

Matthew Varacallo MD**CONSERVATIVE PROTOCOL FOR MASSIVE ROTATOR CUFF REPAIR**

Philosophy: This protocol is designed to serve as a guide for the clinician/therapist to rehabilitate a patient following massive or fragile rotator cuff repair procedures. Time frames allow for optimal healing, and should be used as criteria for advancement along with a patient's functional ability.

Phase I (0-4 weeks)**Goals**

1. Protect the repair and educate patient regarding rotator cuff repair precautions
2. Decrease pain
3. Increase PROM for forward flexion and scaption (see precautions for IR/ER)
4. Independent with home exercise program
5. Initiate scapular awareness exercises

Precautions:

1. **No AROM or AAROM during Phase I.**
2. **Must wear sling at all times except when exercising for 6 weeks.**
3. **No passive IR stretching for 4 weeks.**
4. **External rotation stretching limited to 45 degrees only for 4 weeks.**
5. **No strengthening for 12 weeks.**

Exercises Phase I**Weeks 0-3**

1. PROM for flexion, scaption, and external rotation (to 45 degrees)
2. Grade II, III glenohumeral mobilizations anterior, inferior, and posterior directions.
3. Manual scapular resistance exercises
4. Codman's all directions
5. Active elbow flexion, and extension
6. Gripping exercises for the hand
7. Cervical AROM all directions
8. Educate family on performing PROM for home if appropriate
9. Modalities PRN

Phase II (4-8 weeks)**Goals**

1. Decrease pain
2. Full PROM all directions.
3. Initiate AAROM (4-6 wks) and AROM (6 wks+) with patient aware of upper trapezius substitution pattern

Precautions:

1. **No AROM until 6 weeks.**
2. **No strengthening until 12 weeks.**
3. **Avoid abnormal scapular substitution patterns with initiation of active motion**

Exercise Phase II

Weeks 4-6

1. Continue PROM
2. Initiate AAROM for flexion, abduction, ER, and IR (pulleys, wand, etc), cueing for good scapular positioning/scapulohumeral rhythm
3. Can perform lower extremity strengthening and cardiovascular exercises that are non-stressful to the shoulder
4. Trunk stabilization exercises

Weeks 6-12

1. Perform AROM for flexion, and scaption with emphasis on scapular awareness to minimize the upper trap influence
2. Initiate active scapular retraction and prone Houston exercises
3. Initiate bicep and tricep strengthening with bands only
4. Begin using extremity for light ADLs

Phase III (12-24 weeks)

Goals

1. Achieve full AROM all directions with normal scapulohumeral rhythm.
2. Minimal to no shoulder pain with light to moderate ADL's.
3. Initiate shoulder strengthening.

Precautions: all strengthening should be performed below 90 degrees until normal scapular rhythm and sufficient rotator cuff strength is achieved. Exercise bands only (no free weights) for first 4 weeks of strengthening.

Exercise Phase III

Weeks 12-24

1. Continue PROM and joint mobilization PRN
2. Initiate strengthening of rotator cuff, deltoid, and scapulothoracic musculature with exercise bands only. Can progress to free weights 4 weeks later if good control is present. General progression recommended:
 - a. Prone scapular program
 - b. Integrate functional patterns
 - c. Increase speed of movements
 - d. Integrate kinesthetic awareness drills into strengthening program
 - e. Progress closed chain dynamic stability activities
3. Initiate proprioceptive training
4. Initiate closed chain exercises
5. Initiate active PNF patterns concentrating on technique, with gradual progression to resistive PNF patterns
6. Trunk stabilization/strengthening

Phase IV (6 months)

***Note: At six months may begin return to golf program, lifting, etc as released by surgeon if sufficient strength exists.**

Goals

1. Return to normal ADLs without restriction

Exercises

1. Stretching PRN
2. Continue rotator cuff, scapulothoracic, and trunk strengthening program
3. Plyometric medicine ball program if appropriate

Initiate progressive replication of demanding ADL/ work activities