

# **The Rotator Cuff and Shoulder Safety**

## **Part 1**

**Dave Mansfield MSPT, HFI, CSCS**

The Rotator Cuff is a group of 4 small muscles surrounding the shoulder joint. The shoulder joint is a ball and socket type joint made up of a relatively large “ball” in a rather small “socket” this is then surrounded by what is referred to as a Joint Capsule. This capsule provides a certain amount of static stability to the joint.

However, in order to function we must be able to move our shoulders through a wide range of motion. Physiologically we sacrifice a good deal of stability for a great deal of mobility in the “normal” shoulder. When we move our arm to reach for something the rotator muscles contract to hold the joint together and allow the arm to move smoothly without bumping into the acromium (the bone on top of our shoulder) and without dislocating. Once movement is initiated other larger muscles get increasingly involved so that we may not only move the arm but may also do “work” with it.

In addition to the joint capsule and related ligaments and rotator cuff there is bursa and the biceps tendon around the shoulder and between the acromium and the head of the humerus (upper arm). This is a lot of “stuff” to squeeze between these two bones. You can see that if things are not functioning just right there is bound to be trouble at the shoulder resulting in pain and dysfunction.

Since our shoulders get so much use during a normal, active lifetime, they tend to suffer insult and injury. If we abuse our shoulders further with overhead activities, sports and weight lifting (at work or at play) the possibilities for damage increase.

Fortunately, there are some simple things that we can do to prevent injury and slow down the ravages of time on our shoulders. One of the essential elements to injury prevention and rehab is to maintain strength and Range of Motion in the Rotator Cuff. We will address specific recommendations in future issues.

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## Part 2

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In the first part of this series I emphasized the importance of ROM in preserving Rotator Cuff function and in preventing injury. If you are having shoulder pain you should see a Doctor or a Therapist in order to get a diagnosis of the problem.

If your shoulders feel “tight” or if you have difficulty dressing, reaching or lifting due to Range of Motion restrictions but are not experiencing any pain you need to work on ROM. There are some basic stretches that are helpful.

The **Towel Stretch**: hands behind back (one overhead the other behind your back). Grasp a towel behind your back. Pull up to increase internal rotation, pull down to increase external rotation.

**Corner Stretch**: facing the corner put your elbows on the walls at about shoulder height. Lean into the corner. Feel a stretch across your chest and shoulders.

**Posterior Shoulder Stretch**: with your elbow bent to 90 degrees and at shoulder height, grasp that elbow with the opposite hand and pull across your chest. *More next time.*

# **The Rotator Cuff and Shoulder Safety**

## **Part 3**

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If you want to avoid injury, don't we all, you must maintain balance around the joint. This is particularly true for the shoulder. The human body sacrifices some stability in order to accommodate mobility in the shoulder joint. As wear and tear takes its toll the shoulder tends to become less stable. In the previous installment stretching was addressed, that is a mobility facilitator. Now we need to pay attention to some stability ideas. Strengthening the Rotator Cuff and related muscle groups will go a long way toward preventing injuries or rehabbing existing injuries.

In the course of our daily lives we tend to over develop some muscles while others become stretched and relatively weak. This leads to abnormal motion patterns and stress to the tissues around the shoulder joint. The most common situation is that the shoulder muscles remain strong but tight anteriorly (in the front of the shoulder) and stretched and (relatively) weak posteriorly. The remedy is to pay special attention to stretching the chest area and to strengthening the upper back between the "shoulder blades" and the "rear" of the shoulders. There are many possibilities but today let's address a few of the most common exercises.

External Rotation strengthening is the cornerstone of injury prevention for the shoulder. With your arm at your side place a small towel roll between your elbow and trunk. Lie on a bench on your opposite side, hold a light dumb bell in your "towel side" hand. Now rotate your hand "up" or externally through a full range of motion. Do 15-20 repetitions then turn over onto the other side and repeat. Perform 2 or 3 sets for each shoulder. You may also perform this exercise standing at a cable machine or with elastic tubing. Keep the resistance light and the reps high.

You can also strengthen the external rotators standing with your arm elevated to 90° and the elbow flexed to 90° using a light dumb bell or elastic tubing. Same sets and reps scheme. Maintain strict form, don't cheat, and rotate your shoulder through its full range of motion into external rotation.

More on shoulder strengthening next time.

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### **Part 3**

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As promised: this edition we provide further strengthening exercises to protect your shoulders.

Lying face down on an exercise bench, or sitting in a chair and bending forward with your chest on your knees, hold 2 light dumb bells. With your thumbs up and arms straight raise them as far as you can. Pause for a second or two and return to the start position. Perform 2-3 sets of 15—20 repetitions. At the top of the motion try to squeeze your shoulder blades together.

In a seated or standing position, next, hold 2 light dumb bells in a “shoulder press” position. Your elbows should be slightly to the front of your torso and touching your ribs. Next press the “bells” up to about ear height only and return to the start position. Perform 2-3 sets of 25-30 repetitions of this exercise.

Another useful shoulder exercise is to get into a “push-up” position. You can do this against a wall if your strength level will not allow you to perform a traditional push-up. Instead of actually performing a push-up keep your elbows locked straight. Let your chest sag toward the floor so that your shoulder blades come together. Then round your back up away from the floor separating your shoulder blades. Perform this exercise for 2-3 sets and 15 repetitions per set.

By maintaining good posture, working on shoulder flexibility and building strength in the small stabilizing muscles around the shoulder you can preserve shoulder function and avoid injury. The shoulders take a lot of abuse every day because of the extreme mobility needed to function in our day to day and sporting activities. Take good care of your shoulders and they will take good care of you!