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EXERCISE PROGRAM FOR ATRAUMATIC INSTABILITY

(Adopted from MCP/Hahnemann University Shoulder Service)

Normal shoulders are stabilized by good muscle strength and by proper technique in their use. Many shoulders, like those of gymnasts, are very loose when the muscles are relaxed but function superbly with proper training and technique. Your shoulder may have problems of instability after a minor injury or a period of disuse. You may notice that your shoulder slips or feels unstable with certain activities. In these situations the most effective treatment is to restore the normal strength and coordination of the shoulder.

There are four parts to this reconditioning program. The first is to do all you can to avoid having your shoulder "pop out of place". Even if it feels like it "needs" to be popped, **don't do it**. Each time you let it pop, it makes it easier for it to happen the next time (just like blowing up a balloon repetitively makes it easier on each successive occasion).

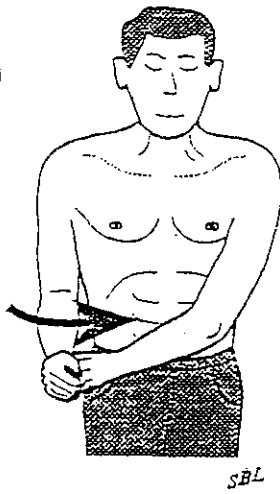
The second part of the reconditioning program concerns strengthening the muscles that press the ball of the shoulder into the socket. These muscles are called the rotator cuff muscles. They are strengthened by working against resistance in rotation internally (toward the body) and externally (away from the body). It is important that your shoulder have both strength and endurance of internal and external rotation. This means that you need to carry out at least five exercise sessions each day, each taking about five minutes. Internal rotation is strengthened by holding the elbow close to the side and trying to rotate the arm inward against resistance. This resistance can be isometric (unmoving), such as the opposite hand, a wall or other fixed object. You can also use dynamic exercises against rubber tubing, weights and pulleys, or free weights while you lie on your side (Fig. 1). External rotation is strengthened by holding the elbow at the side and trying to rotate the arm outward against either isometric or dynamic resistance (Fig 2.).

Total Joint Replacement, Spine Surgery, Arthroscopic Surgery, Hand Surgery, Foot Surgery, Sports Medicine

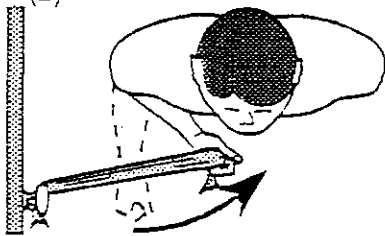
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Fig. 1

(A)



(B)



(C)

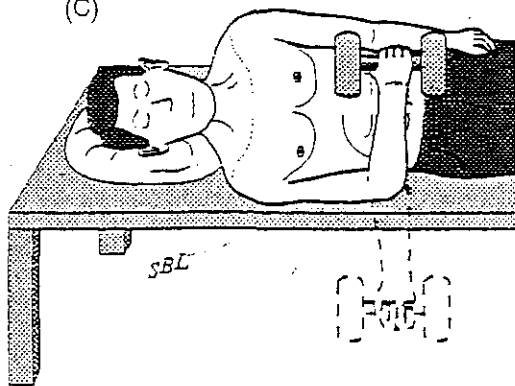
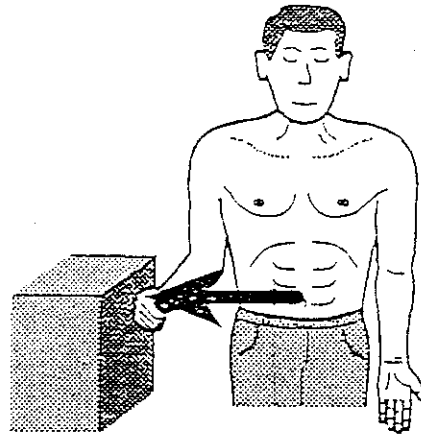
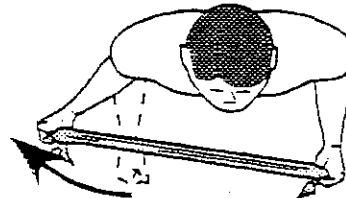


Fig. 2

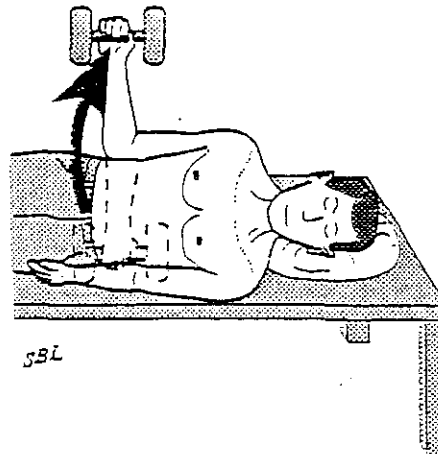
(A)



(B)



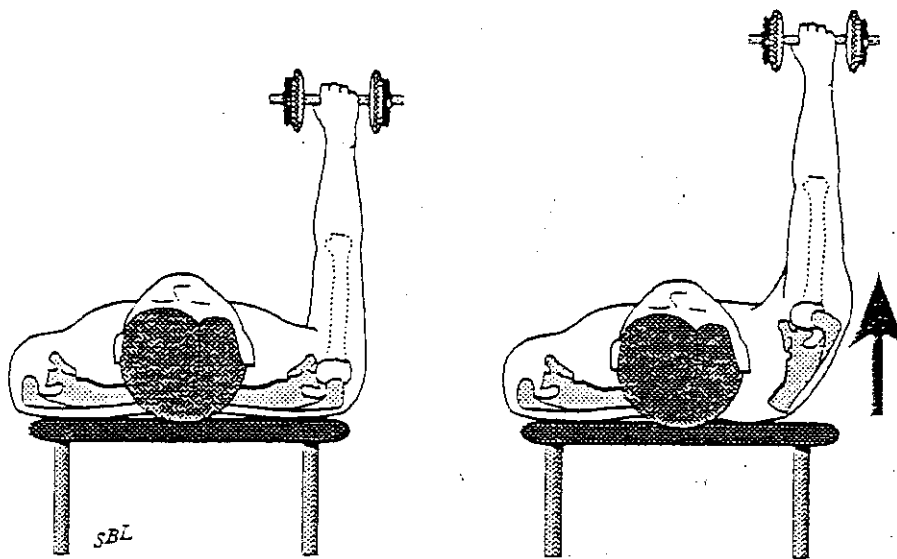
(C)



The reason these exercises are started with your arm at the side is because that is usually a position in which your shoulder is stable. As you get stronger, you should be able to perform these rotations in other stable positions.

The third component of the reconditioning program for your shoulder is to train the muscles that balance the ball in the socket. These muscles are primarily those which power your shoulder blade or scapula. When your scapula gets lazy or weak, the shoulder tends to become malaligned and unstable. The purpose of these exercises is to strengthen the muscles and to eliminate bad habits that your shoulder may have developed.

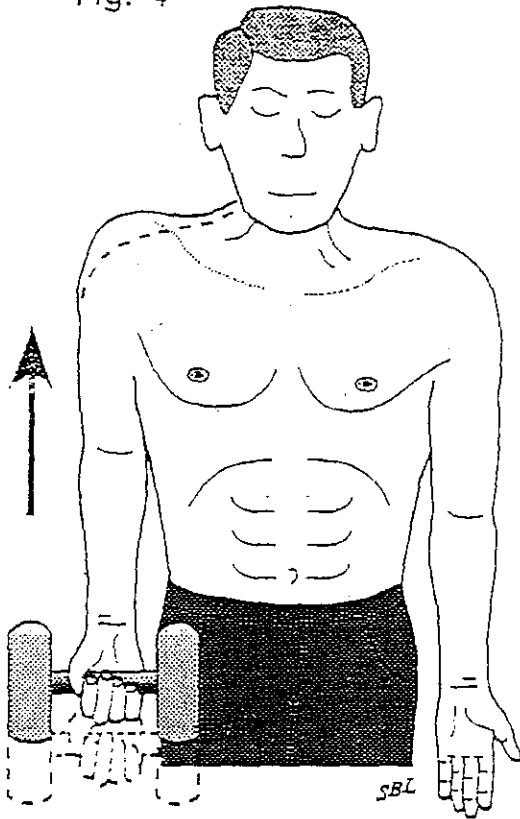
Fig. 3



The largest and most important muscle groups are those which move your shoulder blade forward (the serratus and pectoralis) and those which lift the shoulder blade (the trapezius, levator scapulae, and rhomboids). The first

group, the protractors, are strengthened by a bench press-type exercise performed supine holding the bar with the hands about a meter (yard) apart. At first only the bar is used while you concentrate on powering the shoulder blade upward. When you lift your shoulder blade off the bed or table, we call this the press "plus" (Fig. 3). The "plus" is important for training the shoulder blade muscles. Once you can control the bar alone for 20 repetitions, add weight to the bar progressively up to about half your body weight. Never use a weight greater than what you can control for 20 repetitions. Once you feel confident in the shoulder, you can start doing a one hand press using a one pound weight and building up to 20 percent of your body weight. This series of exercises will restore the strength and technique necessary to use your arm stably in front of you.

Fig. 4



The second muscle group helps balance your shoulder during lifting at your side (Fig. 4). Start with a simple shoulder shrug, lifting the point of your shoulders as high as they will go 20 times. Once the shoulder shrug becomes easy, add weight one pound at a time to each hand, keeping the number of repetitions at 20. With each shrug, concentrate on lifting the tip of the shoulder.

The fourth component of the exercise program concerns performing activities with the arm away from the body. Lift your arm 90 degrees to the side holding several pounds in your hand. Notice that the shoulder is stable in that position. Rotate your hand in a small circle. Repeat this exercise with the arm in progressively more forward positions as long as your shoulder feels stable. Try to accomplish this movement with the shoulder blade and not at the shoulder joint *per se*.

As you gain strength and coordination, try to carry out progressively more of your usual activities, concentrating on keeping the ball of your shoulder in the socket. Avoid activities and positions that threaten your shoulder's stability, while practicing those that you can perform with confidence. Swimming, rowing, and using cross country ski simulators are all good exercises for developing strength, coordination, and endurance. They also have the advantage of exercising both shoulders at the same time.

Persistent, regular sessions of these exercises are essential for success. We cannot say that "exercises don't help" unless you have adhered to a quality program for at least six months.

Please keep a daily log of your exercise sessions so we can go over it when you return to the office.

In summary, the cornerstones of the rehabilitative program are (1) avoid letting your shoulder pop out, (2) strengthening the rotator cuff muscles, (3) optimizing the strength and endurance of the muscles that control your scapula, and (4) regaining the technique and confidence in normal use of your shoulder. Remember that the shoulders of many athletes such as gymnasts are quite lax yet are stabilized by excellent muscle strength and learned techniques of neuromuscular control. Only exercises and training can reestablish proper use of your shoulder.

If you have any questions about your shoulder or our recommended treatment, please let us know.