

## MOON SHOULDER GROUP

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MOON Shoulder Group Web Site: [www.moonshouldergroup.com](http://www.moonshouldergroup.com)

## POST-OPERATIVE ROTATOR CUFF REPAIR PROTOCOL



## MOON SHOULDER GROUP

# Notes for the Therapist

## **MOON Shoulder Group Consensus on Therapy for Rotator Cuff Repairs**

In order to reduce variability so that we can truly determine features that might predict failure of rotator cuff repairs the MOON Shoulder Group met in San Diego, California on February 15, 2007 where we reviewed the best evidence and developed a standard consensus-based postoperative protocol for patients after rotator cuff tear repair:

**CPM:** Level-1 evidence suggests little to no benefit from CPM.

**MODALITIES:** Level-1 evidence supports the use of cryotherapy. Patients are encouraged to use cryotherapy in the postoperative period.

**IMMOBILIZATIONS/SLING USE:** A sling with a small pillow is to be worn for six weeks after surgery in uncontrolled environments (sleeping, around children or pets, around crowds). The sling may be removed for therapy, driving, and deskwork.

**EXERCISE PROGRAM:** Therapy begins within 7 days after surgery. Exercises should be performed daily either at home or with a therapist.

### **Phase 1: *Passive Range of Motion 0-4 Weeks***

Passive range of motion begins within 7 days after surgery. Passive range of motion requires the therapist or an assistant at home to put the arm through a comfortable range of motion while the patient is supine. Motions include forward elevation, external rotation, and abduction-all within a comfortable range. Pendulum exercises are begun during this time. Scapula exercises begin at 1 week, and are done while the patient's arm is in the sling. Scapula exercises should include shrugs, depression, retraction and protraction. Hand, wrist, and elbow motion should be done ad lib.

### **Phase 2: *Active Assisted Range of Motion 4-8 Weeks***

This phase introduces active assisted range of motion. The patient lies supine and uses their other arm (or cane or stick) to move the affected arm into forward elevation, external rotation, and abduction. The patient does this supine at week 4, 45 degrees upright for week 5, and completely upright at week 6. After week 6 the patient can use pulleys for forward elevation.

### **Phase 3: *Active Range of Motion 8-12 Weeks***

While continuing to work on active assisted motion, the patient now begins active range of motion in forward elevation, external rotation and abduction. In addition, isometric strengthening exercises begin at this time.

### **Phase 4: *Resisted Exercise 12-16 Weeks***

After 12 weeks the patient can begin strengthening with resisted exercise using an elastic band or hand weights. Scapula muscle strengthening exercises are introduced. **Full-and Empty-Can exercises are not allowed!**

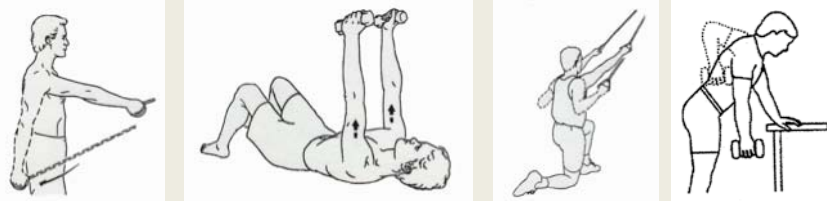
# Rehabilitation Diary

Using the attached form, please record each time you do therapy for your shoulder. Please record whether you do your therapy supervised by a therapist, or at home. If you have comments, please include them on the attached form.

## Phase 4: Resisted Exercises (12-16) Weeks after Surgery)

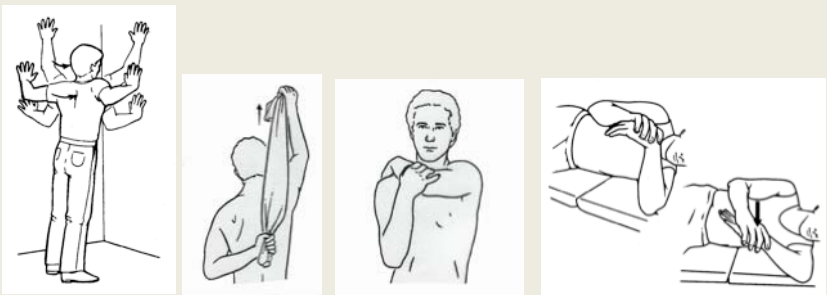
### **Phase 4: Resisted Exercises 12-16 Weeks.**

These exercises include scapula strengthening and light stretching.



#### **RESISTED SCAPULA STRENGTHENING**

Scapula strengthening exercises include locked elbow extension to work the trapezius, press-up plus-reaching toward the ceiling to work the serratus. Rows may be done kneeling with elastic bands, and upright with a hand weight. Like other strengthening exercises, each exercise should be performed as 10-15 repetitions, followed by 2 minutes of rest, and repeated as 3-4 sets. Strengthening exercises should be done 3 days each week.



#### **SHOULDER STRETCHING**

Stretching should be done daily. Hold each stretch for 15 seconds, rest for 15 seconds, and repeat 5 times. The corner stretch will stretch the anterior shoulder. The towel stretch, cross-body stretch, and the sleeper stretch will stretch the posterior shoulder. Begin with gentle stretching. After 16 weeks, aggressive stretching may be used if needed.

## Phase 1: Passive Motion (0-4 Weeks after Surgery)

### **Phase 1: Passive Range of Motion 0-4 Weeks**

Passive range of motion is to begin within 7 days after surgery. Passive range of motion requires the therapist or an assistant at home to put the arm through a comfortable range of motion while the patient is supine. Motions include forward elevation, external rotation, and abduction—all within a comfortable range. These exercises are done with each therapy visit, three times each week.

In addition, pendulum exercises can be initiated during this time. These can be done at home, twice each day.



#### **PASSIVE RANGE OF MOTION**

The patient lies supine and relaxes. The therapist will move the arm. The patient should relax and should not contract any muscles while the therapist moves the arm. This should be done at each therapy visit, three times each week.



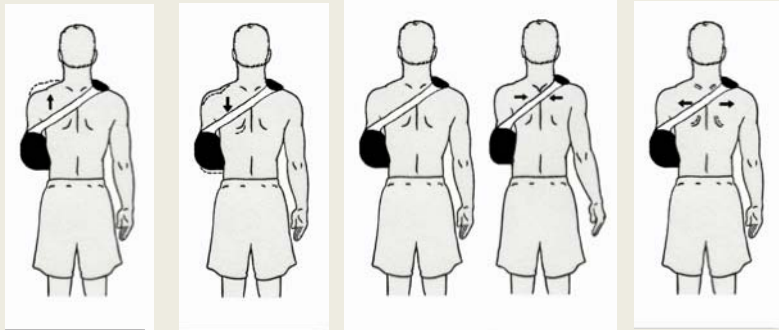
#### **PENDULUM EXERCISES**

Use torso to move arm by rocking body weight. Go in clockwise direction then counter clockwise. Pendulum exercises can be done twice each day.

## Phase 1: Scapula Exercises (1-12 Weeks after Surgery)

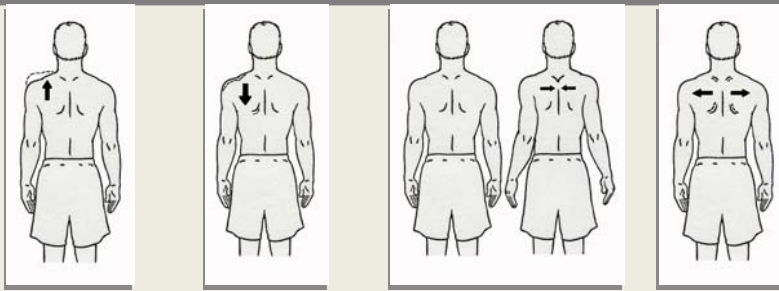
### Phase 1: Scapula Stabilizer Exercises

Scapula exercises begin after 1 week, and are done while the patient's arm is in the sling. Scapula exercises should include elevation with shrugs, depression, retraction and protraction. Six weeks after surgery, these can continue out of the sling until strengthening exercises begin, 12 weeks after surgery. These exercises can be done daily.



### SCAPULA EXERCISES WITH SLING – 1-6 WEEKS AFTER SURGERY

While upright and wearing the sling bring shoulder blades up as you shrug, down as you depress the shoulder, together toward the spine, and apart. Practice upright posture. These can be done daily.



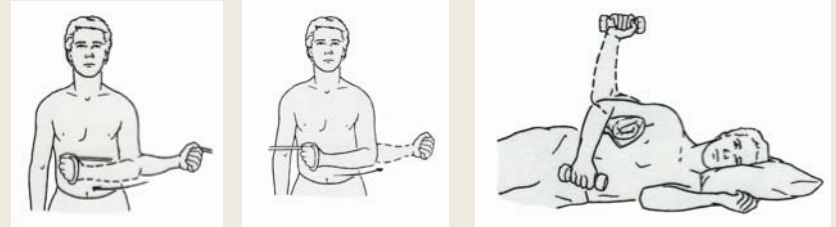
### SCAPULA EXERCISES WITHOUT SLING – 6 WEEKS AFTER SURGERY

After six weeks these same exercises can be done without the sling, with the arm at the side. These can be done daily.

## Phase 4: Resisted Exercises (12-16 Weeks after Surgery)

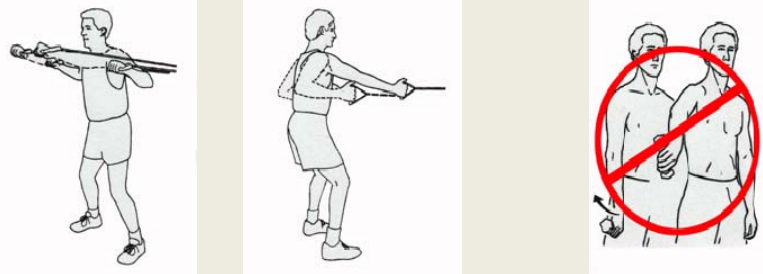
### Phase 4: Resisted Exercises 12-16 Weeks.

After 12 weeks, the patient can begin strengthening with resisted exercise using elastic bands and/or hand weights. Resisted exercises should be done 3 days per week. Each exercise should be performed as 10-15 repetitions followed by 2 minutes of rest, and repeated 3-4 times.



### ROTATOR CUFF STRENGTHENING

With the arm tucked close to the body, use rubber tubing to provide resistance to internal rotation of the arm. Turn around to use the tubing to provide resistance to external rotation of the arm. Alternatively, you may lie on your side and use small hand weights to provide external rotation resistance. Do 10-15 repetitions, for 3-4 sets, for 3 days/week.



### DELTOID STRENGTHENING

With the arm tucked close to the body, use rubber tubing to provide resistance to forward punches. Turn around to use the tubing to provide resistance to pulling the arm. Do 10-15 repetitions, for 3-4 sets, for 3 days/week.

### DO NOT DO FULL-CAN OR EMPTY-CAN EXERCISES!

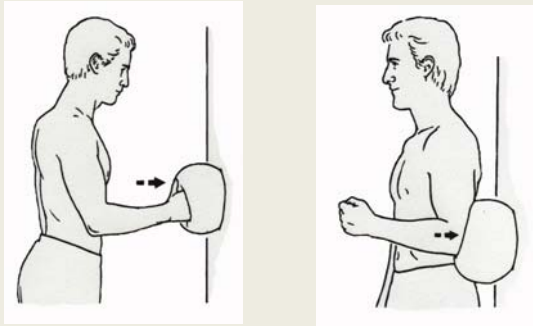
These place too much stress on the rotator cuff.



## Phase 3: Isometric Exercise (8-12 Weeks after Surgery)

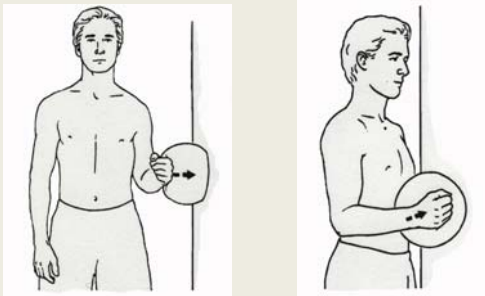
### **Phase 3: Isometric Exercises 8-12 Weeks**

Beginning 8 weeks after surgery the patient can begin isometric exercises. Using a pillow or folded towel the patient applies pressure to the wall without moving the shoulder.



#### **ISOMETRIC PUSH AND PULL**

With a pillow against the wall, and the arm tucked close to the body, create pressure with the fist for forward push, and with the elbow to push backward. Hold the position for 15 seconds then rest for 30 seconds. Repeat this 10-15 times. This can be done daily.



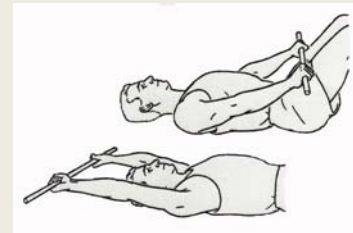
#### **ISOMETRIC EXTERNAL AND INTERNAL ROTATION**

With a pillow against a wall, and the arm tucked close to the body, create pressure with the back of the hand for external rotation, and with the palm of the hand for internal rotation. Hold the position for 15 seconds then rest for 30 seconds. Repeat this 10-15 times. This can be done daily.

## Phase 2: Active Assisted Motion (4 Weeks after Surgery)

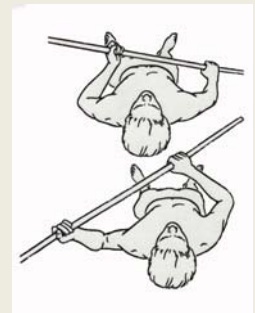
### **Phase 2: Active Assisted Range of Motion 4 Weeks**

This second phase of therapy begins with active assisted range of motion, and starts 4 weeks after surgery. The patient lies supine and uses the unaffected arm (or a stick or cane) to move the postoperative arm into forward elevation, external rotation, and abduction. These can be done daily.



#### **SUPINE ACTIVE ASSISTED FORWARD ELEVATION**

Using a stick or cane, the normal arm will move the affected arm over the head.



#### **SUPINE ACTIVE ASSISTED EXTERNAL ROTATION**

Keep the affected arm tucked close to the body. Bend the elbow to 90 degrees so the hand is pointed to the ceiling. Using a cane, the healthy arm moves the affected arm in external rotation.



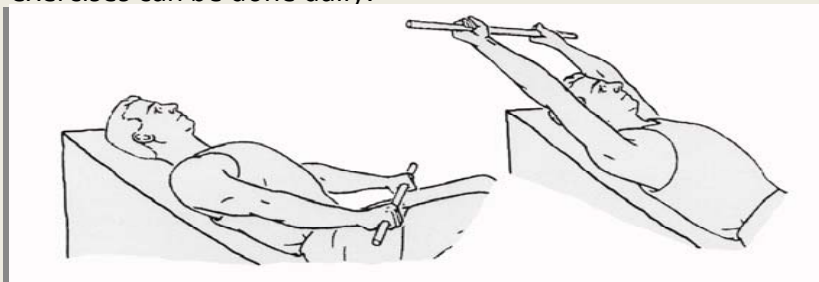
#### **SUPINE ACTIVE ASSISTED ABDUCTION**

While keeping the elbow of the affected arm straight, the unaffected arm will move the affected arm out to the side of the body as high as is comfortable.

## Phase 2: Active Assisted Motion (5-8 Weeks after Surgery)

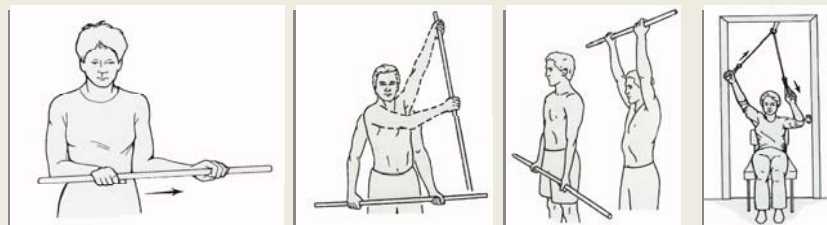
### **Phase 2: Active Assisted Range of Motion 5-8 Weeks**

Five weeks after surgery the patient's back is propped up approximately 45 degrees and uses the unaffected arm to move the postoperative arm (or a cane or stick) into forward elevation, external rotation, and abduction. After six weeks, the patient can do these exercises while upright. These exercises can be done daily.



### **45 DEGREE ACTIVE ASSISTED RANGE OF MOTION**

While propped on a pillow at 45 degrees and using a stick or cane, the normal arm will move the affected arm over the head. The arm is moved in forward elevation, abduction, and external rotation. This begins 5 weeks after surgery and is done daily.



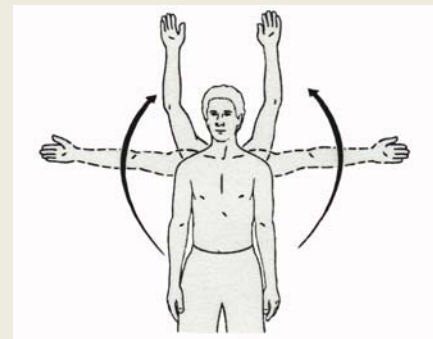
### **UPRIGHT ACTIVE ASSISTED RANGE OF MOTION**

Six weeks after surgery using a stick or cane, the normal arm will move the affected arm in external rotation, abduction and forward elevation while upright. Sitting in a chair while using pulleys is allowed at this time as well. These exercises should be done daily.

## Phase 3: Active Motion (8-12 Weeks after Surgery)

### **Phase 3: Active Range of Motion 8-12 Weeks**

While continuing to work on active assisted range of motion, the patient now begins active range of motion in forward elevation, external rotation and abduction. In addition, isometric strengthening exercises begin at this time. These exercises can be done daily.



### **ACTIVE RANGE OF MOTION**

While upright, the patient moves the arm in front of the body (forward elevation) and to the side of the body (abduction)



### **ACTIVE RANGE OF MOTION**

It is important to avoid "hiking" the shoulder. Place the uninvolved hand on the affected shoulder, or do these exercises in front of a mirror to avoid this.