

# Anterior deltoid muscle rehabilitation for massive rotator cuff tear

## Introduction

As a result of prolonged overuse, wear and tear or injury, 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 degree (shoulder height).

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 muscle.

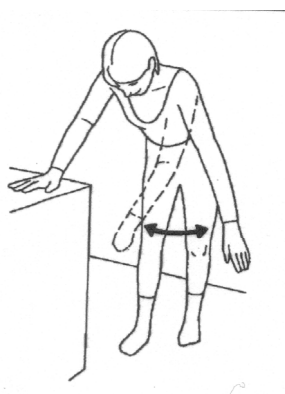
The following exercises should be done 10 times each or until fatigued, 3 – 5 times a day to strengthen your deltoid muscle. It will reduce your pain and improve both the range of movement and your arm function.

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 early exercises by your physiotherapist and then reviewed and progressed by the outpatient department.

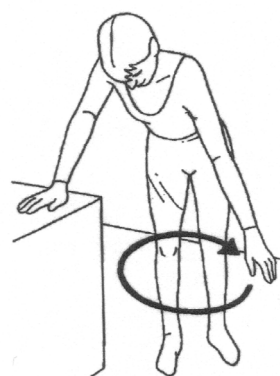
## Exercises

### Exercise 1

While standing, bend forward and let your arm dangle free and perform gentle pendulum movements for about 5 minutes. This will help you in relieving pain and free up your muscles around the shoulder. Move the arm both forward and back, and then in circles both clockwise and anticlockwise.



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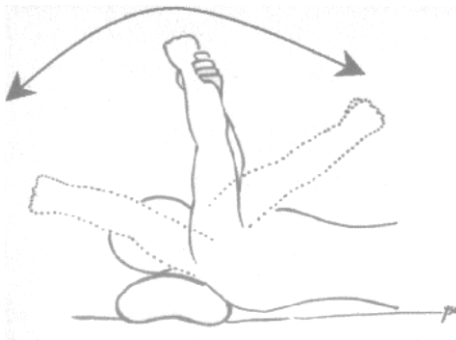
### Exercise 2



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

Once you can hold your affected arm vertically for a few minutes without support of the other arm you may progress to the next exercise.

### Exercise 3



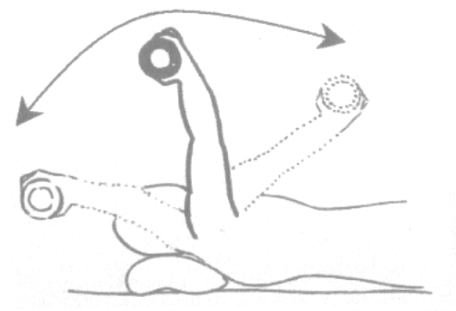
Slowly with your fingers, wrist and elbow straight move the arm forwards and backwards in line with the outside of the leg, as per diagram (gentle movement from both sides of the arm upright position). Keep the movement smooth and continuous for 5 minutes or until fatigued.

### Exercise 4

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

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

### Exercise 5



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

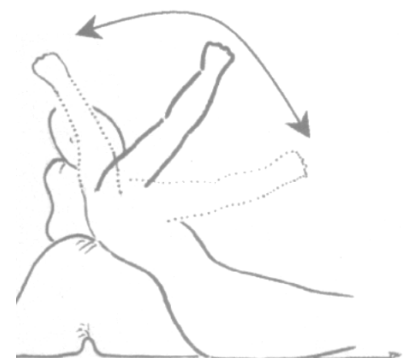
Repeat as for exercises 3 and 4.

### Exercise 6

Having more confidence in controlling your shoulder movement, gradually go from lying to sitting and eventually to 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 for exercises 2, 3, 4 and 5.

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

### Exercise 7



In standing, make a fist with the hand of the affected side. The flat hand of the opposite side is providing resistance. Push your affected 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

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