



## **BADMAN ARTHROSCOPIC BICEP TENODESIS**

### **Phase I – Protective Phase (Weeks 0 – 6)**

#### **Goals:**

- Maintain integrity of repair
- Gradual increase in PROM
- Gradual increase in shoulder strength
- Decrease pain and inflammation

#### **Precautions:**

- No lifting of objects
- No excessive shoulder extension, stretching or sudden movements
- No supporting of body weight on hands
- No active bicep flexion x 6weeks

#### **Weeks 0 – 2:**

- Sling or brace (determined by physician) for 4-6 weeks
- Perform elbow/hand/wrist ROM exercises (elbow extension with gravity; active-assisted elbow flexion)
- Perform PROM to tolerance:
  - Flexion
  - ER/IR in scapular plane
- AAROM:
  - Pendulum exercises
  - Flexion to tolerance
  - ER/IR to in scapular plane
- Strengthening:
  - Rhythmic Stabilization drills
  - Flexion/Extension at 90-100° of flexion in supine
  - ER/IR in scapular plane



Sub-maximal/pain-free isometrics (all with bent elbow):

Abduction

ER/IR

Extension

- Pain control modalities

### **Weeks 3 – 4:**

- PROM to tolerance (full PROM by 4 – 5 weeks)
- AAROM:
  - Flexion to tolerance
  - ER/IR to tolerance in scapular plane
  - ER/IR to 45° at 90° abduction
  - Active assisted elbow flexion against gravity (week 4)

Strengthening:

Tubing ER @ 0° abduction

Isotonics (light):

Prone rows to neutral arm position

Prone horizontal abduction

### **Weeks 5 – 6:**

- Discontinue brace or sling;
- Continue PROM and stretching to maintain full PROM
- AAROM:
  - Flexion to tolerance
  - ER/IR to tolerance in scapular plane
  - ER/IR to tolerance at 90° abduction
- AROM:
  - Flexion to 90°
  - Full elbow flexion against gravity (week 6)
- Strengthening:



Continue tubing ER @ 0° abduction

Continue isotonics (light):

Prone rows to neutral arm position

Prone horizontal abduction

Bicep flexion

- Upper extremity cycle

## **Phase II – Intermediate Phase (Weeks 7 – 12)**

### **Goals:**

- Full, non-painful A/PROM (week 10)
- Gradual improvement of strength and power
- Gradual return to light functional activities

### **Weeks 7 – 10:**

- Maintain full PROM and progress to full AAROM
- Strengthening:
  - Continue/progress rhythmic stabilization drills
  - Continue tubing ER at 0° abduction working on endurance
  - Tubing scapular strengthening to neutral working on endurance
  - Isotonics (gradually progress resistance):
    - Flexion to 90° (no resistance until AROM is without hiking)
    - ER/IR in side lying
    - Prone rows
    - Prone horizontal abduction
    - Triceps
    - Begin light resistance bicep (week 8): 1-2 lbs

### **Weeks 10 – 12:**



- Maintain full AAROM and progress to full AROM
- Strengthening:
  - Continue isotonic/tubing and stabilization strengthening
  - Closed chain stabilization drills
  - Bicep resistance: 3-8 lbs

### **Phase III – Advanced Strengthening Phase (Weeks 13 – 20)**

#### **Goals:**

- Maintain full, non-painful ROM
- Improve shoulder complex strength and neuromuscular control
- Gradual return to functional activities

#### **Weeks 13 – 20:**

- Maintain PROM, AAROM and AROM
- Initiate self-capsular stretches if shoulder is tight
- Begin advancement of bicep resistance to tolerance
- Strengthening:
  - High-speed isokinetics for ER/IR in neutral
  - Begin general shoulder strengthening with precautions:
    - Latissimus pulls with narrow grip and arms in front of body
    - Chest press with light dumbbells keeping elbows anterior to shoulder
    - Machine rows
    - Military press with light dumbbells and arms in front only
- Plyometric program (2 handed → 1handed) at 16 weeks

### **Phase IV – Return to Activity Phase (Weeks 21 – 28)**

#### **Goals:**

- Maintain shoulder ROM, strength and neuromuscular control
- Gradual return to recreational sport activities
- Gradual return to strenuous occupational activities



### **Weeks 21 – 24:**

- Continue flexibility, strength, stabilization and plyometric exercises
- Isokinetic strength test for ER/IR in neutral at 180°/ sec and 300°/sec
- Initiate interval sport program

### **Weeks 24 – 28:**

- Continue flexibility, strength, stabilization and plyometric exercises
- Continue with interval sport program and progress to return to play when released

### **Criteria for return to play:**

- Physician approval
- Satisfactory ROM
- Satisfactory strength test
- Satisfactory clinical exam
- Satisfactory completion of interval sport program