#### **EXERCISES**

- Continue Joint mobilization and A/PROM of elbow and shoulder as needed to achieve full ROM in all planes
- Continue work on AROM in standing with feedback as needed from clinician and/or mirror for proper mechanics.
- Continue manual resistance-rhythmic stabilization and progress to light resistance in combination planes D2, D1 PNF patterns
- Begin a comprehensive strengthening routine using light resistance with bands/tubing/dumbbells. Should remain in the frontal plane to avoid excessive anterior capsule stress – "Always be able to see your hands"
  - Elevation in the scapular plane begin in lower ranges initially
  - o Side-lying ER
  - Serratus "punches", Push up "plus" wall, table top, knees on floor, feet
  - Subscapularis strengthening pulley/band IR, cross body diagonal with band, bear hugs with band
  - o Prone I, T, Y, W
  - Include closed chain and open chain activities
- Progress to use of the Upper Body Ergometer (UBE) beginning with low resistance

### **CRITERIA TO PROGRESS TO PHASE 4**

- Full, pain free shoulder and elbow motion
- Adequate Rotator Cuff and Periscapular strength, endurance and control to perform activities at chest level without difficulty

## Phase 4 (12+ weeks post op)

### **GENERAL GUIDELINES AND PRECAUTIONS**

Avoid undue stress to the anterior capsule – avoid wide grip bench press, military press

### **GOALS**

- Achieve full PROM if not yet present
- Return to full strenuous work activities
- Return to full sport/recreational activities

#### **EXERCISES**

- Continue to address any specific deficits in ROM in all planes with joint mobilization and stretching as indicated
- May initiate biceps curls with resistance
- Increase weight, intensity and duration of strengthening activities from Phase 3
- Gradual return to upper body weight training program Chest press, Row, Lat Pulldowns, Triceps, Biceps. Remain in Frontal plane to avoid undue stress on the anterior capsule. Avoid wide grip bench and military press. Begin with lower weight and higher repetitions.
- Refer to Surgeon for advice regarding specific activity restrictions
- Initiate sport specific activities/return to sport progression once cleared by MD to do so.

### CRITERIA TO RETURN TO FULL STRENUOUS WORK AND SPORT ACTIVITIES

- Clearance by surgeon
- No pain complaints
- Full, pain free PROM and AROM
- Rotator cuff, elbow and periscapular muscular strength, endurance and control adequate for required tasks.