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James T. Mazzara, MD

Orthopedic Surgeon  
www.OrthoOnTheWeb.com

## Postoperative Rotator Cuff Repair Rehabilitation Protocol

### Large and Massive Tears

#### Phase I: 0-6 weeks – exercise 4-5 times per days

##### Goals

1. Patient education
2. Allow healing of tendon to bone (6 weeks regardless of repair technique)
3. In certain cases, therapy may not begin until 3 weeks post op.
4. Control pain and inflammation
5. Initiate range of motion exercises

##### Postoperative day 1-7

1. Educate patient on precautions
2. Pendulum exercises
3. Elbow AROM, hand squeeze exercises
4. Supine PROM forward elevation in appropriate patient
5. Ice (Instruct patient on use of ice at home)

##### Postoperative day 7-10

1. Review precautions
2. Ice
3. Pendulums, elbow AROM, and hand squeezes
4. Supine passive forward elevation and external rotation in plane of scapula above level of abduction pillow
5. Active periscapular exercises (retraction and elevation)

#### Phase I

- Patients are discharged the day of surgery. Most patients will have an interscalene block that wears off in the 24 hours following surgery.
- Ice should be encouraged as often as possible in order to reduce pain and inflammation.
- Rehab begins on post-op day 1. Patients should expect swelling and discoloration in the affected arm and occasionally the chest wall as a result of the surgery.
- ***Patients are expected to wear their arm immobilizer with the abduction pillow for 6 weeks post op unless specifically directed to do otherwise by the operating surgeon. This applies whether the tendon was repaired by open, mini-open or arthroscopic technique.***
- Patients may often use their hand for waist level activities when tolerated.
- They should be cautioned against using the shoulder for any active motion, sleeping on the surgical side, leaning on the elbow, and sudden movements.
- Therapists should document distal neurovascular exam, passive arcs of forward elevation and external rotation.
- Exercises should be performed for 20 repetitions 4-5 times per day. When the patient is performing home exercises, frequent shorter periods of exercises are preferred over one longer session.

**Phase I (continued)**

- Hand squeezes and active elbow ROM without weights) are encouraged.
- Pendulums in tolerable ranges should be performed 25 times in each direction.
- Supine passive forward elevation with the opposite hand and passive external rotation with the arm at 45 degrees to the plane of the scapula. (*or to a limit determined by the surgeon*) are started post-op days 1.
- External rotation limits \_\_\_\_\_ degrees.
- Forward elevation limits \_\_\_\_\_ degrees.
- The adducted position is avoided because external rotation with the arm adducted has been shown to increase tension across the repaired tissues.
- Functional internal rotation is absolutely avoided since shoulder extension and internal rotation will apply excess tension to the repair and endanger the integrity of the repair.

**MD Notes:****Phase II: 6 - 10 weeks**

## Goals

1. Discontinue sling.
2. Improve to full ROM
3. Improve neuromuscular control and strength
4. Emphasize normal scapulohumeral rhythm
5. Decreased pain and inflammation

## Treatment

1. Continue all stretches
2. Review all exercises and precautions
3. AAROM (Ladder, pulley, cane)
4. Add phase II stretching (internal rotation and cross body abduction)
5. Scapular strengthening (Shoulder shrugs, scapular retraction)
6. May progress to resisted scapular strengthening
7. Submaximal rotator cuff isometrics at 6-8 weeks. *MD will indicate.* \_\_\_\_\_
8. Phase I strengthening at 6-8 weeks. To be determined by surgeon. Depends on size of tear, ease of repair, quality of tissue. *MD will indicate.* \_\_\_\_\_

**Phase II**

- Passive/active-assistive ROM into ER can be performed at 70-90 degrees of POS abduction.
- Supine active-assistive ROM into elevation may be started.
- ROM restrictions are expected at this time with large or massive cuff tears.
- After 6 weeks, AAROM in all directions is permitted with caution in internal rotation.

- If joint stiffness persists, joint-mobilization and relatively *pain-free* manual stretching is permitted.
- If the patient had a large or massive tear, the limitations are expected and respected. These patients are advanced slowly and are instructed to avoid over stretching or iatrogenically disrupting the repair due to enthusiastic stretching the therapist.
- Selected patients may begin resisted exercises in this phase. The decision to begin resisted exercises is based on cuff tear size, ease of repair, quality of tissue.
- If minimal manual resistance causes pain, then resisted exercises should be delayed.
- The yellow Theraband is the first to be used and exercises are performed in pain-free ranges. **MD will indicate start date: 8-10 weeks.**
- For larger rotator cuff tears, Theraband exercises are delayed until 8-10 weeks although isometric exercises are started at 6 weeks.
- Multi-angle isometrics are performed beginning at 45 degrees in the POS using manual resistance. If pain occurs, the position is changed and the resistance modified or the exercise is delayed until another session. This usually begins at 6 weeks post op and will be indicated by the surgeon.

### Phase III: 10 - 16 weeks

#### Goals

1. PROM full and pain free
2. Optimize neuromuscular control
3. Improve endurance
4. Initiate return to functional activities
5. Increase strength of scapular stabilizers

#### Treatment

1. Continue all stretches and strengthening
2. Phase I strengthening
3. Resisted scapular strengthening
4. Manual resistance for rotator cuff, deltoid and PNF
5. Progressive resistance of shoulder shrugs, scapular retraction, biceps, triceps
6. Progress to phase II strengthening (abdominal and FF) when at green for all phase I exercises
7. Appropriate variable resistance exercises
  - Theraband PRE when indicated by surgeon
8. Free weights only for biceps / triceps
9. Strengthening above 90 degrees after 16 weeks

### Phase III

- Patients should have recovered at least 80-90% of their ROM at this phase unless they had a large or massive tear requiring lateral mobilization of the tendon or a more extensive procedure.
- The latter group is progressed very slowly. ER may be limited to 50% when measured at the side. IR may also be limited because internal rotation requires maximal lengthening of the rotator cuff.

**Phase IV: 16-26 weeks**

Goals

1. Full functional activities
2. Return to work or sports
3. Promote concept of prevention

Treatment

1. Work or sport specific training for laborers or athletes
2. Suggest modifications to work, sport, or functional activities
3. Gradual return to sports or desired activity

**Phase IV**

- Gradually progress on their home strengthening program. A gradual return to overhead activities may be permitted.

**Comments**

- Unrestricted overhead work is usually permitted after 6 months.
- Most other activities may be attempted after 4 months depending on the individual patient's pace of recovery

**MD Notes:**