



**Austin Cole, MD**

## **Biceps Tenodesis**

### **Post-Operative Protocol**

#### **Phase I – Maximum Protection – Passive Range of Motion**

##### **Weeks 0 to 6:**

- Start PT 1-2 days postop
- Sling for 6 weeks

##### Goals

- Reduce inflammation
- Decrease pain
- Postural education

##### Manual therapy

- Ice and modalities to reduce pain and inflammation
- Shoulder and elbow isometrics at 4 weeks

##### Exercise progression

- Active hand and wrist range of motion.
- Passive elbow ROM for 6-weeks
- Active elbow extension, NO active elbow flexion x 6-weeks
- Active shoulder retraction
- Encourage walks and low intensity cardiovascular exercise to promote healing.

#### **Phase II – Progressive Stretching and Active Motion**

##### **Weeks 6-8:**

##### Goals

- Discontinue sling
- Postural education
- Begin AROM – full all planes

##### Manual therapy

- STM – global shoulder and CT junction.
- Scar tissue mobilization.
- Graded GH mobilizations.
- ST mobilizations.
- Gentle CR/RS for ROM and RC-SS activation.

##### Exercise progression

- Progress to full range of motion, flexion and external rotation as tolerated.
  - Use a combination of wand, pulleys, wall walks or table slides to ensure compliance.
- Gradual introduction to internal rotation shoulder extensions (stick off back).

- Serratus activation: ceiling punch (weight of arm) - may initially need assistance.
- Scapular strengthening – prone scapular series (rows and I's). Emphasize scapular strengthening less than 90 degrees.
- External rotation on side (no resistance).
- DNF and proper postural positioning with all RC-SS exercises.
- Low to moderate cardiovascular work. May add elliptical but no running until 8 weeks.

### **Phase III – Strengthening Phase**

#### **Weeks 8 to 12:**

##### Goals

- Full AROM
- Normalize GH/ST arthrokinematics.
- Activate RC-SS with isometric and isotonic progression.

##### Manual therapy

- Continue as needed

##### Exercise progression

- Continue with combined passive and active program to push full range of motion.
- Internal rotation with thumb up back and sleeper stretch.
- Progress previous exercises with added weight as tolerated
- Add seated rows and front lat pulls.
- Biceps and triceps progressive resistance exercises at 8 weeks
- Scaption: normalize ST arthrokinematics.
- CKC progression at 12 weeks: quadruped, ball compression, counter weight shift, knee scapular push-ups, knee push-ups (all as tolerated).
  - Therapist directed RS and perturbations in quadruped – bilateral progressing to unilateral- tripod position.
- Supine progressing to standing PNF patterns, with resistance as appropriate.

### **Phase IV – Advanced Strengthening and Plyometric Drills**

#### **Weeks 12 to 16:**

##### Manual therapy

- As needed

##### Exercise progression (PRE/PSE)

- Full range of motion in all planes – emphasize terminal stretching.
- Advance strengthening at or above 90 degrees with prone or standing Y's, D2 flexion pattern and 90/90 as scapular control and ROM permit.
  - Patient health, physical condition and goals/objectives determine.
- Gym strengthening program: gradual progression with pressing and overhead activity.
- Progress closed kinetic chain program to include push-up progression beginning with counter, knee then gradual progression to full as appropriate.
- Initiate plyometric and rebounder drills as appropriate.

#### **Weeks 16 to 24:**

##### Return to sport program

- Continue to progress RC and scapular strengthening program, elbow strengthening
- Continue with CKC quadruped perturbations. Add open chain as strength permits.
- Advance gym strengthening program.
- RTS testing for interval programs (golf, tennis etc.) using microfet dynamometer.
- Follow-up examination with the physician (4 to 6 months) for release to full activity.