

## Proximal Biceps Tenodesis

### Phase I (1 – 2 weeks post-op)

- Precautions:
  - For 4 weeks:
    - Limit ER to 40 degrees
    - No extension or horizontal abduction past neutral
  - For approximately 8 weeks:
    - No resisted forearm supination, elbow flexion, or shoulder flexion
- Sling: as prescribed by surgeon's office
  - Trenaile: x4 weeks
- PROM:
  - Elbow extension/flexion, forearm pronation/supination
  - Shoulder PROM as tolerated (do not force painful motion)
- Exercises:
  - Pulleys
  - Pendulums
  - Scapular clocks/retractions

### Phase II (3 – 6 weeks post-op)

- Precautions
  - For 4 weeks:
    - Limit ER to 40 degrees
    - No extension or horizontal abduction past neutral
  - For 8 weeks:
    - No resisted forearm supination, elbow flexion, or shoulder flexion
- ROM:
  - At 4 weeks, begin AAROM of shoulder and progress to AROM
  - Joint mobilizations of GH and scapulothoracic joints OK
  - At 6 weeks, begin long lever shoulder flexion
  - At 4-6 weeks, may begin sleeper stretch with transition to cross body adduction stretch
- Strengthening:

- At 3-4 weeks, begin isometrics, but NO FLEXION

### **Phase III (6 – 8 weeks post-op)**

- Precautions:
  - For 8 weeks:
    - No resisted forearm supination, elbow flexion, or shoulder flexion
- ROM:
  - Continue phase II, progressing AAROM and AROM
- Strengthening:
  - Rhythmic stabilization
    - IR/ER in scapular plane
    - Flex/ext and Abd/Add at various angles
  - Rotator cuff strengthening in neutral
    - Theraband and gravity eliminated

### **Phase IV (8-12 weeks post-op)**

- Precautions:
  - For 8 weeks:
    - No resisted forearm supination, elbow flexion, or shoulder flexion
- ROM:
  - Continue phase II, progressing AAROM and AROM
- Strengthening:
  - At 8 weeks, begin resisted bicep curls and pronation/supination
  - Initiate resisted shoulder ER at 30 degrees abduction (progressed from neutral)
    - Manual and dumbbell in sidelying, then progress to theraband
  - Prone rows to neutral at 30, 45, and 90 degrees abduction
  - Rhythmic stabilization
    - Balance board in push-up position
    - Prone swiss ball walkouts
  - Subscapularis strengthening
    - Push-up plus
    - Cross-body diagonals
    - Resisted IR (0, 45, and 90 degrees abduction)

- Forward punch

**Phase V (12+ weeks post-op)**

- Precautions:
  - Patient may have mild discomfort with exercise, but if pain persists > 1 hour, intensity of exercise should be decreased
- Begin IR/ER at 90 degrees of abduction
- Plyometrics
  - Start below shoulder height and progress to overhead
- Initiate throwing program
- Patient may return to sports:
  - If cleared by surgeon
  - 5/5 RTC strength with multiple repetition testing at 90 degrees abduction in the scapular plane
  - Stability and no apprehension with high velocity or overhead movements

Adapted From:

- 1) Brigham and Women's Biceps Tenodesis Protocol
- 2) UWsportsmedicine.org Bicep Tenodesis Protocol-hardware fixation technique
- 3) Advanced Continuing Education Institute, 2019: Open/Arthroscopic Bicep Tenodesis Protocol
- 4) Indiana Hand to Shoulder Center: Proximal Bicep Tenodesis Protocol, pgs 467-468