

Biceps Tenodesis Rehabilitation Program

The GLSM Biceps Tenodesis Rehabilitation Program is an evidence-based and soft tissue healing dependent program allowing patients to progress to ADL's, vocational, and sports-related activities as quickly and safely as possible. Individual variations will occur depending on surgical details and patient response to treatment.

This program is outlined for a Biceps tenodesis performed with or without another debridement type procedure (Subacromial decompression, Acromioplasty, Distal Clavicle Excision).

If performed with a rotator cuff repair, follow the appropriate rotator cuff rehabilitation program.

Contact us at 1-800-362-9567 ext. 58600 if you have questions.

Factors Influencing Post-op Progression	Tissue quality and soft tissue healing: age, smoking, diabetes Applying appropriate loads based on time frames and healing Patient response to treatment (pain, inflammation, edema)
General Program Outline	
Sling	3-4 wks. D/C based on MD approval May be used up to 6 wks during ADL's and work activities as a precaution
ROM guidelines Elbow: Goal full AROM wk 2-3 Shoulder: Goal full AROM wk 6-8	Elbow / forearm PROM: Initiate day 2. Progress as tolerated. Goal: wk 2 full ROM AAROM / AROM: Initiate day 7. Progress at tolerated. Goal: wk 2-3 full ROM Shoulder PROM / AAROM: Initiate day 7. Progress as tolerated. Goal: wk 5-6 full ROM AROM: Initiate at wk2. Limit elevation 0-90 deg for 4 wks. Goal: wk 6-8 full ROM Avoid compensatory scapular substitution during shld elevation
Strengthening Goal: Full strength wk 12-16	Elbow / forearm No isolated resisted biceps contraction for 6 wks No resisted concentric elbow flexion No resisted eccentric elbow extension No resisted forearm supination Triceps strengthening at wk 4 Bicep strengthening bilateral arm supported wk 6, bilateral un-supported wk7, unilateral un-supported wk 8 Goal is full strength by 12-16 wks Shoulder / scapula Initiate wk 1 with sub-max isometric with gradual progression Progression to full RTC and scapula-thoracic strengthening at wk 6 Emphasis on muscle endurance and strengthening for RTC and scapulothoracic No overhead strengthening until wk 10-12 When implemented, emphasis on endurance and short lever arm Goal is full strength by 12-16 wks
Rhythmic stabilization	Initiate wk 2 sub-max in protected positions with gradual progression
Return to activity	Desk work: 2-4 wks Personal care and low level ADL's (no resisted lifting): 4-6 wks ADL requiring moderate lifting: 2-4 months Sports activities: 3-6 months

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Biceps Tenodesis Rehabilitation Program

Phase I: 0-6 wks	Protected phase with Gradual Return of ROM
Goals	Protect anatomic repair Patient education regarding activity limitations Adequate pain control Initiate gentle ROM and therapeutic exercise based on guidelines
Patient Education	No resisted isolated biceps contraction for 6 wks (elbow flexion, forearm supination) No lifting or carrying of objects >1 lb. No lowering of objects > 1 lb No turning door knobs, using a screw driver, opening a jar No quick or sudden movements. No behind the back movements
Sling	3-4 weeks. D/C based on MD approval May use up to 6 wks during ADL's and work activities as a precaution
Modalities	Ice 15 minutes 3-5x/day, more often as needed for pain control IFC for pain management/inflammation control
HEP initiate at wk 1 post-op	Postural education to avoid forward head / rounded shoulders Active or assisted pendulum, AROM elbow / wrist / hand, gripping Shoulder PROM, AAROM: flexion, scaption, ER (in scapular plane) Thoracic AROM mid-range extension seated or standing Active scapular retraction with depression
ROM guidelines Avoid compensatory scapular shrug during shld elevation	Elbow / forearm PROM: Initiate day 2. Progress as tolerated. Goal: wk 2 full ROM AAROM / AROM: Initiate day 7. Progress at tolerated. Goal: wk 2-3 full ROM Shoulder PROM / AAROM: Initiate day 7. Progress as tolerated. Goal: wk 5-6 full ROM AROM: Initiate at wk2. Limit elevation 0-90 deg for 4 wks. Goal: wk 6-8 full ROM
Treatment Interventions 4 key exercises (max LT/MT, inhibit UT): Sidelying ER Sidelying flexion Prone ext Prone hor abd ER LT= lower trape MT=middle trape UT=upper trape	No isolated biceps resistance. Initial emphasis on ROM per guidelines and pain control. Facilitate thoracic extension and proper posture. Initiate active scapular mobility Initiate sub-max GH and RTC activation exercises based on guidelines Initiate sub-max rhythmic stabilization in protective positions Warm-up: Active Pendulum or hot pack Manual Therapy: Mobilizations: GH, Scapula, Thoracic spine; PROM to tolerance Therapeutic Exercise: AAROM/ AROM based on guidelines Wk 1: Elbow / forearm AROM Shld AAROM elevation, ER/IR in scapular plane per tolerance Active thoracic ext, scapular retraction, GH isometric Wk 2: Shld AROM elevation 0-90 deg only, ER/IR scap plane, AAROM ER/IR in 60 deg ABD UBE forward only, supine protraction, prone row, side-lying ER, bilateral ER with scapular retraction for LT activation manual scap resist for LT in side-lying Rhythmic stabilization: sub-max supine shld 30/30/30 position Wk 3: Shld AROM elevation 0-90, ER/IR in 90 deg ABD. Emphasis on endurance Prone rows, prone hor abd, prone ext Wk 4: Shld AROM elevation per tolerance Low load long duration stretch (TERT) if significant hypomobility Rhythmic Stabilization: sub-max progress to bilateral 90 deg flexion Triceps strengthening Cryotherapy

Biceps Tenodesis Rehabilitation Program

Phase II: 6-12 wks	Restore Full ROM and Initiate Strengthening Phase
Goals	Adequate pain management Increase AROM to be equal bilaterally Increase muscle strength and endurance. Integrate biceps resistance Increase activity tolerance
Modalities	Cryotherapy, IFC for pain management
ROM guidelines	No limitations. Full AROM expected by 8 wks
Treatment Interventions	<p>Facilitate regaining functional ROM with normal movement patterns by wk 8 Emphasis on scapular stabilization and rotator cuff strengthening and endurance Initiate biceps strengthening exercises Progression of rhythmic stabilization exercises Implement overhead strengthening (light weight, elbow bent for short lever arm) wk 10 if needed</p> <p>Active warm-up: pendulum, UBE forward / reverse ROM activities as needed: Low load long duration stretch (TERT), GH mobilizations, PROM with end range stretch, AAROM</p> <p>Therapeutic exercise: scapula-thoracic, GH, RTC, total arm strengthening S-T: Chest press(+), rows full ROM, press downs, scaption (Moseley) prone ext, prone hor abd neutral, resisted wall slides for lower trapezius GH: flexion, prone hor abd w/ER (press downs, scaption) Townsend extension with scapular retraction RTC: sidelye ER, isotonic ER/IR, bilateral ER with SPRI Total arm strengthening: triceps, biceps curls bilateral (elbow supported) Rhythmic stabilization: unilateral 90 flexion Wk 7: Biceps curls bilateral (elbow un-supported), isotonic resisted supination/pronation Wk 8: Biceps curls unilateral un-supported, lat pull downs, isokinetic ER/IR mod neutral, Rhythmic stabilization: CKC < BW Wk 9: Single arm press and rows, isokinetic supination/pronation Shoulder horn 90/90 ER Wk 10: Isotonic ER/IR 90/90 position ,isokinetic ER/IR 90/90 position, prone ball walk outs Wk 11: Overhead strengthening circuit (if needed) with focus on endurance (1-5 lbs)and short lever arm , Resisted PNF patterns</p> <p>Cryotherapy</p>

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Phase III: 12-16 wks	Strengthening and Conditioning Phase, Return Back to Activity
Goals	Progress muscle strength, endurance, and power Initiate higher level activities depending on functional demands and MD approval
Treatment Interventions	Continue to target scapulothoracic, glenohumeral, rotator cuff , and total arm strengthening and endurance Progress overhead strengthening circuit (if needed) to higher weights continuing with short lever arm Progress proprioceptive/kinesthetic activities Plyometrics: bilateral progress to unilateral
Return to Sports	Based on MD approval, full ROM, minimal pain at rest and activity, isokinetic strength scores of 90%. Return to interval throwing program 3 months Return to pitching off a mound 4.5 months Return to golf 3-4 months Return to basketball / volleyball 4 – 5 months

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