

Katherine J. Coyner, MD
UCONN Musculoskeletal Institute

Medical Arts & Research Building
263 Farmington Ave.
Farmington, CT 06030
Office: (860) 679-6600
Fax: (860) 679-6649
www.DrCoyner.com

Avon Office
2 Simsbury Rd.
Avon, CT 06001
Office: (860) 679-6600
Fax: (860) 679-6649



Anterior Deltoid Exercises
Advice for Patients with Massive Rotator Cuff Tears

As a result of prolonged overuse and wear and tear, the muscles arising from the shoulder blade and attaching to the top of your humerus (arm bone) – the rotator cuff muscles - have become torn. This means you are no longer able to easily lift your arm above 90 degrees.

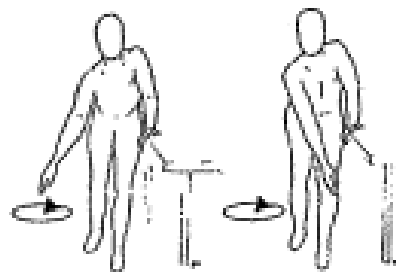
However there is another powerful muscle on the outside of your arm – the deltoid muscle – that may be re-educated to compensate for the torn rotator cuff.

The following exercises should be done three to five times a day to strengthen your deltoid muscle. It will reduce your pain and improve both the range of movement and your arm function.

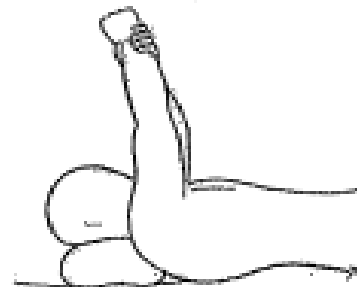
These exercises must be done for at least 12 weeks and must always be performed starting lying down to begin with. You will be taught the exercise at the unit and reviewed at 6 and 12 weeks.

Exercises:

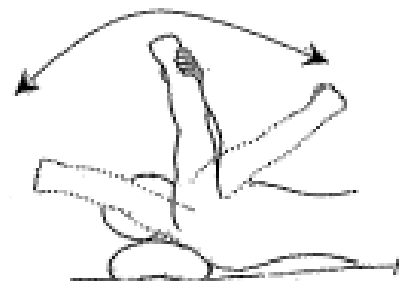
1. While standing, bend forward and let your arm dangle free and perform gentle pendulum movement for about 5 minutes. This will help you in relieving pain and free up your muscles around the shoulder.



2. Lie down flat on your back, with a pillow supporting your head.
3. Raise your weak arm to 90 degrees vertical, using the stronger arm to assist if necessary. The elbow should be straight and in line with your ear.
4. Hold your arm in this upright position with its own strength.



5. Slowly with your fingers, wrist and elbow straight move the arm forwards and backwards in line with the outside of the leg, as per diagram (gentle movement from both sides of the arm upright position.) Keep the movement smooth and continuous for 5 minutes or until fatigue.

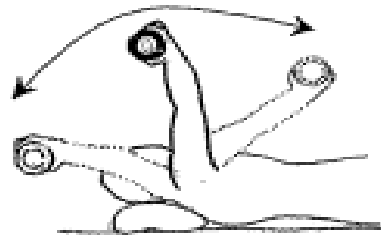


6. As you get more confidence in controlling your shoulder movement, gradually increase the amplitude of movement until your arm will move from the side of your thigh to above your head, touching the bed, and return.

Keep the movement smooth and continuous for 5 minutes or until fatigue.

7. As you get more confidence in controlling your shoulder movement, a lightweight e.g. a tin of beans or small paperweight, should be held in the affected hand.

Repeat as above (5 and 6).



8. Having more confidence in controlling your shoulder movement gradually go from lying down to sitting and eventually standing.

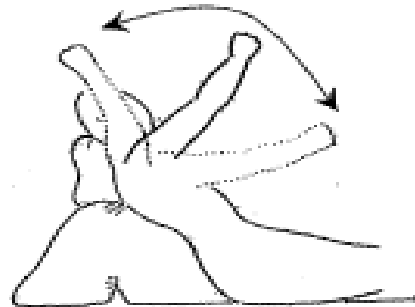
At this stage you may recline the head of your bed or put some pillows underneath your back to recline your position.

Repeat the same exercise again, this time against some gravity.

Start again from holding your arm in the upright position with its own strength.

Repeat as above (5, 6, and 7).

Start first without any weights and progress to use the same lightweight you used before in the lying down position.



9. Another useful exercise for re-education of concentric contracture of the deltoid muscle.

Performing the exercise:



Make a fist with the hand of the affected side. The flat hand of the opposite side is providing resistance. Push your affected side hand against resistance from the other hand. While doing this, you will notice that you can fully elevate your arm (above your head).

Repeat these exercises in order to 'learn' and re-educate your Deltoid muscle to perform this 'concentric contracture' even without pushing against your other arm.

You should repeat these exercises X 10 in a session, 3 to 5 sessions per day.

10. Stop exercising if your pain increases or you feel unwell.
11. We will review you at the Reading Shoulder Unit at 6 and 12 weeks.
We expect to see some improvement by that time.

Massive Rotator Cuff Tear Protocol

The exercises should be performed 2-3 times each day.

1. **Pendulum Warm Up Exercise:** Standing, bend over at the waist and let your arm dangle. Move your hand in a clockwise circle, then in a counter clockwise direction. Start with small circles and work into large ones. Do this for 5 minutes to warm up the muscles.



2. **Active Assisted Warm Up:** Use the pulley system to practice your arm elevation. Use the healthy arm to elevate the injured arm. Do 15 times, rest and repeat 3 times. (Pulley system will be provided by your doctor of physical therapist.)

3. **Active Assistive Arm Elevation Exercise:** Begin lying flat on your back. Use a cane or a stick in your good arm. Hold on to the stick with the hand of the injured arm. Raise the stick from your lap over your head as far as possible. Do this 20 times, rest and repeat 4 times. If no cane or stick is available, use your healthy arm to raise the injured arm.



4. **Active Arm Elevation Exercise:** When you can raise the arm comfortably with assistance (cane or other arm) try lifting the injured arm under your own power. Do 20 times, rest and repeat 4 times.

5. **Resisted Arm Elevation Exercise:** After you are comfortable lifting your arm under your own power, do the same exercise with an 8 Oz. can, then try a 1 lb. weight. Do 20 times, rest and repeat 4 times.



6. When these exercises become easy to perform, you will raise your bed up 20 degrees and start steps 2-5 over again.

7. When the exercises become easy to perform with the bed raised 20 degrees, you will raise the bed another 20 degrees and begin steps 2-5 over again until you are performing the exercises standing up.

