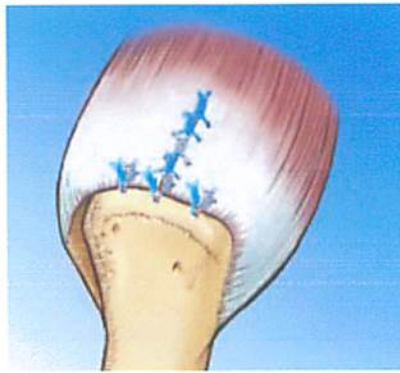


General Rehabilitation Guidelines

Massive Rotator Cuff Repair Protocol for Repair of Tears involving the Suprapinatus and Infraspinatus Tendons



Precautions:

- **Basis**
 - Tendon healing back to bone is a slow process that requires many weeks under tension free conditions
 - New collagen synthesis takes up to 100 days
 - The success of rotator cuff repair depends on certain factors including tear size, tissue quality, tension on the repair and whether or not the deltoid was taken down as part of the repair
 - Surgeon will specify specific precautions depending on these factors
- **Precautions**
 - No active use of the shoulder for 8 weeks
- **NOTES:** if biceps tenodesis included in surgery then no resistive elbow flexion or supination for 6 weeks
 - PROM and AROM okay
 - Rehab otherwise dictated by cuff procedure

Prehabilitation

- Instruct in application of ice and encourage use as much as tolerated within a 24 hour period for first week. If using ice packs, encourage to ice 20-30 minutes every 3-4 hours while awake
- Instruct in pendulum exercises to be performed 2-3 times per day starting immediately following surgery
 - These should be followed by cryotherapy session
- Instruct in basic progression of rehabilitation program and expectations for time course to recovery
- Arrange follow-up physical therapy appointment on 7th-10th day post-op to correspond with physician's post-operative evaluation

Outpatient Phase 1: (Weeks 1 - 4)

- **ROM**
 - Instruct in home program, and begin, self-assisted ROM
 - Forward elevation in scapular plane to 140° supine with contralateral arm assist
 - Perform with palm up to externally rotate repair from under acromion
 - External rotation in adduction to 40° with stick/wand
 - IR in scapular plane as tolerated
 - No IR behind back
 - No IR in abduction, extension or cross body adduction
 - Instruct in home program and begin cervical, elbow and wrist ROM and grip strengthening
 - If biceps tenodesis performed then no resistance with elbow flexion
- **Strength**
 - Instruct in home program and begin scapular retraction and depression
 - No shrugs

- Instruct in home program and begin postural control exercises
- **Sling:**
 - Between exercise sessions, arm should be kept in sling, including at night
 - **Note:** the rotator cuff receives a better blood supply when the shoulder is slightly away from the body so encourage the use of a towel roll under the arm when in a resting position
- **Other**
 - Instruct to don/doff sling while maintaining precautions
 - Incision mobilization and desensitization techniques
 - Modalities to decrease pain, swelling and inflammation (no e-stim)
- Notes: home exercise program should be done 2-3 times per day with cryotherapy 15-20 minutes after each session

Outpatient Phase 2: (Weeks 5 - 8)

- **ROM:** continue program with following modifications
 - Progressive return to full passive forward elevation and external rotation at side
 - May add self-assisted table top stretch for forward elevation but no wall walking
 - No cross body adduction stretch until Week 9
 - No IR towel stretch until Week 9
 - Grade I-II glenohumeral and scapular mobilizations
- **Strength**
 - Continue precautions with no active use of arm
 - Continue scapular retraction and depression and postural control
- **Sling**
 - Continue to wear sling except during bathing and exercise, including at night until Week 7
 - May discontinue at Week 7 but continue to emphasize precautions (no active use of arm)
- **Other**
 - Continue incision desensitization and inflammation and edema control
 - Continue cryotherapy as necessary

Outpatient Phase 3: (Weeks 9 - 12)

- **ROM**
 - Begin side lying internal rotation in abduction and cross body adduction for posterior capsule
 - Begin external rotation at 45°
 - May begin internal rotation stretch behind back
 - Begin use of pulleys to assist with forward elevation with hand supine to externally rotate humerus away from acromion
 - Stage III and IV glenohumeral and scapulothoracic mobilizations
- **Strength**
 - Instruct in home program begin AROM in flexion, scaption and abduction, IR/ER with no resistance
 - Assess for substitutions patterns
 - Instruct in home program and begin progressive supine two-hand press
 - Start with hands close together and progressively widen

- Instruct in home program and begin gentle low level isometrics in IR/ER, flexion, extension and abduction
 - Start rotation isometrics in modified neutral (non-impingement position)
- Low level biceps and triceps strengthening with elbow supported
- Continue scapular retraction and depression exercises and add shrugs
- Theraband for scapular strengthening with rows, shrugs and punches

Outpatient Phase 4: (Weeks 13 - 16)

- **ROM**
 - Continue flexibility training with active range of motion
 - Emphasize posterior capsular flexibility and scapular mobility
 - Add anterior chest wall stretching
- **Strength**
 - Begin light resistive rotator cuff and periscapular strengthening
 - Submaximal isometrics in all planes
 - Isotonic strengthening with tubing or light dumbbells
 - Emphasize anterior deltoid strength
 - Avoid exercise in impingement position
 - **Notes**
 - Resistance must be added gradually to promote contractile remodeling
 - Multiple angle: start and low level and progress to horizontal as strength improves
 - Submaximal resistance to painful motions should be used until the motions are pain free
 - Emphasis early should be on lower weight and higher repetition to foster muscle hypertrophy
 - Progress scapular stabilization program
 - Forward and reverse UBE starting with low resistance and progressing
 - Serratus, latissimus, trapezius, rhomboid and pectoralis strengthening
 - May start upper extremity proprioception and functional progression activities as indicated

Outpatient Phase 5: (Functional Phase)

- Continue strengthening program with progressive increase in resistance
- Return to functional activities
- Work/sport specific conditioning to enhance endurance and coordination
 - One-handed plyometrics
 - Eccentric cuff strengthening
 - Large muscle strengthening: lat pull downs, bench press, military press
- UBE at higher resistance