



Kansas City Orthopedic Alliance

H. Scott Ellsworth, MD

Rehabilitation Protocol: Biceps Tenodesis

Phase 1: Passive ROM (weeks 1-2)

- Goals:
 - Minimize shoulder pain and inflammatory response
 - Achieve gradual restoration of PROM
 - Enhance adequate scapular function
- Precautions/Patient education:
 - No active ROM of the elbow
 - No excessive external rotation
 - Use of a sling to minimize activity of biceps
 - No friction massage to the proximal biceps tendon/tenodesis site
- Activity:
 - Shoulder pendulum hang exercises
 - PROM elbow flexion/extension and forearm supination/pronation
 - AROM wrist/hand
 - Begin shoulder PROM in all planes to tolerance
 - Scapular retraction and clock exercises for scapula mobility and progress to scapular isometric exercises
 - Ball squeezes

Phase 2: Active ROM (week 4)

- Goals:
 - Achieve gradual restoration of AROM
 - Begin light waist level functional activities
 - Wean out of sling by the end of the 2-3 postoperative week
- Precautions:
 - No lifting with affected extremity
 - No friction massage to proximal biceps tendon
- Activity:
 - Progress shoulder PROM to AAROM and AROM in 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 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
 - Sleeper stretch

Phase 3: Strengthening phase (weeks 6-8)

- 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 patient has near full ROM and strength in that plane of movement.
- Activity:
 - Continue AROM and PROM of shoulder and elbow as needed
 - Initiate biceps curls with light resistance, progress as tolerated
 - Initiate resisted supination/pronation
 - Begin rhythmic stabilization drills
 - ER and 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 with low resistance
 - Exercises should be progressive in terms of muscle demand/intensity, shoulder elevation, and stress on the anterior joint capsule
 - Nearly full elevation in the scapula plane should be achieved before beginning elevation in other planes.
 - No heavy lifting should be performed at this time
 - Initiate full can scapular plane raises with good mechanics
 - Initiate ER strengthening using exercise tubing at 30 degrees of abduction
 - Initiate side lying ER with towel roll
 - Initiate manual resistance ER supine in scapular plane (light resistance)
 - Initiate prone rowing at 30/45/90 degrees of abduction to neutral arm position
 - Begin subscapularis strengthening with push ups progressing from using the wall to the floor, Cross body diagonals with resistive tubing, IR resistive band, and forward punch.

Phase 4: Advanced Strengthening Phase (week 10)

- Goals:
 - Continue stretching and PROM as needed
 - Maintain full non-painful ROM
 - Return to full strenuous work activities and full recreational activities
- Precautions:
 - Avoid excessive anterior capsular 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, is not painful, and has no residual soreness
 - Strengthening overhead if ROM and strength below 90 degree elevation is good
 - Continue shoulder stretching and strengthening at least 4 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