B-BOYING AND BUILDING HEALTHY SHOULDERS-ROUND 1

BY MATT AVILA, CES

Warm Up

Maintaining the integrity of the body's joints should be an integral part of training. The shoulder joint plays a particularly significant roll in the performance of the active b-boy. The shoulders have to be stable enough to support the rest of the body in movements like floor-work, freezes, and power moves, as well as mobile enough to negotiate the ranges of motion associated with these movements. Many b-boys suffer from shoulder pain and dysfunction because of the constant stresses placed on the shoulder during activity. In an epidemiologic study of injuries in b-boying by C.H. Cho et al. (2009), 42 b-boys (23 professionals and 19 amateurs) were surveyed about their injury history during their dance career. A total of 52.45% of the subjects had sustained a musculoskeletal injury to the shoulder. Additionally, I have personally seen a number of shoulder subluxations (partial dislocations) happen during events and have spoken to numerous b-boys who suffer from shoulder pain.

It is possible to lower the likelihood of injury through proper conditioning. Some of the most common methods of training the upper body in the b-boy community rely almost exclusively on exercises such as push-ups, handstand exercise variations, and L-sit type exercises. These are all excellent exercises that should be included in any conditioning program for b-boys. However, there are many other important factors to consider when addressing training the shoulder.

The Shoulder

Many think of the shoulder as just the ball-and-socket joint that sits on the top of the arm, but it is actually an entire mechanical apparatus comprised of over 13 different muscles and 4 different joints all contributing to its function. If the body were divided into quarters, all the structures associated with the shoulder would be an entire quarter of the upper body, not just a single point at the top of the arm.

The shoulder is made up of 4 different joints: the glenohumeral, scapulothoracic, acromioclavicular, and sternoclavicular joints. The glenohumeral joint is the ball-and-socket joint that most would recognize as the shoulder joint. This is where the "ball" portion of the upper arm bone (the humerus), meets the "socket" portion of the joint on

the shoulder blade (the scapula). The scapulothoracic joint is where the shoulder blade meets the back of the rib cage. The acromioclavicular joint attaches the scapula to the collarbone (the clavicle). Lastly, the sternoclavicular joint is where clavicle attaches to the sternum, which attaches the shoulder girdle to the rest of the body. The four joints of the shoulder complex can be seen in figure 1.

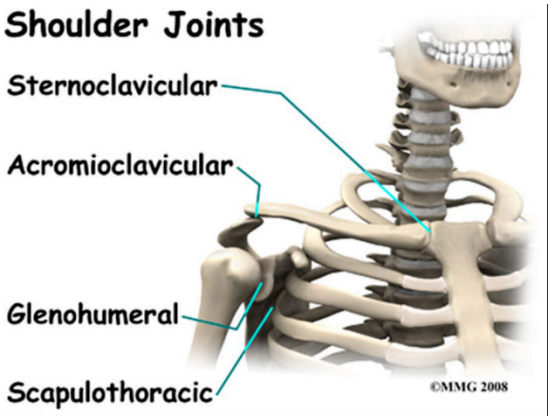

Figure 1

The shoulder also depends on key muscle groups for its function such as the pectorals, serratus anterior, trapezius, levator scapulae, rhomboids, and the rotator cuff.
All of these joints and muscles need to work in synchronization in order to achieve optimal functionality of the shoulder.

Good Position Precedes Efficient Movement

The way a joint sits on your body has a direct effect on the way it moves; for a joint to produce optimal movement it must sit in an optimal position. The "optimal" position for the shoulder joint is where the "ball" of the joint sits centered within the socket. The balance of tension between the surrounding muscle groups significantly affects the positioning of the joint. Imagine a game of tug-of-war in which the bones of the joint are the rope and the muscles around it are the players. The best situation for the shoulder joint is one in which all the muscles are pulling on it with a balanced amount of force. In this case the "rope" will not move and the humerus will remain centered in the socket. If one set of muscles is pulling harder than the other, the joint will be pulled off-center.

Factors such as repetitive movements, imbalanced workout routines, and poor postural habits can result in strength imbalances around a joint. Muscular imbalances can alter joint mechanics during movement, which leads to abnormal wear and tear on the joint, ultimately leading to pain and injury. Rather than traumatic injuries that result in an immediate cease in training, muscular imbalances can lead to more chronic aches and pains that adversely affect training and progress for long periods of time.

Static Posture

One of the simplest ways to determine if the shoulder is in its optimal position is to evaluate its static posture. Static posture is how the body positions itself when a person is standing naturally. The positional patterns the body follows depends on the balance of tension between different muscle groups. A common postural misalignment in the shoulders referred to as Upper Crossed Syndrome, characterized by rounded shoulders and a forward protruding head (figure 2). This posture is problematic because when a joint is not sitting well on the body, its movement can be impeded, which can diminish performance on the floor and raise the likelihood of injury. This postural misalignment is common in people who are not b-boys, so it is not the result of b-boying. However,

many of the common training practices in the b-boy community can lead to or exacerbate the same muscular imbalances.

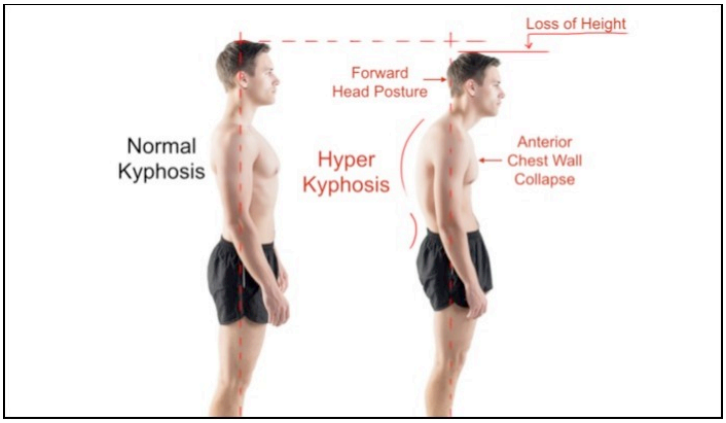

Figure 2

What Should We Incorporate Into Our Training?

The reasoning that some of our common training practices can be conducive to shoulder dysfunction stems from the observation of a similar form of training that leads to Upper Crossed Syndrome and its related shoulder problems. The same shoulder problems can be found in many who regularly lift weights. While the two activities may seem radically different, both follow the same patterns that lead to the same issues. Recall a time where you have seen someone who had huge muscles, but had a slumped over forward posture like in figure 2. Or be on the look-out for it the next time you visit the local gym. This posture is often the result of an imbalanced training program containing a high volume of "push-type" movements in comparison to "pull-type" movements. The bench press, incline dumbbell presses, and military presses are examples of push-type exercises because they involve pushing the weight away from the body. While rows, pull-ups, and band pull-aparts are all examples of pull-type exercises because they involve pulling the weight towards the body or pulling the body towards a fixed point. A program that primarily focuses on push-type exercises and lacks pull-type exercises over-develops muscle groups on the front side of the body in relation to the back side of the body. This can cause the shoulders to round and the head to protrude forward, creating a predisposition to a multitude of shoulder issues.

Does this kind of program sound familiar? Most b-boy conditioning programs consist of high volumes of push-ups, handstand push-ups, and dips; which are all push-type movements. This high volume of pushing exercises combined with the constant pushing off the floor and a lack of pull-type exercises creates a situation for shoulder issues to occur.

Cool Down

The best conditioning program for the shoulders is one that not only builds strength but also focuses on maintaining balance in all of the musculature that surrounds the joint and focuses on the muscle groups that are responsible for stabilization. This is the component of training that this series of articles will focus on. By the end of this series I hope to arm you with the basic principles of shoulder training that will keep your shoulders healthy for tomorrow's battle and a lifetime.

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