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Lower Trapezius Tendon Transfer Rehabilitation Protocol

The following is a basic framework from which to work during rehabilitation following lower trapezius tendon transfer. This procedure is done for a massive irreparable rotator cuff tear in an active patient that wants to restore partial external rotation strength, and does not meet indications for reverse total shoulder arthroplasty. The lower trapezius is in-phase with the posterior rotator cuff, and is connected to the proximal humerus with a tendon allograft.

Phase 1: 0-6 Weeks (Protected Motion)—**Passive ROM only**

- **Weightbearing:** External rotation sling at all times except for therapeutic exercises
- **Range of Motion Goals:** 0-90° Forward flexion, 0-40° ER with arm at side, 60-80° abduction
- **Therapeutic Exercises:**
 - From 2 weeks until 6 weeks, perform overhead reach
 - Overhead reach is helping to lift your stiff arm up as high as it will go. To stretch your overhead reach, lie flat on your back, relax, and grasp the wrist of the tight shoulder with your opposite hand. Using the power in your opposite arm, bring the stiff arm up as far as it is comfortable. Start holding it for ten seconds and then work up to where you can hold it for a count of 30. Breathe slowly and deeply while the arm is moved. Repeat this stretch ten times, trying to help the arm up a little higher each time.
 - Grip strengthening
 - Scapular retraction, shoulder shrugs, sub-maximal pain-free deltoid isometrics
 - **Avoid all active and active assistive exercises until cleared by the surgeon. This includes pulley exercises, wand and supine assisted exercises.**

Phase 2: 6-12 Weeks (Progressive ROM)—**Active ROM**

- **Weightbearing:** Wean from sling, lifting restriction of 5lbs max (no resistance exercises)
- **Range of Motion:** Start AAROM, then progress to AROM

- **Goals:** Full PROM in all planes (no IR behind back until 3 mo)
- **Therapeutic Exercises:**
 - May begin pulleys, wand, supine gravity assisted exercises
 - Isolate and strength scapular stabilizers
 - **Avoid resistance training/strengthening**
 - No forced internal rotation, adduction, or extension

Phase 3: 6-12+ Weeks—**Progressive strengthening**

- **Weightbearing:** WBAT, gradual increase in weights
- **Range of Motion:** Full, painless ROM
- **Therapeutic Exercises:**
 - Begin formal rotator cuff and shoulder strengthening
 - Begin with isometrics→bands→light weights (1-5lbs)
 - Only do strengthening 3x per week to avoid rotator cuff tendonitis
 - Initiate isotonic strengthening at 4 months
 - Theraband, dumbbells, Hughston's exercises, etc
 - Include home cuff strengthening program. Continue to emphasize scapular stabilizers.
 - Equate active and passive range of motion. Encourage scapulohumeral mechanics during active shoulder motion.
 - Simulate work/recreational activities as rotator cuff strength and endurance improve