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## **EXERCISE PROGRAM FOR THE STIFF SHOULDER** (Adapted from the University of Washington Shoulder Service)

Shoulders can become stiff for a wide variety of reasons. In many situations the stiffness is related to tightness of the soft tissues around the joint. Normally these tissues are flexible, allowing the shoulder to maintain its usually large range of motion. When these tissues become thickened or scarred, they lose their normal resilience and suppleness. Sometimes this stiffness develops after injury or surgery. On many occasions, however, shoulder stiffness occurs for no apparent reason.

After a medical examination has excluded such condition as arthritis, which may require a different kind of treatment, most stiff shoulders are treated effectively by a simple program which can be done at home. This program is the safest of all the treatments for frozen shoulders. Although months of these specific exercises may be required, persistence almost always pays off.

There are two components to the home program for stiff shoulders. The first is a series of stretching exercises and the second relates to regular participation in a fitness program.

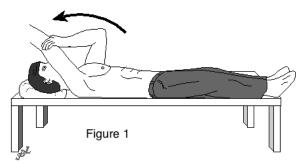
## The stretching program

Your opposite arm is a great therapist for your stiff shoulder. Your "therapist arm" is always available to apply a gentle stretch in any direction of tightness. Each of these gentle stretches needs to be held up to a count of 10. The basic program includes four directions of stretching:

- 1.) Forward elevation/Overhead reach of the arm
- 2.) External rotation with the arm at the side
- 3.) Reaching up the back
- 4.) Reaching across the body

If other directions of stiffness are identified, they can be stretched with a similar approach. An important principle of the stretching exercises is to allow your muscles to relax so that the stretch can be applied to the soft tissues without muscle interference. Tissues of the tight shoulder do not like to be stretched suddenly, roughly or with a lot of force. Thus the strategy is to apply a stretch sufficiently gently that only minimal soreness results. Any soreness should go away within 15 minutes after you conclude the exercises.

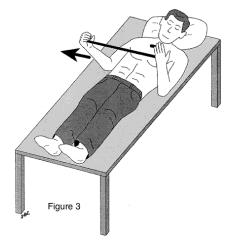
Overhead reach is helping to lift your stiff arm up as high as it will go. To stretch your overhead reach, lie flat on your back, relax and grasp the wrist of the tight shoulder with your opposite hand. Using the power in your opposite arm, bring the stiff arm up as far as it is comfortable. Start holding it for 10 seconds and then work up to where you can hold it for a count of 30. Breathe slowly and deeply while the arm is moved. Repeat this stretch ten times, trying to help the arm up a little higher each time (Fig. 1).

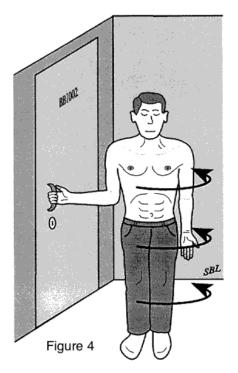


An alternative method of stretching to overhead reach is to use the "progressive forward lean." Here you sit beside a table, shelf, armchair back or other fixed object with your arm in a comfortable amount of elevation in overhead reach. By leaning forward, allow the fixed object to apply a gentle, upward-directed force on the arm for a count of at least 10. The advantage of this method is that it does not require the help of the other arm and it can be sustained for a longer period of time (Fig. 2).



External rotation is turning the arm out to the side while your elbow stays close to your body. External rotation is best stretched while you are lying on your back. Hold a cane, yardstick, broom handle or dowel in both hands. Bend both elbows to a right angle. Use a steady, gentle force from your normal arm to rotate the hand of the stiff shoulder out away from your body. Continue the rotation as far as it will go comfortably. **Hold it there for a count of 10. Repeat this exercise ten times.** 





An alternative method of stretching in external rotation is to hold onto a fixed object and gently turn your body away while holding your elbow at the side. The advantage of this method is that it does not require the help of the other arm and it can be sustained for a longer period of time (Fig. 4).

Internal rotation is the motion of reaching up the back. Grasp a towel behind your back with both hands. Gently pull the hand of the stiff shoulder up your back. Work up to holding the maximum comfortable stretch for a count of 10 to 30. Repeat the exercise ten times (Fig. 5).



An alternative method of stretching in internal rotation is to hold onto a fixed object (such as a table top) behind you with your hand as high up your back as it will easily reach. Then by bending your knees a gentle stretching force can be applied and sustained for a count of 10 to 30.

Cross body reach is reaching across your chest so that your elbow approaches your opposite shoulder. Work up to holding the maximum comfortable stretch for 10 to 30 seconds. Repeat the exercise ten times (Fig. 6).



Figure 6 You should carry out this shoulder stretching sequence three times a day. As much as possible these sessions should be performed after the shoulder has been relaxed by a hot shower or aerobic exercise. For each stretch, make a note of the maximum range obtained with each session. Try to establish a new benchmark each time you do them, so that you can see your progress with time.

The beauty of this exercise program is that you are in control. You can adjust the vigor of the stretching to do what is most easily tolerated by your shoulder. The exercise program is totally portable and can be performed in your office, home, car, bus, airplane, or wherever you happen to be. This is important because consistency in this exercise program pays off. If pain results from the exercise program, do not stop or change the frequency of your exercise sessions, just reduce the vigor of the stretches.

## The Fitness Program:

Regular fitness exercise helps keep your joints supple. This "lubricating" effect is optimized if you perform a half-hour of aerobic exercise each day. This exercise may take a variety of forms including brisk walking, jogging, riding a stationary or mobile bicycle, rowing, climbing stairs, or using a cross-country skiing simulator. If you have concerns about your ability to carry out such an exercise program, you should consult your general physician. It is not important that these exercises be carried out vigorously, it is only important that in addition to the stretching program, a half an hour of your day be devoted to some form of aerobic exercise. A guideline for someone with a healthy heart, lungs and blood pressure is to work up to 30 minutes of exercise at a target of two-

thirds of his/her maximum heart rate. The maximum heart rate is estimated by subtracting your age from 220. If you are over 35 and have not been exercising much, or if you are not sure of your health, you should consult your doctor before starting this aspect of the program.

Many patients are reluctant to try this stretching and aerobic program because they have already "had therapy." Our repeated observation is that many patients who have not responded to formal therapy sessions can improve their shoulder function using this home program. Remember that your shoulder stiffness has been present for quite a while. Improvement in your range of motion and comfort may not begin until six weeks of persistence with the program. You should not stop these exercises until your shoulder has regained normal motion and comfort.

We have found that medication is not very helpful in managing stiff shoulder. However, mild analgesis (aspirin, ibuprofen, or acetaminophen) may be used.