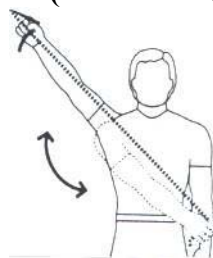




SHOULDER & ARM EXERCISES FOR ATHLETES WHO THROW

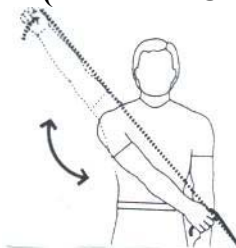
STRENGTHENING THE SHOULDER MUSCLES:

1. DIAGONAL (D2 EXTENSION)



Grip the tubing overhead and out to the side (hitchhikers position). Pull the tubing down and across your body towards the opposite hip. During the motion, lead with your thumb (“thumb in your pocket”)

2. DIAGONAL (D2 FLEXION)



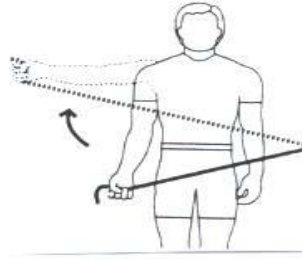
Grip the tubing with your arm down and across your body with your hand at your opposite hip and thumb positioned toward your body. Turn your palm up and proceed to straighten your elbow and lift your arm up and across your body making sure your arm stays next to your head. During the motion, lead with your thumb (“hitchhikers position”)

3. FLEXION



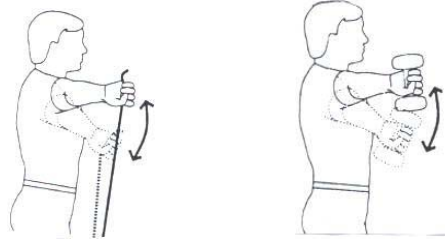
With tubing or a dumbbell, hold the object next to your side with your palm facing your body. Raise your arm forward with your elbow straight and thumb pointing upward. Raise your arm to shoulder height.

4. ABDUCTION



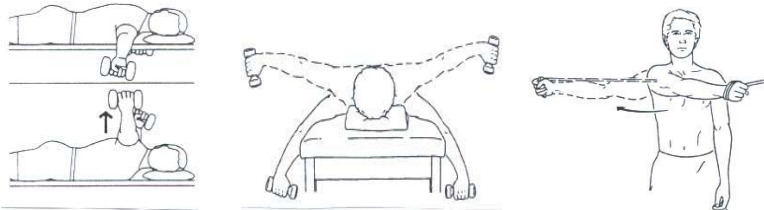
With tubing or a dumbbell, hold the object next to your side with your palm facing your body. Raise your arm out to the side with your elbow straight and thumb pointing upward. Raise your arm to shoulder height

5. "EMPTY CAN"



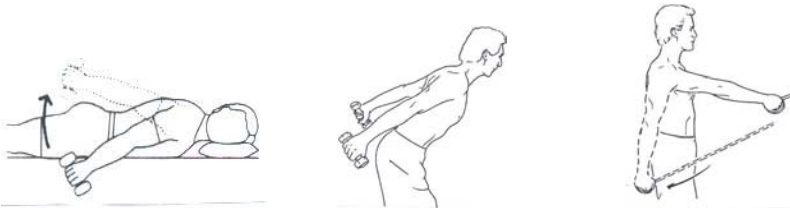
With tubing or a dumbbell, hold the object next to your side with your thumb pointed toward your hip. Raise your arm at a 45 degree angle in front of your body with your elbow straight and thumb pointed toward the floor. Raise your arm to shoulder height.

6. HORIZONTAL ABDUCTION



Lie on your stomach with your arm over the edge of the bed/table. Your elbow is straight and the palm faces the floor. Lift your arm up at 90 degrees from your body toward the ceiling. Squeeze the shoulder blade inward at the top. This exercise can also be performed standing with your arm held at shoulder height and moving your arm away from your body.

7. EXTENSION



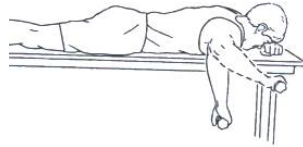
Lie on your stomach with your arm over the edge of the bed/table. Your elbow is straight and the palm faces the ceiling. Lift your arm next to your body up toward the ceiling. This exercise can also be performed standing next to a table and leaning forward from the hips or pulling your arms backward next to your side.

8. EXTERNAL ROTATION (SIDELYING)



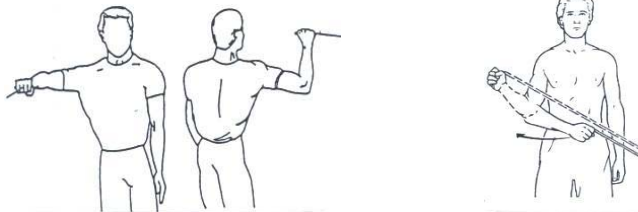
Lie on your uninvolved side. Place a rolled towel between your arm and trunk. Keep your elbow bent at 90 degrees and rotate your arm toward the ceiling, keeping your arm and elbow on the towel roll.

9. EXTERNAL ROTATION (STOMACH LYING)



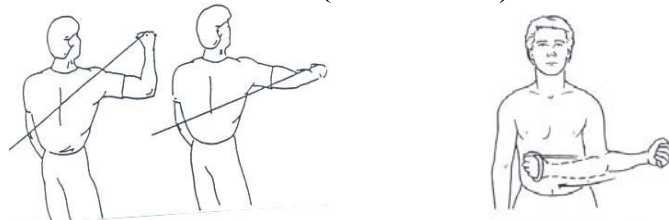
Lie on your stomach with your arm over the edge of the bed/table. Your arm should be about 70 degrees from your body and your elbow bent at 90 degrees. Rotate your hand up toward the ceiling, keeping your arm on the bed/table.

10. EXTERNAL ROTATION (STANDING)



Stand with your arm out to the side and at shoulder height. Keep your elbow bent at 90 degrees and palm facing toward the floor. Hold the tubing and rotate your shoulder backward (palm up). Alternately, you can stand with your arm next to your side and a towel roll between your body and arm. Rotate your hand away from your stomach outward.

11. INTERNAL ROTATION (STANDING)



Stand with your arm out to the side and at shoulder height. Keep your elbow bent at 90 degrees. Hold the tubing and rotate your shoulder forward and down toward the floor (palm down). Alternately, you can stand with your arm next to your side and a towel roll between your body and arm. Rotate your hand toward your stomach.

12. HORIZONTAL ADDUCTION



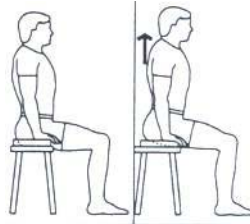
Lie on your back and hold your arms out to the side with your elbows slightly bent. Bring your hands together keeping your elbows bent. (hugging motion). Alternately, Hold your arm at shoulder height and move your arm toward your body.

13. PUSH-UPS WITH A PLUS



Stand with your feet together and away from the wall. Place both hands on the wall and perform a push-up. At the end of the push-up try to arch your upper back and make your shoulder blades move away from one another. Progress this exercise to a counter/table top and eventually the floor.

14. SEATED PRESS-UP



Sit on a chair or table and place both hands firmly on the sides of the chair or table. Slowly push downward to elevate your buttocks off the sitting surface.

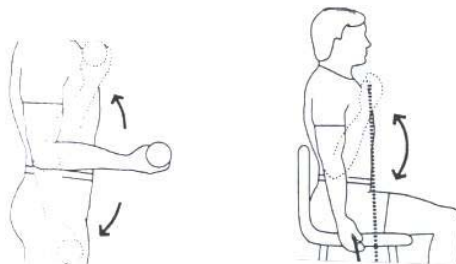
15. ROWING



Lie on your stomach with your arm off the bed/table and your thumb toward the bench. Hold the tubing or dumbbell in your hand starting with your elbow straight. Raise your arm to the ceiling, bending your elbow. Squeeze your shoulder blade inward at the top. Alternately, you can perform this exercise in standing, holding onto the tubing with both hands and pulling your hands toward your chest while squeezing your shoulder blades inward.

STRENGTHENING THE ELBOW AND ARM MUSCLES:

1. ELBOW FLEXION



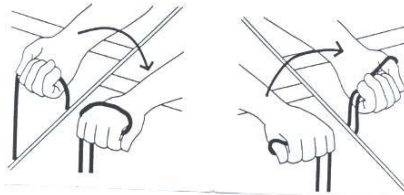
Stand and hold the tubing or dumbbell with your arm next to your side and elbow straight. Keeping your upper arm still, bend your arm to your shoulder. Perform with your palm facing your shoulder, with your thumb facing your shoulder, and with the back of your hand facing your shoulder.

2. ELBOW EXTENSION



Lie on your back with your elbow straight and arm 90 degrees from your body. Place your opposite hand on the back of your arm for support. Allow your elbow to bend, then straighten it toward the ceiling. Alternately, you can stand with the tubing or dumbbell behind your shoulder with your elbow bent, and then straighten your elbow toward the ceiling.

3. FOREARM PRONATION/SUPINATION



Support your forearm on the table with your thumb facing up and your hand off the edge of the table. Using a dumbbell or tubing, roll your wrist downward and upward as far as possible.

4. WRIST FLEXION



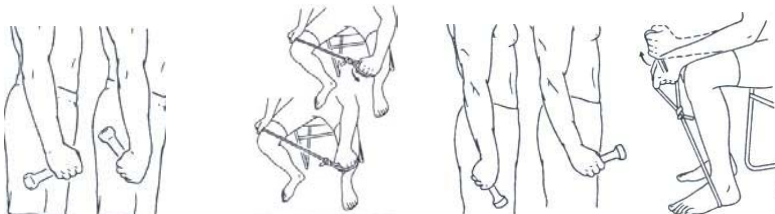
Support your forearm on the table with your hand off the edge of the table. Your palm will be facing upwards toward the ceiling. Using a dumbbell or tubing, bend your wrist up as far as possible.

5. WRIST EXTENSION



Support your forearm on the table with your hand off the edge of the table. Your palm will be facing downwards toward the floor. Using a dumbbell or tubing, extend your wrist up as far as possible.

6. ULNAR AND RADIAL DEVIATION



Stand with your arm at your side. Hold a dumbbell or tubing and bend your wrist toward the ceiling, first, leading with your small finger, then with your thumb. Keep your arm still.

Note: Positive effects from resistance training include an increase in muscle fiber size and strength and an increase in strength of tendons, bones, and ligaments. These changes, in turn, impose a significant influence on an athlete's physical capacity, appearance, metabolic function, and injury potential.

The three principles of strength training that should always be adhered to are as follows:

1. PRINCIPLE OVERLOAD

Strength, power, and endurance will only increase when the muscles are forced to perform workloads greater than those previously encountered.

- **Perform 3 sets of each exercise of 10-12 repetitions at 65-70% of a 1 RM (Repetition Maximum)**
- **Progress to 3 sets of each exercise of 4-6 repetitions at 80-85% of a 1 RM**
- **Start with 1-5 pounds and progress up in weight once the amount of sets and repetitions become easy**
- **Perform slow and fast sets/repetitions**

2. PERIODIZATION

Breaking down the annual training regimen into smaller phases within the scope of in-season and off-season training. This will improve athletic performance and allow for the athlete to "peak" during the competitive season. This will also decrease the possibility of over-training and "burnout"

- ***Pre-season:* high volume, low intensity workouts that build a general strength base. Begin 6-8 weeks prior to the competitive season and include sport-specific Training**
- ***Competitive phase:* high intensity, brief workout that brings performance to its peak and avoids over-training. Devotes a large portion of the time working on sport-specific skills and weight training during the "off" days.**
- ***Post-season:* low to moderate intensity work that allows the athlete to heal physically and recover emotionally from the competitive season. It includes rest and participation in other recreational activities.**

3. SPECIFICITY

Training must be relevant to the demands of the sport. The activities in a strength and conditioning program should be specifically related to the desired sport as well as the athlete's position in that sport.

If you experience any difficulties with these, or any other, exercises please stop the exercise(s) and consult your physician or physical therapist from ProFormance Physical Therapy.