Massive Rotator Cuff Repair Protocol

- 10-16 visits over 6 months
- Emphasis is on AAROM and a high repetition, low weight free weight program
- Address posterior capsular tightness if indicated at 3 months
- Address scapular mal-positioning if indicated
- Minimal to no pain during or after exercises, although fatigue is OK
- No passive ROM (PROM) or pulleys unless specifically indicated by the physician

Subscapularis Repair Precautions:
- No active IR or glenohumeral extension beyond midaxillary line for 6 weeks; no resisted IR until 12 weeks post-op.
- ER at 0° or less until 4 weeks post-op., 20° or less until 8 weeks post-op., and near symmetric by 4 months post-op.; no ER in abduction beyond neutral for 6 weeks post-op.

Biceps Tenodesis Precautions:
- No active elbow flexion or supination against resistance for 4 weeks

I. Modalities:
   A. Ice following exercises
   B. No phonophoresis/iontophoresis
   C. No ultrasound
   D. Transfrictional massage for tendonitis (only if indicated by physician)
   E. Soft-tissue techniques (only if indicated by physician)

May prescribe 1-2 visits for pre-operative instruction of the physical therapy program

Stage I (0-6 weeks)
2 visits (max.) over 6 weeks

I. Patient is to wear sling or abduction pillow continuously for 6 weeks. The sling may be off for exercises, showering, dressing, and sleeping. It is okay to do tabletop activities within pain tolerance (writing, and occasional typing).

   The abductor brace is used only for patients with a problem with the deltoid. Therefore, protect the anterior deltoid.

II. Range of Motion (ROM)
   Codman’s (pendulum) exercises 3-4 times daily
   AROM of elbow (if biceps tenodesis performed, no resisted motion), wrist and forearm
Goal:
A. Minimize post-operative stiffness while protecting repair during early phase of healing

III. Precautions:
A. Protect anterior deltoid and rotator cuff

**Stage II (7-12 weeks)**
1 visit/week (max.) or 1 visit every other week

I. ROM –
A. Codman’s (pendulum) exercises to warm up
B. AAROM (wand exercises) – painfree only
C. AROM-to start at 10 weeks as tolerated

II. Strengthening:
A. Grip strengthening and elbow flexion/extension
B. Scapular stabilization exercises #1
C. Large and massive tears: light isometrics with arm at side beginning at 9 weeks for deltoid activation and light isometrics in ER beginning at 9 weeks for infraspinatus activation

Goal:
AAROM to 75% of contralateral side
Exercises should be painfree with only short term minimal discomfort

**Stage III (13 weeks – 5 months)**
1 visit every other week over 8 weeks
Emphasis is on home rehabilitation program

I. Strengthening/AROM – painfree arc only (one session, every other day)
A. No weight - Do not increase inflammation
B. Supine rotator cuff program initially
C. Strengthening exercises #1-5

II. Scapular stabilization exercises #1-5

III. Subscapularis exercises - #1-3
1. Perform 30-50 reps of each exercise
2. Emphasis on proper technique and ensure that shoulder is not moving forward
3. Tension of theraband for exercise #2 may be gradually increased

IV. Transition to more aggressive strengthening/AROM as patient is able – may progress to weight; exercises #1-6 and #8
A. Begin with 2 oz. weight and increase to 1 lb. (max.)
B. Patient should experience only minimal pain with exercises
C. Do not increase inflammation or overwork rotator cuff

V. Goal:
A. Full AROM by week 16
B. Gradual progression of strengthening program

**Stage IV (5-6 months)**
1 visit every 2 weeks (max.) only if patient having difficulty

Emphasis is on home program

I. Strengthening/AROM – may progress with weight do not exceed 2-3 lbs with rotator cuff exercises; exercises #1-8
   A. Home Program:
      1. stretching/ice: 7 days/week
      2. strengthening: 3-4 days/week
   B. Begin sports related rehab at 5 months, including advanced conditioning

II. Scapular stabilization exercises #1-8

VI. Goal:
   A. Return to work and sports without limits 5-6 months post-op.
   B. Throwers begin Return to Throwing Protocol at 6 months – collision sports return to activity at 9 months

**Stage V: Maintenance**

I. Continuation of isotonic strengthening exercises should be encouraged 1-2x/week for 6-12 months.

II. Be careful with heavy lifting or unexpected loading on the shoulder for up to 12 months post-op.

This protocol provides you with general guidelines for the rehabilitation of patients following a Massive open and/or arthroscopic Rotator Cuff Repair. Specific changes in the program will be made by the physician as appropriate for an individual patient. If you have any questions regarding the progress of the patient, the physician should be contacted.
PENDULUM EXERCISES (CODMAN’S)

1. Pendulum Exercises

Bend forward at the waist, (back parallel to ground is ideal). Allow involved arm to hang down, perpendicular to the floor. Keep arm and shoulder muscles relaxed. Move arm slowly, increasing the arc as tolerated. This technique should cause only minimal pain.

Perform ______ repetitions ______ times per day.

1. Front to back
2. Side to side
3. Clockwise circles
1. Pendulum Exercises

Bend forward at the waist, (back parallel to ground is ideal). Keep arm and shoulder muscles relaxed. Move arm slowly, increasing the arc as tolerated. This technique should cause minimal pain.
Motions: Front to Back, Side to Side, Clockwise Circles, Counterclockwise Circles

Perform _____ repetitions _____ times per day.

2. Flexion in Supine

Slowly raise arm overhead, keeping elbows straight.

Hold _____ seconds.

Perform _____ repetitions _____ times per day.
WAND EXERCISES (AAROM)

3. **Flexion In Standing**
   - Keep elbow straight throughout each repetition.
   - Slowly push affected arm up.
   - Hold _____ seconds.
   - Perform _____ repetitions _____ times per day.

4. **Extension**
   - Keep elbow straight throughout each repetition.
   - Slowly push affected arm back.
   - Hold _____ seconds.
   - Perform _____ repetitions _____ times per day.
WAND EXERCISES (AAROM)

5. Abduction

Keep elbow straight.
Slowly push affected arm up.

_____ leading with thumb

or _____ palm facing down.

Hold _____ seconds.
Perform _____ repetitions
_____ times per day.

6. Internal Rotation

Hold wand behind you.
Slowly raise hands up then slowly return to starting position.

Hold _____ seconds.
Perform _____ repetitions
_____ times per day.
WAND EXERCISES (AAROM)

7. External Rotation
Place towel roll under elbow. Keep elbow bent 90°. Slowly push hand toward floor.

Hold ____ seconds.

Perform _____ repetitions _____ times per day.
8. Adduction
Holding on to the end of the wand with the right hand, right elbow slightly flexed, left hand is on the mid shaft on the wand and pulls right shoulder across the body (for exercising an involved right shoulder, reverse hands for an involved left shoulder).

Hold ____ seconds.

Perform _____ repetitions
_____ times per day.
SHOULDER ISOMETRICS

Hold _____ seconds.

Perform _____ repetitions _____ times per day.

1. **Flexion**
   Press hand forward into wall.

2. **Extension**
   Press hand backward into wall.

3. **Abduction**
   Place towel inside arm.
   Push elbow into wall.
SHOULDER ISOMETRICS

4. **Adduction**
   - Place towel inside arm.
   - Pull arm in toward body.

5. **External Rotation**
   - Place towel inside arm.
   - Press back of hand into wall.

6. **Internal Rotation**
   - Place towel inside arm.
   - Press palm of hand into wall.
SUPINE ROTATOR CUFF PROGRAM

These exercises are intended for the initial strengthening of acute shoulder problems, and/or long-term rehabilitation for massive rotator cuff tears and other conditions resulting in long-term severe weakness. All of the exercises should be performed with slow and controlled motion. Stay within the pain-free arc of motion. Begin with 5-10 repetitions, advancing to 30 repetitions as able. Initially performed as active range of motion, you may add weight achieving 30 repetitions. The initial amount of weight to add is 4-6 oz. Normal fatigue signs are desirable, never an increase in symptoms.

For all “Reverse Codman” exercises use your uninvolved hand to assist your arm into a vertical position (pointing toward the ceiling).
SUPINE ROTATOR CUFF PROGRAM

1. Reverse Codman’s (Supine Elevation)

Lie on your back, use your uninvolved hand to assist your arm to a vertical position (your upper arm pointed to the ceiling). Actively move your arm over head, then toward your hip, keeping your elbow straight. Stay within the range (arc of motion) that is pain free and in control of your arm. Over time gradually increase to full range of motion. May use wand for assistance and have uninvolved arm guide the movement.

Perform _____ repetitions _____ times per day.

2. Lateral Reverse Codman’s

Lie on your back, use your uninvolved hand to assist your arm to a vertical position (your upper arm pointed to the ceiling). Actively move your arm across your chest and then out to the side, keeping your elbow straight. Stay within the range (arc of motion) that is pain free and in control of your arm. Over time gradually increase to the full range of motion.

Perform _____ repetitions _____ times per day.
3. **Circumduction Reverse Codmans**

Lie on your back, use your uninvolved hand to assist your arm to a vertical position (you upper arm pointed towards ceiling). Actively rotate your arm clockwise, complete reps, then counterclockwise, keeping your elbow straight. Stay within the range (arc of motion) that is pain free and in control of your arm. Over time gradually increase circumduction range of motion.

**Perform _____ repetitions _____ times per day.**

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4. **Shoulder Flexion (bench press)**

Lie on your back. Begin with your elbow at your side, as shown. Reach toward the ceiling, straightening your elbow as you reach (like a slow punch to the ceiling or bench press). You may use a wand for assistance and have the uninvolved hand guide the movement.

**Perform _____ repetitions _____ times per day.**
5. Scapular Protraction (punch to ceiling)
Lie on your back. Use your uninvolved hand to assist your arm into a vertical position (your upper arm pointing toward the ceiling). Reach as far toward the ceiling as possible by moving your shoulder blade toward the ceiling. Then lower your shoulder blade back to the resting position, keeping your elbow of your affected arm straight the entire time.

Perform _____ repetitions _____ times per day.

6. Modified Abduction
Lying on uninvolved side, raise involved arm to approximately 60° away from the body while keeping your elbow straight, then slowly lower it back to its resting position.

Perform _____ repetitions _____ times per day.
SHOULDER STRENGTHENING EXERCISES

General Guidelines

1. Exercises should not be painful.
2. Perform exercises slowly.
3. Maintain the correct position.
4. Warm up prior to using weights – stretching and pendulum exercises as instructed.
5. Ice after exercise for 10-20 minutes.
6. Exercise 4 days a week.

Perform _____ repetitions.

1. Flexion

Start with arm at side, thumb forward. Raise arm to shoulder level (parallel to ground). Lower slowly to starting position.

2. Abduction

Start with arm midway between front and side of your body, thumb pointing up. Raise arm sideways to shoulder level in scapular plane. Lower slowly.

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3. **Abduction**

Start with arm midway between the front and side of your body, thumb down. Raise arm diagonally to 45° level and lower slowly to starting position.

4. **External Rotation**

Lie on uninvolved side. Place a towel roll under elbow. Keep elbow bent at 90° squeeze shoulder blades together. Raise hand away from stomach toward the ceiling. Lower slowly to starting position.

5. **External Rotation**

Keep elbow bent at 90°. Squeeze shoulder blades together. Raise hand up. Lower slowly to starting position.
SHOULDER STRENGTHENING EXERCISES

6. **Internal Rotation with Theraband**

Place Theraband in door. Squeeze shoulder blades together. Pull hand toward stomach. Slowly return to starting position.

7. **Wall Push-Ups**

Perform standing push-ups against the wall. Progress to a counter top, then to the floor with knees bent and then floor with knees straight.

8. **Biceps Curls**

Raise hand toward shoulder with palm up. Lower slowly to starting position.
SCAPULAR STABILIZATION

General Guidelines
1. Exercises should not be painful.
2. Perform exercises slowly.
3. Maintain the correct position.
4. Ice after exercise for ______ minutes.
5. Perform _____ times per day for _____ days per week.

1. Scapular Retraction
Pull shoulder blades together and down.

Hold _____ seconds

Perform _____ repetitions.

2. Scapular Depression
Place theraband over door, squeeze shoulder blades together while pulling your arm to your side. Slowly return to starting position.

Perform _____ repetitions.

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3. **Extension**

Start with your arm hanging straight down with your thumb pointing down. Raise arm backwards and slowly return to starting position.

**Perform _____ repetitions.**

4. **Horizontal Abduction**

Start with your arm hanging straight down with your thumb pointing out, raise arm out to the side to shoulder level (parallel to ground) and then slowly return to starting position.

**Perform _____ repetitions**

5. **Proprioception (Countertop)**

Place your hands on a countertop. Slowly shift weight from one side to the other while keeping your shoulder blades flat to your back.

**Perform _____ repetitions.**
6. Proprioception (Wall)

Stand facing a wall. Keep your shoulder blades together and down and make circles with a ball in a clockwise direction. Repeat same number of reps in a counterclockwise direction.

Perform _____ repetitions.

7. Proprioception (Ball dribble)

Stand facing the wall. Keep your shoulder blades together and down and dribble to ball off of the wall. You may advance to dribbling the ball in shapes and patterns.

Perform_____ repetitions.

8. Wall Push-Ups

Perform standing push-ups against a wall. Progress to countertop, then floor with knees bent and then floor with knees straight.

Perform _____ repetitions.
9. Proprioception (Hands & Knees)

Get on your hands and knees. Keep your shoulder blades together and down and make circles with the platform in a clockwise direction. Repeat same number of reps in a counterclockwise direction.

Perform _____ repetitions.
1. **Wings**

Place hand on stomach above belly button and just below sternum. Press hand into stomach while rotating elbow forward. Do **not** bend wrist or move shoulder forward.

Perform _____ repetitions.
2. **Belly Press**

Attach a theraband to a doorknob or other stable structure about waist high. Hold tightly to the other end with elbow bent at approximately 90°. Extend hand and elbow 4-6 inches away from stomach. Keeping your elbow extended from your body, rotate your arm bringing your hand into your stomach.

Perform _____ repetitions.

3. **Lift-Off**

Stand with feet square and bend slightly at the waist. Place back of hand on beltline in middle of back. Lift hand off by rotating away from body without moving elbow.

Use chair with opposite hand for support if necessary.

Perform _____ repetitions.