



# IMPROVING SHOULDER STRENGTH AND STABILITY

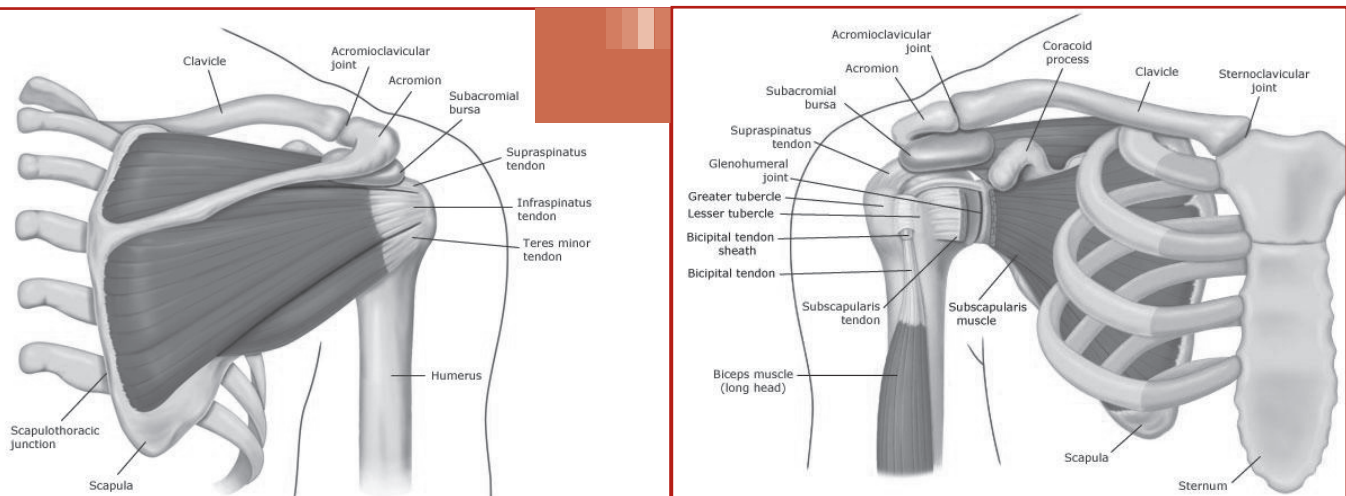
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**S**houlder injuries are common in gymnastics due to the extreme range of motion needed for many skills and at the same time the strength and stability needed to accept and produce force for tumbling. The shoulder girdle is comprised of four joints and more than 15 muscles that act to stabilize and move the shoulder (see fig.1). Due to the fact that the shoulder joint allows a very large range of motion, this decreases its ability to stabilize itself. Muscular imbalance of the front side to the back side, poor rotator cuff strength

latissimus (lats) muscles. The result is a greater strength imbalance of the shoulder and a decrease in range of motion which can predispose your athlete to injury. Corrective exercises consist of stretches that improve chest and lat flexibility (fig. 2, 3, 4). Pictures 2 and 3 are showing a dynamic chest stretch over a foam roller where the shoulder blades are held down/in while the arms slide on the floor from overhead to hip. Picture 3 is a lat stretch where the athlete sits in a butterfly position with back flat to a wall and slides arms up while maintaining contact with the

FIGURE 1



and poor posture are just a few issues that can increase the incidence of shoulder injuries. In this article, we will discuss exercises that will improve shoulder mobility, strength and stability. These exercises can be utilized for rehabilitation of an injured athlete or integrated in your team warm-up/conditioning.

The body's normal adaptation to the skills of gymnastics coupled with traditional strengthening that focuses primarily on the front side can lead to excessive tightness of the pectoralis (pecs) and

wall. Dynamic stretches are held 3-5 seconds and are repeated 10 times each.

Shoulder strengthening begins with teaching stability which gives it a greater ability to produce power. I like to describe the shoulder as being a golf ball on a golf tee. The ball is in its most stable position if it is in the middle of the tee. If it isn't in the middle it falls off. By strengthening the rotator cuff and scapular stabilizers (back side), you improve its ability to hold itself in the middle of the joint which allows all of



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the muscle to work more efficiently. The first step is to teach the athlete to retract the shoulder blades correctly. Many times shoulder exercises are done but the athlete's shoulder position is poor (golf ball is off the tee) and the exercises are not as efficient and even can add to the problem. One easy way to teach the correct position is to stand against a wall with the shoulder blades flat on the wall (down and in) and arms out to the side.

your hips (fig. 8). For the "T" arms are at 90 degrees and pull back horizontally (fig.9). Begin the same for the third exercise but finish the arms in a "Y" position (fig.10). Make sure the shoulders stay down and in during the entire motion. If the athlete is unable to do this have her move closer to decrease the resistance or discontinue the exercise until she is able to stabilize better.



FIGURE 2, 3 AND 4

Have the athlete press into the wall with the arms without shrugging. Hold 5 seconds and repeat 5-10 times. Then progress to sliding the arms upward and ending in a "Y" position (hold at top). Pressure should be maintained the whole time with no shrugging and at no time should the shoulder blades lose contact with the wall (fig. 5, 6, 7).



FIGURE 8, 9 AND 10

Next is external rotation/internal rotation (fig.11). Begin by facing toward the elastic tube with the shoulders and elbows bent 90 degrees. Externally rotate the shoulders by lifting the hands upward while maintaining the position of the upper arm. Internal rotation is the same except you are facing away from the elastic tube.



FIGURE 5, 6 AND 7

Once the athlete has adequate mobility and stability of the shoulder girdle, you can effectively strengthen with resistance training. There are many ways to strengthen the shoulder. In this article, I will discuss an elastic cord series that is fast, cheap and easily done in the gym. Begin with an elastic tube with handles or just elastic bands and place it around any bar in the gym. These exercises can be used to activate the shoulder before practice by doing 1 set of 10-15 repetitions or can be used for conditioning by doing 3 sets of 10-15 repetitions. Tell the athlete to stand in a sports stance with knees slightly bent, butt back and shoulder blades down/in. The first 3 exercises I call "I," "T," "Y." Begin with the "I" by grabbing the tube and pulling it down past



FIGURE 11

The next exercise is the single arm row with rotation. For the row, grab both ends of the tube in one hand and stand in a split stance. Pull the tube in a rowing motion and at the same time push forward with the other shoulder. This is a great way to strengthen the shoulder and improve thoracic rotation (fig 12, 13).

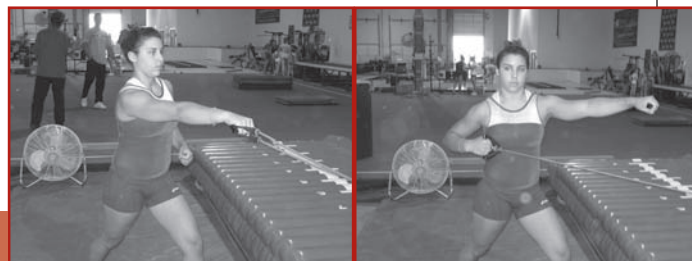


FIGURE 12 AND 13



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The last 2 are the triceps extension and bicep curl. They are very common but still need to be mentioned. For both exercises you stand in the middle of the elastic tube and grab each end. For the triceps extension, step one foot forward (split stance) and position the tube behind your back with your elbows flexed next to your ears then straighten the arms toward the ceiling (fig.14). For the bicep curl, maintain

good shoulder position (down/in) and elbows against your side and flex the elbows toward the shoulders. Changing wrist position from palm-up to thumb-up to palm down will work different muscles needed for gymnastics (fig. 15).

There are many other exercises that could have been included. I chose a few that I believe are very effective and sometimes overlooked. It doesn't matter

what exercise method you use if you focus on maintaining proper shoulder mobility and train your athlete to develop stable and balanced shoulders from the front side to the back side.

\*Thanks to Sharps Gymnastics for allowing me to take pictures. ✨

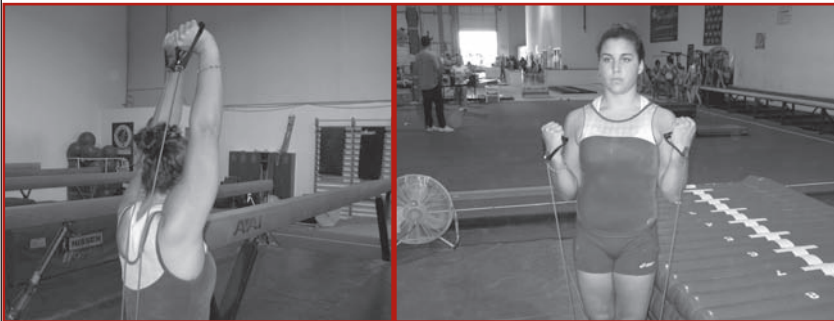


FIGURE 14 AND 15