

Subpectoral Biceps Tenodesis REHAB Protocol

PHASE I – PROM Phase (1-4 weeks)

Goals:

- Minimize shoulder pain and inflammatory response
- Achieve gradual restoration of gentle AROM
- Enhance/ensure adequate scapular function

Precautions/patient education:

- Gentle AROM of the elbow against gravity only with extension
- No excessive ER ROM stretching, stop when you feel the first pull
- Use of sling to minimize activity of biceps
- Ace wrap upper forearm as needed for swelling control
- No lifting objects with operative shoulder
- Keep incisions clean and dry
- No friction massage to proximal biceps tendon/tenodesis site
- Patient education regarding limited use of upper extremity despite the potential lack of or minimal pain or other symptoms

Milestones to progress to phase II:

- Appropriate healing of the surgical incision
- Full PROM of shoulder and elbow
- Completion of phase I activities without pain or difficulty

Activity:

- Shoulder pendulum hang exercises
- Gentle AROM elbow flexion/extension and forearm supination/pronation
- AROM wrist/hand
- Begin shoulder PROM all planes to tolerance
- Scapular retraction and clock exercises for scapula mobility progressed to scapular isometric exercises
- Ball squeezes
- Sleep with sling as needed supporting operative shoulder, place a towel under the elbow to prevent shoulder hyperextension
- Frequent cryotherapy for pain and inflammation
- Patient education regarding postural awareness, joint protection, positioning, hygiene
- May return to computer based work

PHASE II – AROM phase (week 4)

Goals:

- Minimize shoulder pain and inflammatory response
- Achieve gradual restoration of gentle AROM
- Begin light waist level functional activities
- Wean out of sling by the end of the 4th post op week
- Return to light computer work

Precautions/patient education:

- No lifting with affected arm
- No friction massage to proximal biceps tendon/tenodesis site

Activity:

- Begin gentle scar massage and use of scar pad to anterior axillary incision
- Progress shoulder PROM to AAROM and AROM all planes to tolerance
- Lawn chair progression for shoulder
- Continue active elbow flexion/extension and forearm supination/pronation – no resistance
- GH, Scapulothoracic and trunk joint mobilizations as indicated (grade i-iv) when ROM is slightly less than expected. Mobilizations should be done in directions of limited motion and only until adequate ROM is gained
- Begin incorporating posterior capsular stretch as indicated
- Cross body adduction stretch
- Side lying IR stretch (sleeper stretch)
- Continue cryotherapy for pain and inflammation
- Continue patient education on posture, joint protection, positioning, hygiene

Milestones to progress to phase III:

- Appropriate scapular posture at rest and dynamic scapular control with ROM and functional activities
- Full AROM of shoulder and elbow
- Completion of phase II activities without pain or difficulty

PHASE III – Strengthening Phase (Weeks 6-8)

Goals:

- Normalize strength, endurance, neuromuscular control
- Return to chest level full functional activities

Precautions/patient education:

- Don't perform strengthening activities in a given plane until patient has full ROM and strength
- Patient education regarding a gradual increase to shoulder activities

Activity:

- Continue A/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/IR in scapular plane
- Flexion/extension and abduction/adduction at various angles of elevation
- Initiate balanced strength program
- Initially in low dynamic positions
- Gain muscular endurance with high repetition of 30-50, low resistance 1-3lbs
- Exercises should be progressive in terms of muscle demand/intensity, shoulder elevation, stress on the anterior joint capsule
- Nearly full elevation in the scapula plane should be achieved before beginning elevation in other planes
- All activities should be pain free and without compensatory/substitution patterns
- Exercises should consist of both open and closed chain activities
- 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 of abduction (use towel roll)
- Initiate sidelying ER with towel roll
- Initiate manual resistance ER supine in scapular plane (light resistance)
- Initiate prone rowing at 30/45/90 of abduction to neutral arm position
- Begin subscapularis strengthening to focus on both upper and lower segments
- Push up plus (wall, counter, knees on the floor, floor)
- Cross body diagonals with resistive tubing
- IR resistive band (0, 45, 90 of abduction)
- Forward punch
- Continue cryotherapy

Milestones to progress to phase III:

- Appropriate RTC and scapular muscular performance for chest level activities
- Completion of phase III activities without pain or difficulty

PHASE IV – Advanced Strengthening Phase (Post-op Week 10)

Goals:

- Continue stretching and PROM as needed
- Maintain full non-painful AROM
- Return to full strenuous work activities
- Return to full recreational activities

Precautions/patient education:

- Avoid excessive anterior capsule stress
- With weight training 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 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 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/cleared by MD

Milestones to return to overhead work and sport activities

- Clearance from MD
- No complains of pain
- Adequate ROM, strength, and endurance of RTC and scapular musculature for task completion
- Compliance with continued HEP