

Mechanics of the Upright Row

By Tracy Anderson

To execute this exercise grasp the bar with a narrow grip, perhaps slightly narrower than shoulder width, with an overhand grip and pull upward. The wider the grip the more the trapezius muscle will assist in the movement. Pull the bar upwards with elbows leading, similar to following your bodies contour. As the bar rises and your elbows bend, your wrist will also flex. If you feel discomfort in the wrist while doing this movement, try using an E-Z Bar and grip it on the inclined angle.

The target muscle for this movement is the lateral head of the deltoid, also known as the side deltoid. The function of this muscle is to abduct and flex the humerus (upper arm), or to move the arm upward laterally. The side deltoid originates from the acromion process of the scapula (shoulder blade) and inserts onto the deltoid tuberosity of the humerus. The acromion process is the boney knob felt on the top of your shoulder and the deltoid tuberosity, while it cannot be felt, is almost half way down your upper arm bone (humerus) on the lateral side.

You should realize that your humerus moves along the same path during upright rows as it does during dumbbell side laterals, just with more weight. That's why this movement is considered more of a mass-builder. Form is extremely important to properly work the targeted muscle, the lateral head, as opposed to your traps, and to prevent rotator-cuff injuries.

Many muscles come into play as assisting and stabilizing muscles during this exercise. Remember that an assisting muscle “assists” another muscle to accomplish a movement and a stabilizing muscle contracts with no significant movement or contribution. The anterior deltoid, or front head, assist with this movement because of its common insertion point on the humerus. Three of the four muscles associated with the rotator cuff are also assisting muscles and they are the infraspinatus, supraspinatus, and the teres minor. The infraspinatus and teres minor externally rotate and adduct the arm, and the supraspinatus assists only in adduction because of its lateral insertion point on the greater tubercle. As the elbow rises, during this exercise, your arm slightly externally rotates, or turns outward, however, you want to minimize any external rotation by the arm. First, if you are using heavy weight you can injure the rotator cuff and second, if you externally rotate too far, you will limit the distance that your elbow can move. (The fourth muscle of the rotator cuff, the subscapularis, is involved in medial, or internal, rotation.)

As your arm rises, your scapula, or shoulder blade, upwardly rotates and allows your arm to move higher with assistance from the middle and lower trapezius, and serratus anterior. The lower trapezius and serratus anterior upwardly rotates the scapula, as the middle trapezius retracts it. Retraction means that your shoulder blades are moving toward each other. However, your upper trapezius does upwardly rotate the scapula, but it is a stronger elevator (as in shoulder shrugs). Since shoulder elevation is not part of this movement, and the shoulders are actually being depressed, the assistance from the upper trapezius is limited and it acts more to stabilize than to assist.

When executing this movement your elbow flexes, or bends, so your arm muscles will also assist in this movement, but you do want to minimize their assistance. The more your arm muscles assist with the motion, the less your shoulder muscles have to move. The muscles of the arm, (biceps, brachialis and brachioradialis), function to flex the elbow. Ideally you want to act as if your arms are hooks, only there to hold onto the weight. Remember it is how far your elbow travels, not how far the bar travels.

Tips:

* Make sure you use your feet to stabilize your lower body. Tighten your abdominal muscles to ensure proper body balance and posture.

* Inhale as you lower the bar, eccentric portion, and exhale as you raise the bar, concentric portion. Proper breathing will ensure oxygen is being delivered to the muscle and will help stabilize your torso during exertion.

What is it good for?

Powerful and strong shoulder muscles are useful in other activities and sports other than a bodybuilding contest. Strong shoulders are useful for boxers, football players, gymnasts, baseball, and tennis, just to name a few.

Check with your therapist or doctor before beginning an exercise regimen or if you have shoulder problems before performing this exercise. This article is excerpted from Tracy Anderson's book Movement Science for Personal Trainers. Questions and comments are welcomed and can be given at www.LFNOnline.com.