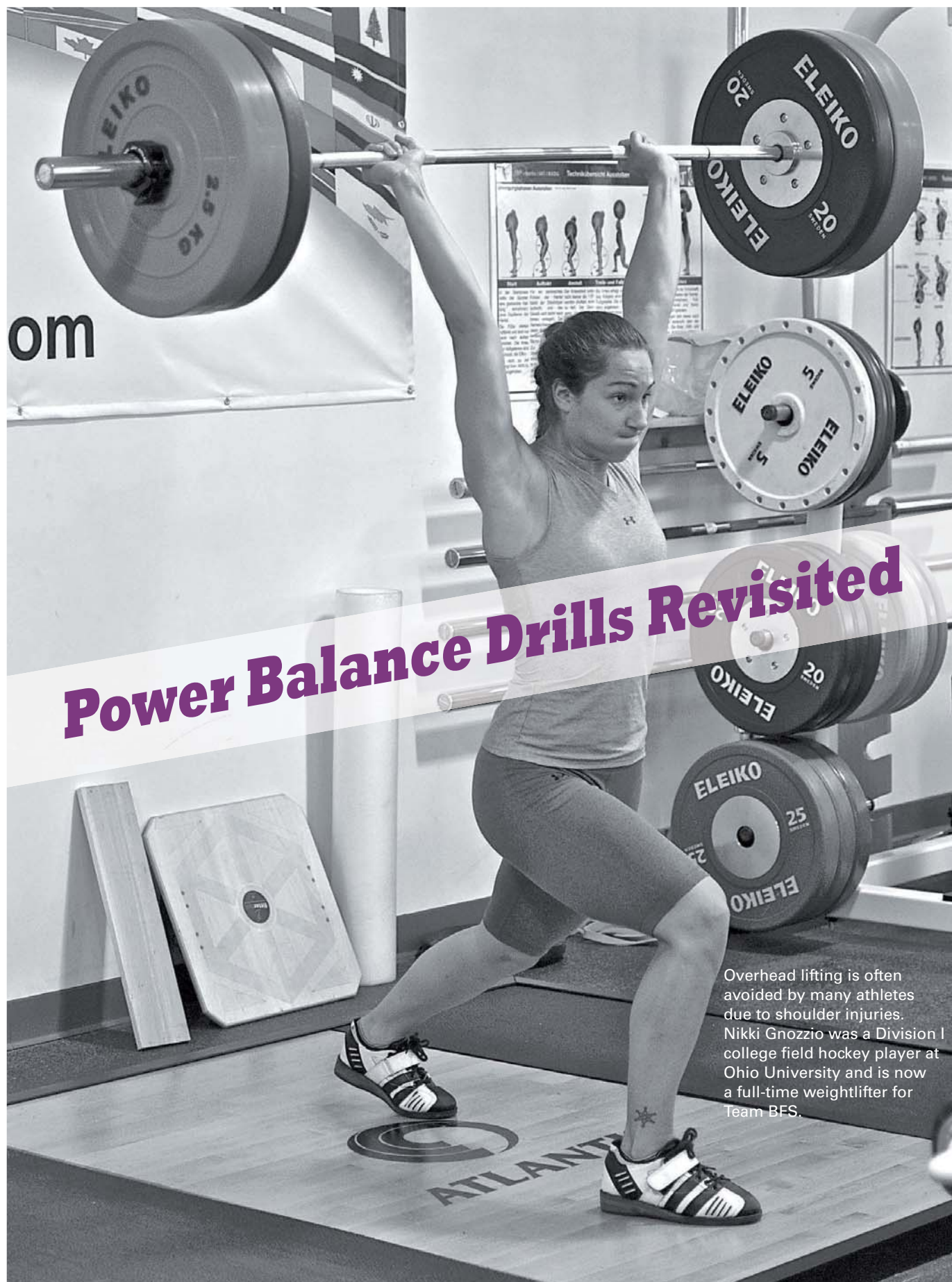




Power Balance Drills Revisited

Overhead lifting is often avoided by many athletes due to shoulder injuries. Nikki Gnozzio was a Division I college field hockey player at Ohio University and is now a full-time weightlifter for Team BES.

Correct round shoulders with variations of these powerful exercises

BY **KIM GOSS, MS**

In recent years it's been the practice of many coaches to avoid overhead lifting when designing strength programs for athletes. It's not that coaches don't want their athletes to perform such powerful exercises but that they're concerned about worsening the shoulder injuries that so many athletes incur today. Let's look at the extent of the problem, some common causes and one practical solution.

A review in the June 2010 issue of the *Journal of Strength and Conditioning Research* noted that the most commonly injured area during resistance training is the shoulder. In one study referenced in the review approximately 36 percent of trainees had suffered shoulder injuries.

One condition that predisposes an athlete to a shoulder injury is round shoulders. In this posture there is an exaggerated curvature of the upper portion of the spine and excessive forward

hours hunched in front of a computer, using smartphones and playing video games is the fast track to developing a hunchback. Another cause of round shoulders is fallen arches, a condition identified when the subject is standing. Fallen arches are technically referred to as *valgus*, and the degree of the problem is based on a scale of 1 to 3, with a rating of 3 fulfilling the classic definition of flat feet. The collapse of the arches causes the legs to internally rotate, and this in turn causes the pelvis to tilt forward; in fact, anatomical compensations occur all the way up the spine and result in a round-shouldered posture. To learn specific exercises to correct flat feet, refer to "The Ultimate Guide to Fixing Flat Feet," an article in the January/February 2008 issue of *BFS* magazine.

Another problem is muscle imbalances caused by improperly designed workout programs. I find it interesting

one of the primary functions of the lats is to internally rotate the upper arm. Swimmers and gymnasts often have round shoulders due to overdevelopment of the lats – this fact shows that stretching is not enough to overcome round shoulders, as these athletes often perform a considerable amount of stretching as part of their regular training.

A New Look at Power Balance Drills

As a test to determine potential shoulder problems as well as the cause of many current shoulder injuries, you can use power balance drills. These exercises simulate the position achieved in a full snatch. Holding a barbell overhead in a low squat with the trunk upright and heels flat on the floor requires considerable flexibility and stability, and power balance

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position of the shoulders (and often the head). More specifically, the upper back muscles known as the infraspinatus and teres minor and major will be stretched and internally rotated. This posture creates constant tension on these muscles because they must continually fight gravity. It also impairs flexibility, which disrupts normal functioning of the muscles and increases the risk of shoulder instability and dislocation.

So, what causes round shoulders? First, there is poor posture, both when sitting and standing. Spending endless

that many coaches consider BFS a powerlifting program, when in fact the three competition powerlifts – bench press, squat and deadlift (or hex bar deadlift) – are performed only once per week in the BFS workout. When the bench press and chin-up (or lat pulldown) are performed excessively, they can contribute to a rounded shoulder posture.

The risk from overworking the bench press is obvious because the pectorals and anterior deltoid muscles will pull the shoulders together, but what most coaches don't realize is that

drills develop these qualities. In fact, the exercise is often used as a form of postural assessment in many physical therapy protocols – you'll hear terms such as "functional strength," "dynamic flexibility" and even "neuromuscular efficiency" to describe the qualities assessed during the overhead squat test.

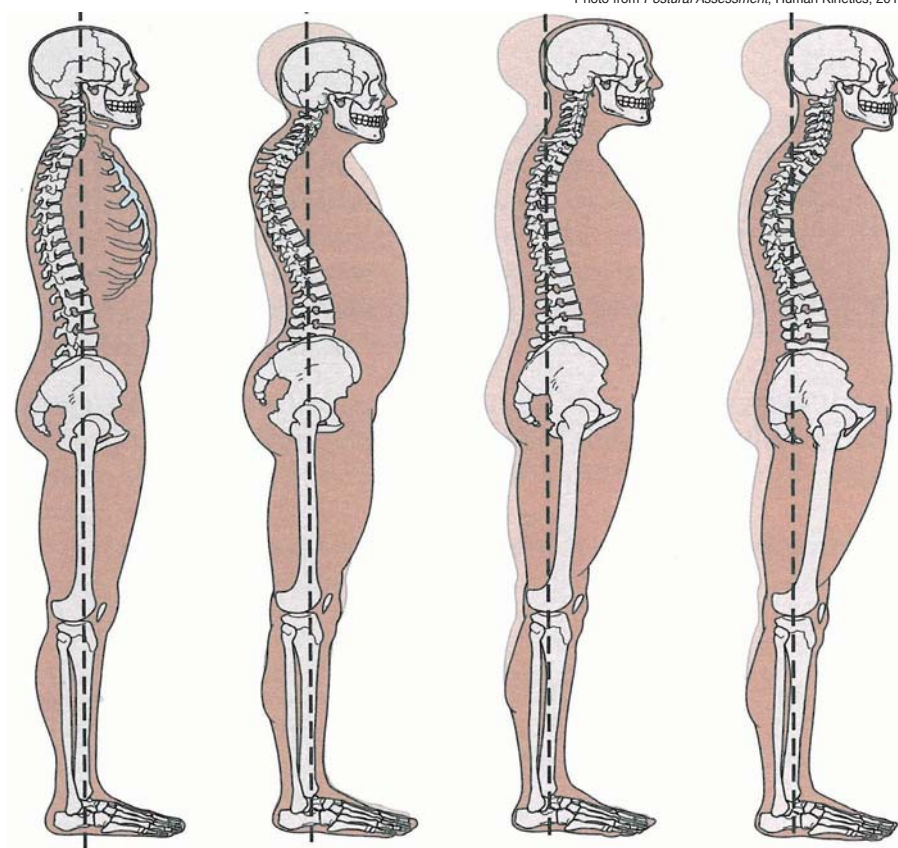
You will find a detailed explanation of the three BFS power balance drills in the BFS Total Program book, *Bigger Faster Stronger*, 2nd ed. I'll focus here on just the first one, Power Balance Drill #1, which is also known in weightlifting

circles as the overhead squat. For this exercise you grasp a barbell with a snatch grip, power snatch it overhead (or you can remove the bar from a power rack, and jerk it overhead) and then perform a full squat.

One problem many beginners have is poor body awareness, and as such when they go into a full squat, the bar drifts forward. Over time this often corrects itself, but I'll share with you one variation of this exercise to accelerate progress that you can add to your list of auxiliary exercises.

This exercise requires the use of a cable pulley system with two low pulleys, such as the BFS Functional Trainer. Adjust the pulleys to their lowest setting, and attach the ends to a lightweight bar (one good choice is the Aluma-Lite bar, which weighs only 15 pounds). For the first set, use the lightest resistance possible. Stand in front of the barbell, facing away from the machine. Lift the weight overhead with a snatch grip, and then perform an overhead squat. Keep the bodyweight back, towards the heels, and keep the weight on the outside of the feet for correct skeletal alignment (i.e., toes aligned, knees aligned); it also helps to think about spreading your hands apart and trying to push the floor apart with your feet.

Beginners with extremely poor flexibility can squat to a box first, and later use a lower box and finally no box as they get comfortable with the exercise; the adjustable BFS 3-in-1 Squat Box is ideal for this purpose. Athletes with especially tight ankles can place their heels on two small weight plates (or use weightlifting shoes), as this will incline the shins forward, enabling the athletes to stand more upright. A spotter standing behind the beginning trainee can assist them in getting the barbell overhead for the start of the exercise and can



The far left posture is considered ideal. The three other postures illustrated are affected by foot structure and all alter shoulder mechanics and can contribute to shoulder injuries. Below are before-and-after photos of two athletes (Gnozzio and gymnast Makayla Betz) trained by the author whose round-shouldered postures were corrected.



prevent them from falling backwards during the exercise.

When performing this exercise you'll find that the resistance pulls the bar backward and into the correct position for exercise – it can also

help beginning trainees get the feel of “locking in” the lower back. After performing a set or two with this exercise, trainees can then try the exercise without the pulleys attached – the immediate effect is often surprising. Later, by



Attaching cables to resistance is one way to use the BFS Power Balance Drills to make dramatic changes in posture, especially round shoulders. Shown is Power Balance Drill #1.

adding resistance, athletes will further strengthen the muscles that pull the shoulders back, along with stretching those that pull them forward. Athletes can perform all three power balance drills with this setup.

When you've mastered this exercise, rather than continually trying to increase the amount of weight you lift on it, move to another variation that uses independent cables to perform the exercise – you can actually do this with all three power balance exercises.

In fact, simply standing with your back to the machine and performing presses (palms facing out) will work the muscles that abduct the shoulders

through a greater range of motion, while again stretching the muscles that adduct the shoulders. When you perform this type of exercise, try to press straight up (even back, behind the ears) and think of the BFS Absolute "Spread the Chest." Many physical therapists have their clients perform this type of exercise from a prone position, requiring them to fight gravity to maintain proper alignment of the arms during the exercise, but I advocate the standing variation because it provides body awareness (proprioception) that makes it more comfortable.

One more advantage of these exercises is that they don't have to take

up additional time in your workout. If you are performing overhead squats in your workout, make the first two sets the cable version. If you are performing military presses, use the cable version for 1-2 sets. These not only stretch the muscles that are tight and strengthen the muscles that are weak but also serve as a warm-up. Again, all three power balance drills can be performed with this variation.

Obviously there are many causes of shoulder injuries and poor posture, but adding these overhead squat variations to your workouts may be just the thing to help you stay healthy, stand tall and convey the look of a champion. **BFS**

Using independent handles makes these power balance drills more challenging. Shown is Power Balance Drill #3.

