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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 I: Protected ROM (6 weeks)**

- Ice or cold flow systems encouraged for the first week at a minimum: should be used 3-4 times per day.
- Gunslinger brace should be in place when not performing 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.
- May start active scapular mobility exercises at 6 weeks – Must keep the shoulder musculature relaxed.
- Avoid all active and active assistive exercises until cleared by the surgeon.  
This includes pulley exercises, wand and supine assisted exercises.
- Initiate exercise program 3 times per day: Immediate elbow, forearm and hand range of motion out of sling

Passive external rotation of the shoulder to tolerance - instruct family member (start at 6 weeks)  
PROM into scapular plane elevation to 120 degrees (start at 6 weeks)

### **PHASE II: Progressive ROM (6 to 12 weeks)**

- May discontinue brace/sling at 6 weeks.
- Lifting restriction of 5 pounds should be reinforced with patient.
- Start AAROM and AROM – includes pulleys, wand and supine gravity assisted exercises. Emphasize all motions except IR behind the back until 3 months.
- Isolate and strengthen scapular stabilizers.
- Progress PROM and capsular stretching of the shoulder as needed – elevation and external rotation as tolerated
- Avoid resisted training or strengthening. Avoid AROM in positions of subacromial impingement.

### **PHASE III: (>12 weeks)**

- Discontinue formal lifting restrictions.
- Start progressive rotator cuff and shoulder strengthening at 3 months – isometrics initially
- 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.