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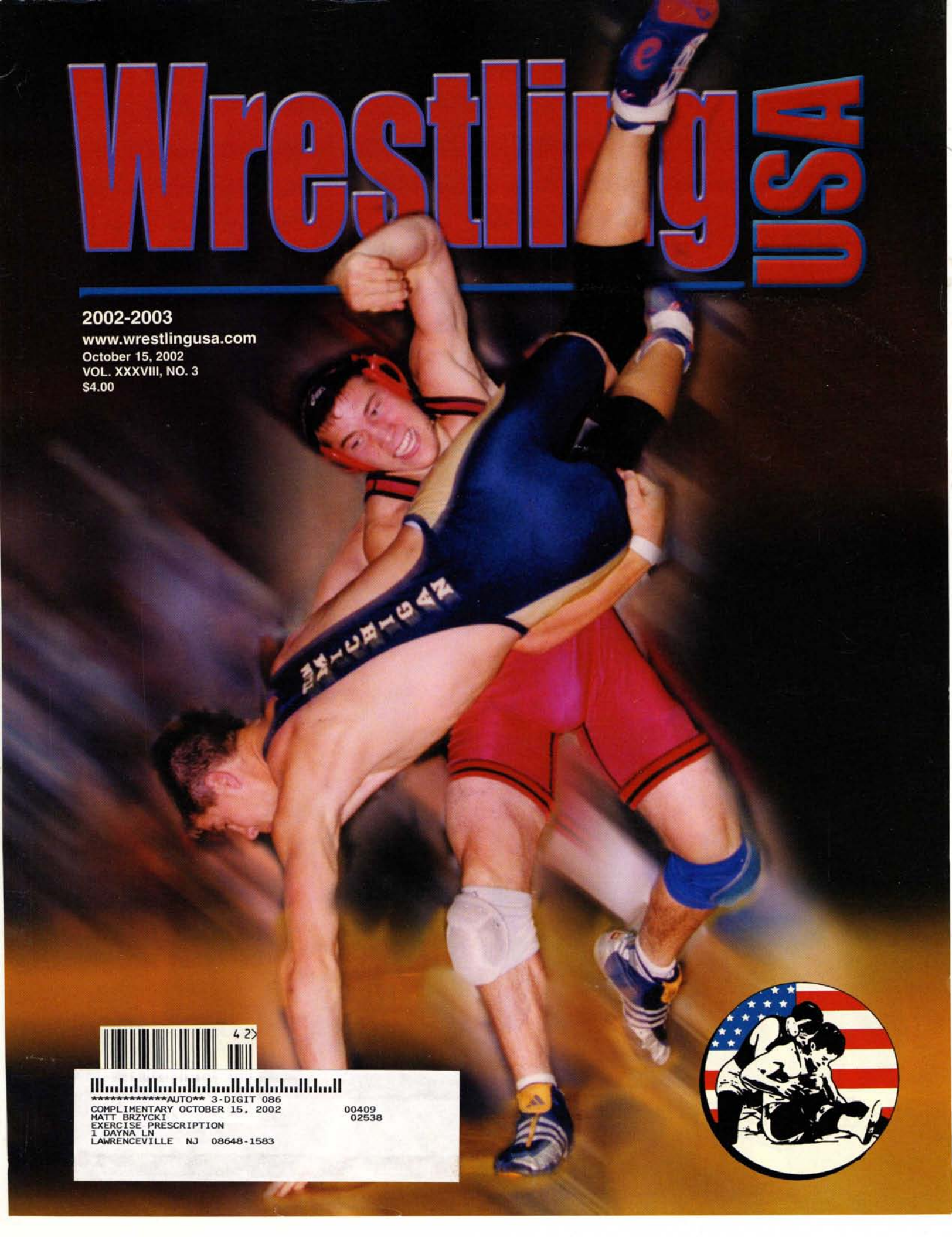

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Back with a Vengeance!

By Matt Brzycki

Quite often, individuals tend to overemphasize the muscles that they can see and underemphasize – or even overlook – muscles that they cannot. For instance, the chest on the anterior part of the body usually receives a good bit of attention – in many cases, far too much – while the upper back on the posterior part of the body typically does not get equal emphasis. Yet, the muscles of the upper back are at least as important as those of the chest.

BASIC ANATOMY AND MUSCULAR FUNCTION

The latissimus dorsi is the long, broad muscle that comprises most of your upper back. The "lats" are the largest muscles in your upper body. Their primary function is to pull your upper arm backward and downward. The lats are especially important in pulling movements that are done on the wrestling mat and in the weight room. In addition, developing the lats is necessary to provide muscular balance between your upper-back and chest areas.

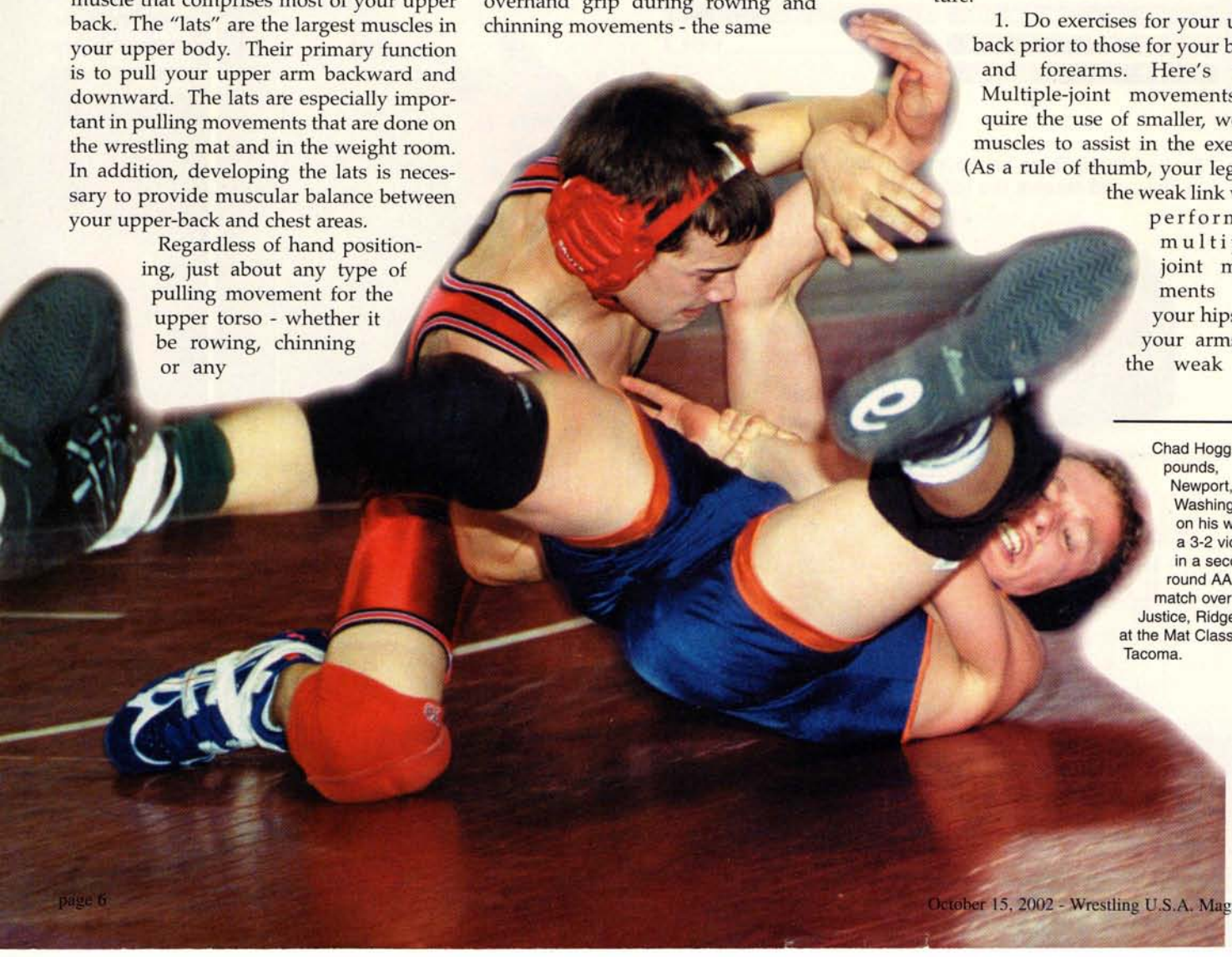
Regardless of hand positioning, just about any type of pulling movement for the upper torso - whether it be rowing, chinning or any pulldown variation - targets the same muscles, namely your upper back, biceps and forearms. However, there are differences in the leverage received from these muscles based upon the grip that you elect to use. For example, performing a lat pulldown with an underhand grip (palms facing toward you) is more biomechanically efficient than doing it with an overhand grip (palms facing away from you). Why? With an underhand grip, the radius and ulna (your forearm bones) run parallel to one another; with an overhand grip, the radius crosses over the ulna forming an "X". In this position, the bicep tendon gets wrapped around the lower portion of the radius, creating a biomechanical disadvantage and a loss in leverage. This is also true when comparing an underhand and overhand grip during rowing and chinning movements - the same muscles are used but with varying degrees of biomechanical leverage. (With a "parallel grip" – in which your palms face each other – your forearm bones do not cross, either. Therefore, this grip is also more efficient than an overhand one.)

What grip should you use? While there is a biomechanical advantage in using an underhand (and parallel) grip, movements done with an overhand grip can still be productive. Therefore, the grip that you use is your choice.

GENERAL GUIDELINES AND PRECAUTIONS

The following general guidelines apply when training your upper-back musculature:

1. Do exercises for your upper back prior to those for your biceps and forearms. Here's why: Multiple-joint movements require the use of smaller, weaker muscles to assist in the exercise. (As a rule of thumb, your legs are the weak link when performing multiple-joint movements for your hips and your arms are the weak link



Chad Hogg, 103 pounds, Newport, Washington, on his way to a 3-2 victory in a second round AA match over Tyler Justice, Ridgefield, at the Mat Classic in Tacoma.

when performing multiple-joint movements for your upper body.) If you fatigue your smaller muscles first - in this case, your biceps and forearms – you will weaken an already weak link. As a result, you will limit the workload placed on the larger, more powerful muscles of your upper-back region and restrict the potential for their development.

2. Provide equal attention to the muscles of your upper back and chest. These muscles - as well as all others in your body - are arranged in such a way that they perform opposing functions: Your upper back moves your upper arm in one direction and your chest moves your upper arm in the opposite direction. When one muscle acts in opposition to another, it is referred to as an "antagonist." It is important to provide antagonistic partnerships with an equal - or nearly equal - amount of stimulus so that a muscular imbalance does not occur between the two areas. In this regard, strong upper-back muscles are necessary to balance the effects of the chest muscles. Therefore, you should perform approximately the same volume of activity - that is, roughly the same number of exercises, sets and repetitions - for your upper back as you do for your chest.

3. Avoid doing exercises in which you experience shoulder pain. Some individuals may find it difficult - or even impossible - to perform pain-free exercises when they pull the bar behind their heads such as during the lat pulldown or pullup. In fact, this position may exacerbate shoulder-impingement syndrome. Simply doing those same two exercises with the bar positioned in front of your head – rather than behind it - will reduce the orthopedic stress in your shoulder area. This is not to say that pulling the bar behind your head cannot be done. Rather, pulling the bar behind your head should not be performed if it cannot be done in a pain-free manner.

4. Perform your repetitions with proper technique. Proper technique is raising the resistance without an excessive use of momentum in about 1–2 seconds, pausing distinctly in the mid-range (or contracted) position and lowering the resistance under control in about 3–4 seconds. This will ensure that momentum did not play a significant role in the performance of the repetition and that your chances of incurring an injury while strength training are minimized. In addition, each repetition should be done throughout a full range of motion (ROM). This will allow you to maintain (or perhaps improve) your flexibility and guarantee that you are exercising your entire muscle, not just a portion of it.

5. Reach muscular fatigue within about 6 - 12 repetitions (or about 40 - 70 seconds). A desirable level of fatigue is when you have exhausted your muscles to the point where you literally cannot do another repetition. Performing sets of less than about 6 repetitions increases your risk of injury. Once an activity for the upper back exceeds about 12 repetitions, it becomes an increasingly greater test of aerobic endurance rather than muscular strength.

6. Train the muscles of your upper back 2 - 3 times per week on nonconsecutive days. You should exercise your upper-back muscles three times per week when not in season and twice per week when in season (but not within 48 hours of a match).

EXERCISES AND DESCRIPTIONS

The following are specific descriptions for many popular exercises that can be performed to strengthen the muscles of your upper back using conventional equipment:

1. Bent-over row. This multiple-joint movement works your upper back, biceps and forearms. Place your left hand and left knee on a bench and position your right foot on the floor at a comfortable distance from the bench. Reach down with your right hand and grasp a dumbbell. Lift the dumbbell slightly off the floor and keep your right arm straight. Your right palm should be facing the bench. To do the exercise, keep your upper arm close to your torso and pull the dumbbell to your right shoulder. Pause briefly in this mid-range position (arm flexed) and then return the dumbbell under control to the starting position (arm fully extended) to ensure an adequate stretch. After performing a set for the right side of your body, repeat the exercise for the left side of your body (with your right hand and right knee on the bench for support).

2. Seated row (with chest pad). Your upper back, biceps and forearms are targeted with this multiple-joint movement. If the seat pad on the machine is adjustable, position it so that when you pull the handles toward you, your hands will be just below your shoulders. If the chest pad is adjustable, position it so that you can barely touch the handles with your fingertips. Grasp the handles and lean toward the chest pad. To do the movement, keep your upper arms close to your torso and pull the handles directly below your shoulders. Pause briefly in this mid-range position (arms flexed) and then lower the weight under control to the starting position (arms

fully extended) to obtain an adequate stretch.

3. Seated row (without chest pad). This multiple-joint movement exercises your upper back, biceps and forearms. Grasp the handles and lean back slightly. To do the movement, keep your upper arms close to your torso and pull the handles to your mid-section. Pause briefly in this mid-range position (arms flexed) and then lower the weight under control to the starting position (arms fully extended) to ensure a sufficient stretch.

4. Underhand lat pulldown. Your upper back, biceps and forearms will be targeted with this multiple-joint movement. Grasp the bar with your palms facing toward your body and space your hands approximately shoulder-width apart. Sit down on the seat pad, place your upper thighs under the roller pads and lean back slightly. To do the movement, pull the bar to your upper chest and bring your elbows past your torso. Pause briefly in this mid-range position (arms flexed) and then return the weight under control to the starting position (arms fully extended) to obtain a proper stretch.

5. Overhand lat pulldown. This multiple-joint movement works your upper back, biceps and forearms. Grasp the bar with your palms facing away from your body and space your hands several inches wider than shoulder-width apart. (You should not use an excessively wide grip since this will reduce your ROM.) Sit down on the seat pad and place your upper thighs under the roller pads. To do the exercise, pull the bar behind your head to the base of your neck. Pause briefly in this mid-range position (arms flexed) and then lower the weight under control to the starting position (arms fully extended) to ensure an adequate stretch. This exercise may be contraindicated if you have shoulder-impingement syndrome. You may be able to do this exercise in a pain-free manner, however, by pulling the bar in front of your head (to the upper part of your chest) rather than behind it.

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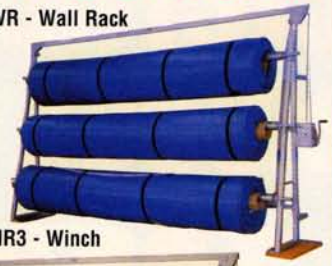

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6. Chin. Your upper back, biceps and forearms will be addressed with this multiple-joint movement. Reach up, grasp the bar with your palms facing toward your body and space your hands approximately shoulder-width apart. Bring your body to a "dead hang" and cross your ankles. To do the movement, pull yourself upward, touch your upper chest to the bar and bring your elbows past your torso. Pause briefly in this mid-range position (arms flexed) and then lower your body under control to the starting position (arms fully extended) to obtain a proper stretch.

7. Pullup. This multiple-joint movement works your upper back, biceps and forearms. Reach up, grasp the bar with your palms facing away from your body and space your hands several inches wider than shoulder-width apart. (You should not use an excessively wide grip since this will reduce your ROM.) Bring your body to a "dead hang" and cross your ankles. To do the movement, pull yourself upward and touch the base of your neck to the bar. Pause briefly in this mid-range position (arms flexed) and then lower your body under control to the starting position (arms fully extended) to ensure a sufficient stretch. This exercise may be contraindicated if you have shoulder-impingement syndrome. However, you may be able to do this exercise in a pain-free manner by pulling the bar in front of your head (to the upper part of your chest) rather than behind it.

8. Pullover (machine). This single-joint movement targets your upper back without using your biceps and forearms. Adjust the seat pad so that your shoulders are slightly below the axis of rotation when sitting upright with your arms hanging straight down. Secure the seat belt, place your upper torso against the back pad and put your feet on the foot bar. Push the foot bar forward with your legs and place the backs of your upper arms against the elbow pads. Position your hands on the movement arm so that your palms are facing the bar and your hands are open – that is, your fingers are extended. (If you cannot reach the bar while keeping your elbows against the pads, you can grasp it with an underhand grip.) Remove your feet from the foot bar and position the movement arm near or slightly behind your head. To do the exercise, pull the movement arm down to your mid-section by exerting force against the elbow pads (or by pulling the bar with your hands if you have grabbed it). Pause briefly in this mid-range position (hands near your mid-section) and then lower the weight under control to the starting position (elbows near or slightly past your head) to ensure a sufficient stretch. After completing the exercise, place your feet back on the foot bar, remove your arms from the machine and use your legs to return the resistance to the rest of the weight stack. This exercise may be contraindicated for individuals with low-back pain or shoulder impingement syndrome.

9. Pullover (dumbbell/barbell). You can exercise your upper back without using your biceps and forearms with this single-joint movement. Lay supine across the width of a bench (not the length) and position the weight (a barbell or dumbbell) over your chest at arms length (or have a spotter give you the weight). To do the movement, keep your arms relatively straight, lower the weight under control to the stretched position (elbows near or slightly past your head) and then pull the weight back to the starting position (which in this case is the mid-range position). This exercise may be contraindicated for individuals with low-back pain or shoulder impingement syndrome.

Matt Brzycki has been involved in the strength and conditioning of collegiate wrestlers for more than 20 years. Since 1986, he has authored more than 70 articles for *Wrestling USA Magazine*. Reprints of 42 of these articles have been updated and adapted into book form (Wrestling Strength: The Competitive Edge and Wrestling Strength: Prepare to Win) and are available through Cardinal Publishers Group (317-879-0871). He is also the author of A Practical Approach to Strength Training and the editor of Maximize Your Training, a 455-page book that features chapters written by more than 30 strength and fitness professionals