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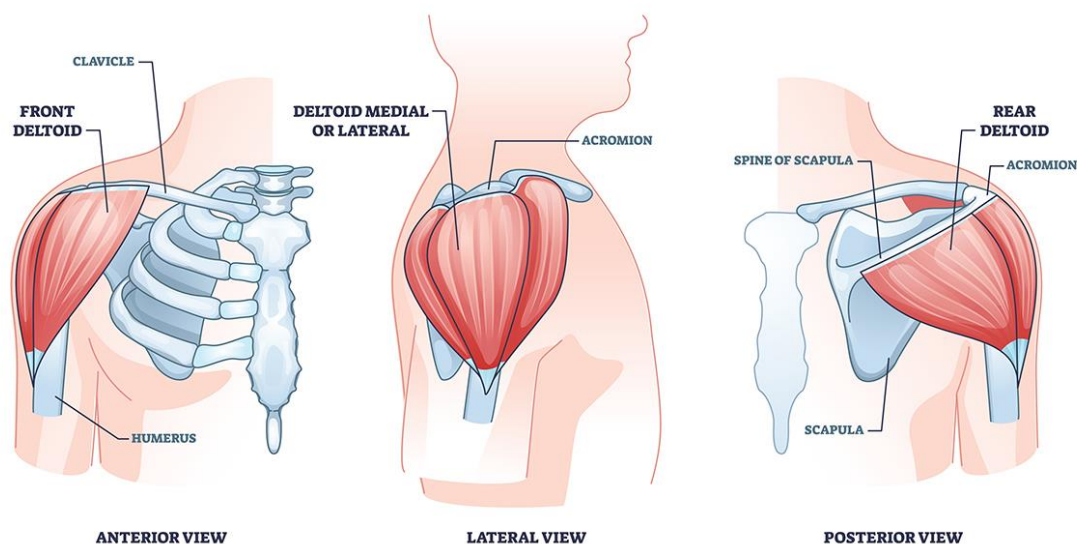
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Anterior Deltoid Strengthening Program

Deltoid Muscles



Injuries to the rotator cuff tendons in the shoulder can significantly impair the ability to lift the arm away from the body, causing pain and difficulty in performing daily tasks. When these tendons are severely torn, the anterior deltoid muscle steps in to compensate for the loss of function. This muscle plays a crucial role in lifting the arm and can be trained to alleviate discomfort and restore functionality.

The following exercises are designed to target and strengthen the anterior deltoid muscle, aiming to improve arm mobility and reduce pain associated with rotator cuff injuries. This program, which starts with simple movements and progresses to more challenging exercises, is tailored to enhance muscle strength over time gradually. Consistency is key, and it is recommended to adhere to this exercise regimen for at least three months, performing the exercises three to five times daily.

While these exercises are generally safe, consulting with a physiotherapist or doctor is essential to ensure proper technique and address any concerns. These exercises are part of a comprehensive approach to shoulder rehabilitation, which aims to empower individuals to regain strength and mobility for an improved quality of life.

The following exercises aim to strengthen the deltoid muscle – which sits over the top and outer aspect of your upper arm – to assist in lifting your arm above shoulder height and to reduce pain. You are training and strengthening your deltoid muscle in order to compensate for the underlying rotator cuff muscles, which are weak or torn.



The exercises need to be done at least three times a day for at least three months to strengthen this muscle and improve the mobility of your shoulder. They are not difficult and should not be unduly painful. The explanations use the terms ‘good arm’ and ‘bad arm’; however, many people have both sides affected. In that case, you will need to do the exercises on both sides.

The exercises are initially carried out lying down to prevent the compensatory ‘hitching’ or lifting of the shoulder in an effort to help lift the arm.

A common side effect of repeated hitching of the shoulder is pain around the lower neck on the affected side and in very bad cases the onset of tingling in the arm or hand.

Should this neck pain occur, you need to immediately check the position of your shoulder and ensure that it is not too close to your ear/hitched while exercising. It is also prudent to inform your physiotherapist at your next visit so that they can check and treat the neck if necessary, to resolve the problem.

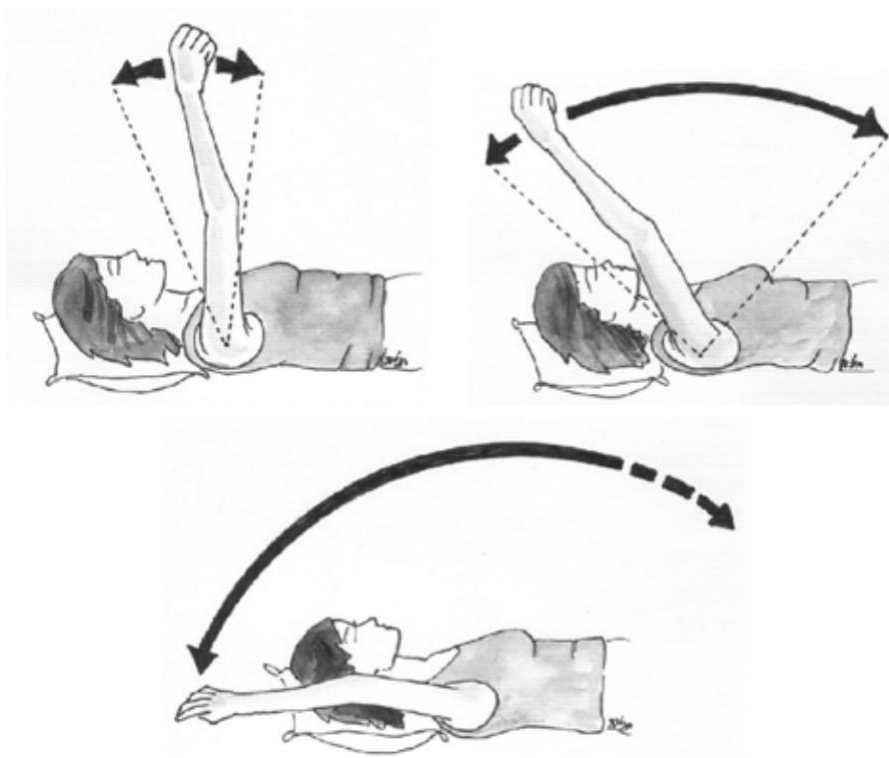
1. Pendulum exercises: Standing and leaning forward, supporting yourself with your good arm, letting the bad arm swing like a pendulum. It can swing forwards, backwards, side to side, and in a circular motion for up to 5 minutes. This exercise is also useful for relaxing the muscles after you have carried out the other exercises.



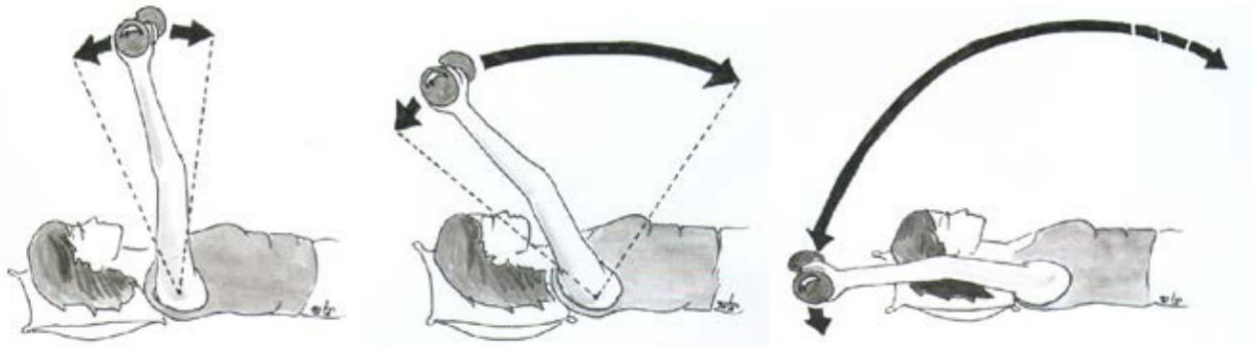
Bend forward, using your unaffected arm for support.

- Perform 20 circular motions with your affected arm.
- Follow with 20 repetitions of backward and forward movements.
- Then, execute 20 side-to-side motions with your affected arm.
- Complete four sets of these exercises.

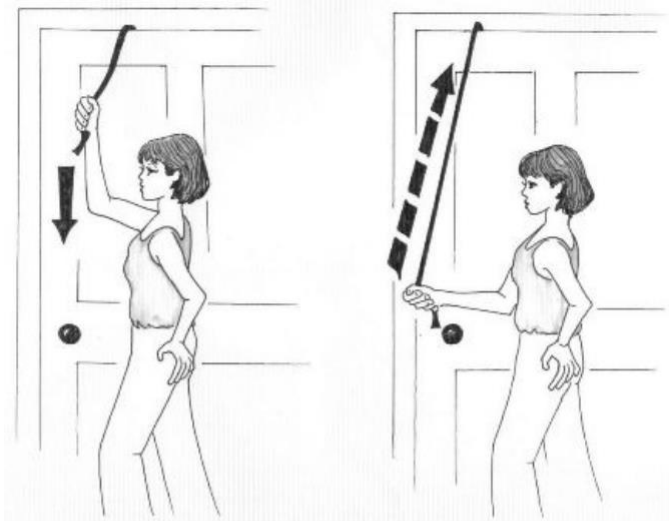
2. Lying on your back – lift the bad arm to a vertical position with the help of your other arm. Then hold the bad arm in the vertical position with its own strength for as long as possible while keeping the elbow straight. Bring the bad arm back down to your side with the help of the other arm. As your arm gets stronger, you can lower it to your side without help. When this becomes easy, move to exercise 3.
3. Lying on your back – as the vertical position becomes easier to maintain, the exercise can be progressed. With the elbow straight, start to move your arm forwards and backwards. Try to keep the arm moving in a slow, smooth, straight line and keep it lined up with the side of your body. As your control and confidence improves, begin to increase the range of motion until the arm can move from the side of your body to touching the bed above your head and back again. Continue this movement for up to 5 minutes or until your arm gets tired.



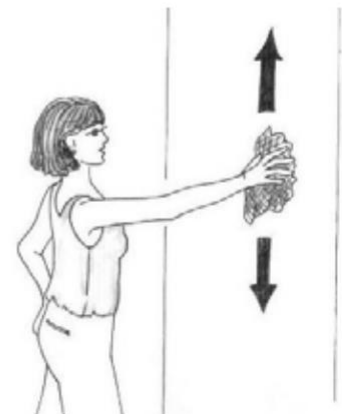
4. Lying on your back – the next progression is to add a small weight, e.g. a tin of beans or a small bottle of water. Hold this in the hand of your bad arm and continue to move the arm from your side to above your head and back again in a smooth movement for up to 5 minutes or until the arm gets tired.



5. Use a piece of stretchy elastic which your physiotherapist can provide. Tie a big knot at one end, loop it over the top of a door and then close the door. Now, stand or sit sideways with the bad side closest to the door. Reach as far up the band as you can with the hand of the bad side. You can use your good arm to help the bad arm to reach higher or it may help if you initially pull the band down with the good arm and then hold on to it with the bad arm. The exercise involves pulling the band down as far as you can and then slowly controlling the release or upward movement of the band back to the starting position. Repeat this movement for as long as you can control it.



6. Standing facing the wall, hold a cloth or duster against a smooth, bare bit of wall or door. Slide your hand up the wall as far as you can and, if necessary, push the hand further up the wall with the good arm. Now, allow the bad side hand to slide back down the wall, but keep the movement slow and controlled. Repeat this exercise for as long as you can control the movement.



7. Once exercise 4 becomes more accessible to carry out, you can alter the starting position of the exercise by gradually moving from lying on your back to sitting and then to standing. As you begin to sit up, stop using the small weight and start again by just holding the arm in the upright position before carrying out the backwards and forward movement. Your arm will automatically feel heavier because of the effect of gravity. As the exercise becomes easier again, you can use the weight. If you are having difficulty raising your arm in the reclined or sitting position, you can use your good arm to help lift the bad side and then lower it back down under its own strength.



The below program is recommended in stages.

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This program, which starts with simple movements and progresses to more challenging exercises, is tailored to enhance muscle strength over time gradually. Consistency is key, and it is recommended to adhere to this exercise regimen for at least three months, performing the exercises three to five times daily. While these exercises are generally safe, consulting with a physiotherapist or doctor is essential to ensure proper technique and address any concerns. These exercises are part of a comprehensive approach to shoulder rehabilitation, which aims to empower individuals to regain strength and mobility for an improved quality of life.

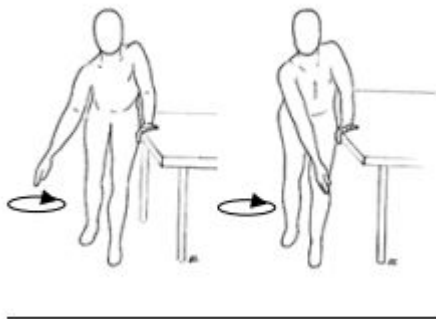
Exercise number 1

Most of these exercises begin with lying on your back. This position is chosen to minimise the resistance against gravity, facilitating the movements. It may take a considerable period to notice the positive effects of these exercises, and we strongly advise continuing them for a minimum of three months.

Pendular Exercises The pendular exercises shown below can be done as a warm-up.



- Bend forward, using your unaffected arm for support.
- Perform 20 circular motions with your affected arm.
- Follow with 20 repetitions of backward and forward movements.
- Then, execute 20 side-to-side motions with your affected arm.
- Complete four sets of these exercise



Stage 1:

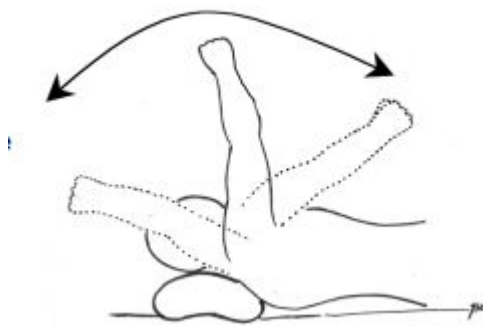
- Lie flat on your back,
- bend the elbow of your
- affected arm, then lift your
- arm towards the ceiling. If unable,
- use your stronger arm to assist, if needed



Stage 2:

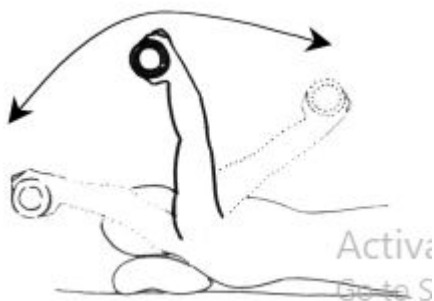
- Maintain the arm in an upright position using its own strength.
- Gradually move the arm back and forth, ensuring the elbow remains straight, as depicted in the diagram.
- Maintain smooth and continuous movement for 5 minutes.
- Begin with a very small range of motion and gradually increase as the exercise becomes more manageable.

Stage 3



As you gain confidence, extend the range of motion, aiming to lower your arm by your side and raise it towards the wall above your head.

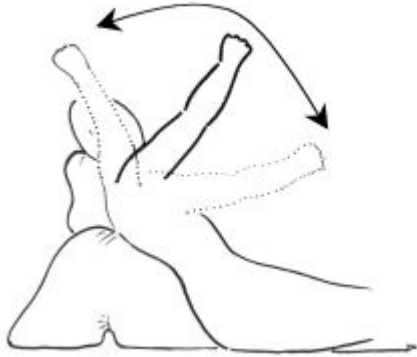
Stage 4



As you become more confident in managing your shoulder movement, you can introduce a light weight (less than 1 kg) to be held in the affected hand. Once you can effectively control the shoulder while lying down with the weight, you can progress to the next stage

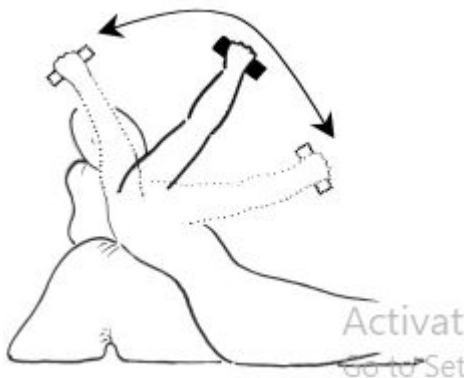
Stage 5

Perform this exercise while sitting up halfway, using pillows to support your upper body if needed. Begin without weight; once you can do this comfortably, you can add weight



Stage 6

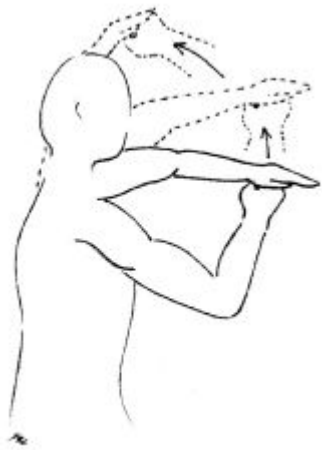
Once you have mastered the exercise without weight, gradually introduce a light weight as you become capable. Improvement in shoulder movement and strength is typically observed within three months of starting these exercises.



Exercise number 2

Here's another beneficial exercise to retrain the concentric contraction of the deltoid muscle.

To perform the exercise:



1. Make a fist with the hand on the affected side.
2. Use the flat hand of the opposite side to provide resistance.
3. Push your affected hand against the resistance from the other hand.
4. While doing this, you'll notice that you can fully elevate your arm above your head.

Repeat these exercises to teach and retrain your deltoid muscle to perform this concentric contraction without pushing against your other arm.

Exercise number 3

Level one

- Sit with your elbows bent at a 90-degree angle and close to your sides.
- Grasp a yellow resistance band with both hands.
- Extend your unaffected arm from your body,
- then slowly return to the starting position.

a)



b)



Level two

- Sit with your elbows bent at a 90-degree angle and resting against your sides.
- Grasp a yellow resistance band with both hands.
- Extend your affected arm outward away from your body, then slowly return to the starting position, repeating this movement five times.



b)



Level three

- Fasten one end of a long yellow resistance band to a stable object placed above head level, like a bannister or door hook.
- Hold onto the resistance band with your arm raised to shoulder height and your elbow bent at a 90-degree angle.
- Pull your arm downwards towards your side while maintaining the bend in your elbow.
- Gradually release the tension and revert to the initial position.

