



Bringing Back the Shoulders

Mike Kamal

Peak performance in competition should always be the primary goal of training. The unfortunate and sometimes unavoidable consequences of sport are fatigue, breakdown and, ultimately, injury. In contact and non-contact sports, the integrity of the shoulder girdle is highly essential for performance. It is also a very vulnerable area. Injuries that occur here may become chronic and debilitating. For this reason, we cannot overlook the importance of the shoulder girdle in our training programs.

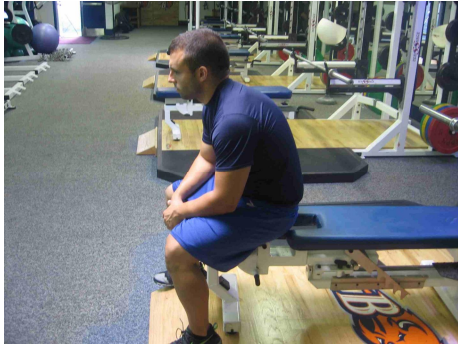
To further the argument for the importance of a strong, stable, and balanced shoulder girdle, I ask you this question: At the Division One level, which area of the body do you think received the most treatment during preseason, competitive season, and post season for football, and all intercollegiate sports for that matter? One might guess the hamstrings, ankles, or knees. Believe it or not, based on cumulative reports received from the sports medicine department of a Division One institution, athletes received significantly more treatments for the shoulder than any other joint or muscle. It led me to brainstorming,

reading, researching, and developing a plan of attack to the issue as presented here.

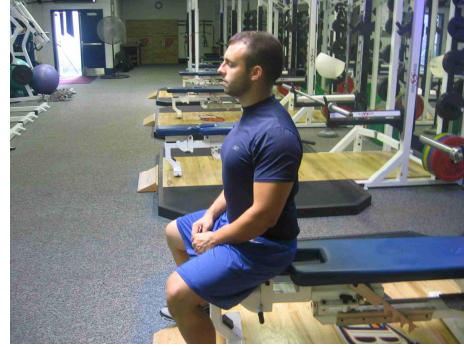
Let's now look further into the problem and potential solutions for how to handle it as a professional working with athletes. These factors include strength and structural balance, mobility, and stability.

Strength and Structural Balance

Working with college football, I can say that it is common for an athlete to enter college being able to bench press more than they can properly squat. Also, an athlete that some may consider very strong, such as a 300lb bench press, can not properly perform 10 body weight rack rows or pull ups. These underdeveloped and unbalanced athletes are setting themselves up for injury. Yes, the athlete possesses horizontal pressing strength, but has no structural balance. The lack of posterior shoulder girdle strength will lead to some prominent anatomical changes. These changes include internal rotation of the humerus, protraction of the scapula, and rounding of the upper back. This posture is depicted in the image below to the left. Proper posture, with a slight chin-tuck, scapula retracted and depressed (pinched back and brought down) is portrayed in the image to the right.



Poor Posture



Good Posture

If you have concerns with the athlete sustaining an injury or unsure of what to do from here, take into consideration structural balance within their training program. Employing a structurally balanced program (of push to pull exercises, if not a 2:1 ratio of pulls to pushes) will help to create balance between anterior and posterior musculature. Some great exercises that we use to develop overall posterior shoulder girdle strength and the rack row, pull ups, and dumbbell scapula rows. These three exercises are personal favorites as they are not only great multi-joint strengtheners, but also help to teach proper scapula position: retracted and depressed.

The rack row is a great exercise for building up posterior shoulder girdle strength. Start with feet elevated (advanced), or in contact with the ground (beginner). Keep the core tight, raise the hips up to create a table top position. From here, row yourself in the bar, touching the bar to the lower part of the sternum. Be sure to keep the scapula retracted and depressed upon completion of a rep.



Rack Row Start



Rack Row Finish

The dumbbell scapula row is actually a two part movement. The first action comes at the initiation of the movement, where the athlete will retract and depress the scapula. From here, row the dumbbell to the hip, return back to the starting position, and repeat



DB Scap Row Start



DB Scap Row w/ retraction



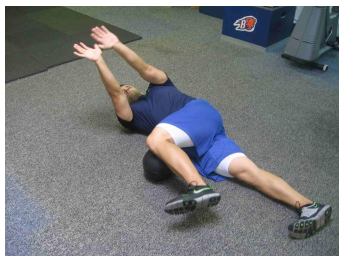
DB Scap Row Finish

Thoracic Spine Mobility

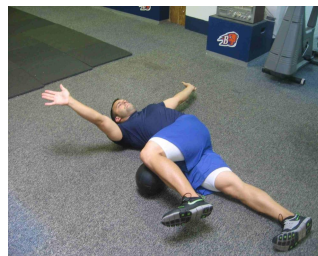
Poor posture is very evident in today's society. The vast use of computers and video games add to this dilemma, creating the kyphotic (rounded back) posture. We, as professionals, may have exposure to the athletes for 90 minutes 2 or 3 times a week in-season, and up to 5 times a week off-season. That's not that much in the grand scheme of it all. With a great deal of work to do and always seem pressed for time, we must choose and select exercises wisely during these training sessions. In order for us to address the thoracic spine, we must first understand it.

The body is made of a series of stable and mobile joints. Michael Boyle described and simplified this in great detail in a recent article "*A Joint by Joint Approach to Training.*" The thoracic spine is a mobile joint and a lack of mobility here will assist in pain accumulation in the neck and lower back.

Although exercises to attain thoracic spine mobility are not very common, there are a few very good exercises out there. Mike Robertson and Bill Hartman have a number of great exercises detailed in their book "*Inside-Out, The Ultimate Upper Body Warm-Up.*" Below are two drills we commonly use, side lying rotations and foam rolling of the thoracic spine. To perform the side lying rotation, place a small medicine ball underneath the left knee and keep pressure on it. Extend the right arm 45 degrees to the body, reaching as far out as possible. With the left arm, reach out as far as you can, and, in a rainbow like motion, attempt to bring it to the ground; focus on the rotation of your upper back.

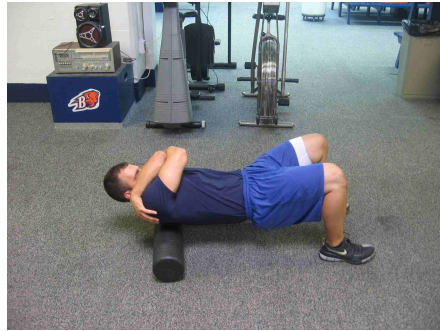


Side Lying Rotation Start



Side Lying Rotation Finish

Although not a mobility drill, foam rolling will aid in the process correcting ones posture by addressing the soft tissue in this area. To really expose the musculature here, cross the arms so as to get the shoulders blades out of the way.



Foam Roll Thoracic Spine

Scapula Stability

As described earlier, posterior shoulder girdle is extremely important in shoulder health. If strength and stabilization are lacking in the scapulo-thoracic area, a common side effect will be shoulder pain, namely rotator cuff tendonitis. This is a vicious cycle, stemming from the vast amounts of pressing and limited pulling exercises. In a proper anatomical position, as previously mentioned, the scapula should be retracted (pinched together) and depressed (brought down). This is the position that we constantly cue and seek to attain throughout the exercises performed. The rhomboids and lower traps are two main scapula retractors which need to be strengthened in order to enhance stability. Two exercises that we very frequently use to strengthen these muscles and emphasize proper scapula position are the high rope row and prone T's. The high rope row, similar to a face pull, utilizes an athlete's body weight as resistance. To perform the exercise, the athletes must row themselves, retracting and depressing the scapula. The prone T's, also known as horizontal abduction, requires the athlete to externally (thumbs up) or internally (thumbs down) rotate and again, retract and depress the scapula.



High Rope Row Finish



Prone T Finish

I would also like to note an extremely important and commonly overlooked scapula stabilizer called the serratus anterior. Located on the anterior surface of the body, at first glance, may not seem to play the role of a stabilizer. However, it holds the scapula against the thoracic wall. Examining the anatomy of the serratus anterior, this muscle originates on the ribs and attach to the medial (inside) border of the scapula. An exercise that we frequently use to train the serratus is the scapula push. Here, you will get into the starting position of a push up. First, retract and depress your shoulder blades and hold for a count. Now, protract the shoulder blades. Here, you will engage the serratus. Hold for a two count, and repeat.



Scapula Push Up Start



Scapula Push Up Finish

In summary, the first thing we must do is analyze the problem we are faced with. From here, come up with a plan of attack to a possible solution to the problem, as strength, mobility, and stabilization in this case. Always evaluate your athletes prior to training them. I find that this exposes strength and flexibility imbalances that might not otherwise be noticed. For the shoulder girdle, the overhead squats, rack row, push ups, and postural analysis will serve as great evaluation tools that will expose any abnormalities or deficiencies that may be present.

One last note is to continue to seek out information, but do not limit your resources. Never feel limited to particular websites, authors, etc. Seek out physical therapists, doctors, and athletic trainers. Just because they may not be strength and conditioning professionals doesn't mean that they can not have the answers to our many questions. The solution to your next issue may be just one article away!

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