

Innate Motion Fitness

The Movement Within

B-BOYING AND BUILDING HEALTHY SHOULDERS-ROUND 3 STRENGTH AND STABILITY

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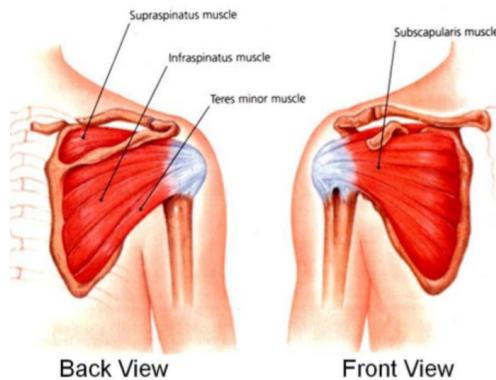
Warm Up

This article will highlight focused shoulder training to increase strength and stability. There are particular muscle groups that are consistently ignored in b-boy training programs and these groups are some of the most important to train in order to maintain healthy shoulders. Proper training of these groups will provide proper alignment and stabilize the entire shoulder girdle. These muscle groups are the rotator cuff, the scapular stabilizers and the deep cervical flexors. The following will discuss the function of these critical groups and recommend exercises to maintain them in performance condition.

Figure 1

The Rotator Cuff

The term “rotator cuff” is often associated with shoulder training; however, few dancers know neither what it is nor how to train it. The rotator cuff is a group of 4 muscles that act to internally/externally rotate the shoulder, which is where the name “rotator” cuff is derived from. They also have the responsibility of keeping the head of the humerus, which is the “ball” portion of the shoulder joint, depressed into the glenoid fossa of the scapula which the “socket” portion of the shoulder joint. The rotator cuff, literally, holds your arm in its socket. Just as a tree’s roots hold it into the ground to keep it in place, the rotator cuff holds your shoulder in place. A weak rotator cuff means an inherently unstable shoulder; therefore, focused rotator cuff training should be incorporated into any shoulder-conditioning program.



The four muscles of the rotator cuff are the supraspinatus, infraspinatus, subscapularis, and teres minor (Figure 1). They originate on the shoulder blade and attach on the head of the humerus. The common postural misalignment of the previously discussed forward head/rounded shoulder posture is partially

due to the shoulder joint being too internally rotated. This is due to muscles such as the Pectorals and the Lats being too overactive and holding the shoulder inward while muscles like the external rotators of the rotator cuff and the scapular stabilizers, which hold the shoulders outward, are too underactive. To train the rotator cuff the shoulder needs to move in rotation (Figure 2). Since the shoulders have a tendency toward internal rotation and most movements in

breaking are in the internally rotated position, dedicated focus to external rotation should be given. The following exercises will target the rotator cuff and train the shoulder in external rotation.

Resistance Band External Rotation in 2 Positions



Stand with the back straight, shoulder blades back, and elbow bent at 90 degrees with a towel pinched to your side

The “90/90” (arm at 90 degrees/elbow at 90 degrees) position trains the rotator cuff with the arm away from the body. This position prepares the rotator cuff to stabilize the shoulder in overhead activities such as pitching a ball or holding handstands,

- Keep back straight and shoulders back
- Keep shoulder depressed and way from the ear
- Keep wrists straight



Pull the band outward to 45 degrees and then return to the starting position

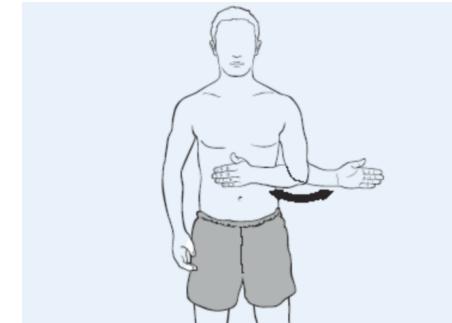


Figure 2

- Keep shoulder depressed and away from ear
- The towel should remain pinched between the elbow and side
- Shoulder should not roll forward
- Keep wrists straight



Stand with back straight, shoulders back, and elbow/arm at 90 degrees



Move hand back against the resistance back. Keep the elbow and arm at 90 degrees

The Scapular Stabilizers

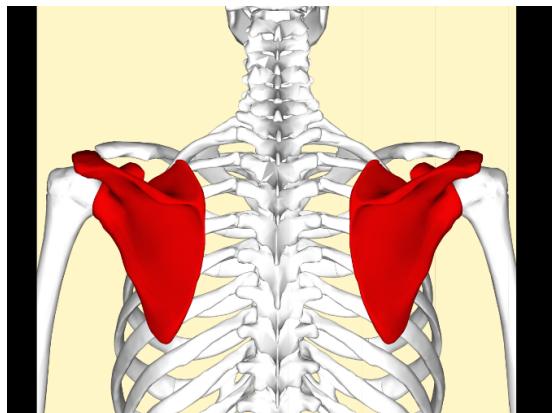


Figure 3

A tremendously important, but often overlooked, aspect of shoulder health is the positioning of the scapula (shoulder blades) on the rib cage. The scapula acts as the "socket" portion of the shoulder joint and functions as a stable base for all movements of the arm. The scapula attaches to the thorax via the scapulothoracic joint. Unlike other joints in the body, the scapulothoracic joint is not supported by any ligaments and is not surrounded by a synovial capsule, therefore, the scapula are completely dependent on the surrounding musculature for their stability and position. Training the muscle groups that stabilize the scapula is an integral part of shoulder health. The scapula are highlighted in red in Figure 3.

The scapulae are important to shoulder health because they work as a partner to the movements of the entire arm. To illustrate, in order to perform a handstand, you must reach your hands in front of you and above your head. In order for your arm to do this, the scapula must abduct and upwardly rotate as the arm raises (Figure 6). If your scapula was fixed onto your rib cage and did not move, you would not be able to get your arms past shoulder height or be able to reach in front of you. This mechanism applies to all of the movements of the shoulder joint. All movements of the arm require simultaneous movement of the scapula. The scapula, then, is a key player in shoulder movement.

Smooth movement of the scapula supports a fully functional and healthy shoulder. Smooth movement of the scapula is achieved by maintaining balance between all the musculature that provide it stability. These muscles are known as the scapular stabilizers and they include the serratus anterior, levator scapulae, trapezius, and the rhomboids (Figure 4). Due to factors such as constantly maintaining poor posture and imbalanced exercised routines these muscles are often weak and underactive. When these muscles are underactive they cannot properly stabilize the scapula. The instability of the scapula caused by weak scapular stabilizers increases the risk of injury.

B-boy training regimens tend to focus primarily on "push-type" exercises such as push-ups, handstand push-ups, and various pressing movements. These exercises are great for developing the musculature on the front side of the body. However, they ignore the muscles on

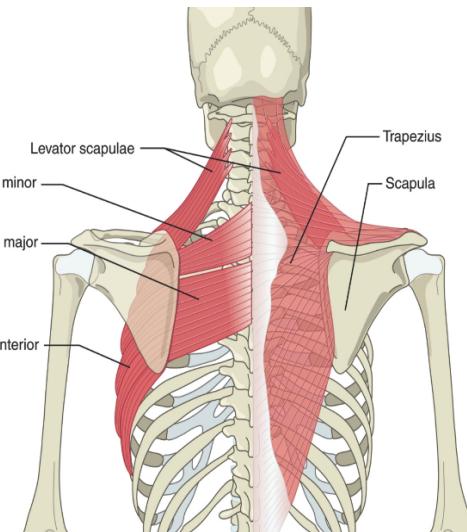


Figure 4

the back side of the body that help stabilize the scapula and maintain proper shoulder posture. The muscles that stabilize the scapula are developed with “pull-type” exercises.

One important element for training the scapular stabilizers for breaking is to train them in a straight arm position. When we dance our arms are often outstretched and away from our bodies or over our head. Hence, it is important to train the scapular stabilizers in this position. The following exercises will target the middle/lower portion of the trapezius and the rhomboids while holding the arm in the straight position.

Pull Ups

Pull ups are one of the best exercises to develop the entire back all in one movement and develop tremendous strength. Engage the scapular stabilizers by depressing the shoulders away from the ears and squeezing the shoulder blades together as you pull yourself up.



Resistance Band Shoulder extension



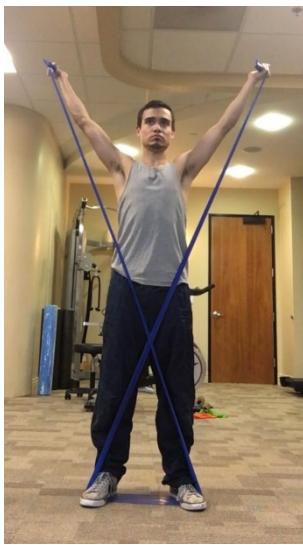
- keep shoulders depressed and away from ears
- Squeeze with the upper back
- Do not let low back over arch

Band Pull Apart

- Begin with arms to the front and thumbs pointed at each other
- As you pull the band apart squeeze the shoulder blades together and rotate the thumbs so they are pointed behind you in the final position.
- Return to the starting position
- Keep the shoulders depressed and way from the ears

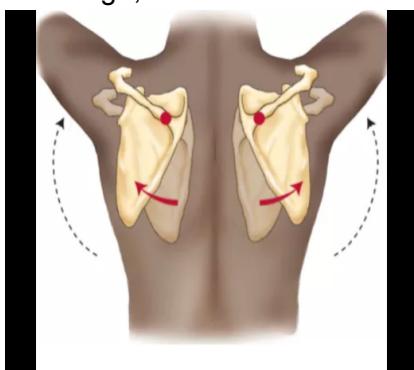


Shoulder X



- Begin with the hands to the front with the thumbs pointing at each other
- While keeping the shoulders depressed and away from the ears, pull the band to the top position with the thumbs facing behind you
- Initiate the movement from the upper back and squeeze the shoulder blades together and down
- Return to the starting position

Another scapular stabilizer that is often overlooked is the serratus anterior (Figure 4). The serratus anterior originates on ribs 4-12 and attaches to the medial border of the scapula. Its job is to spread apart, upwardly rotate the scapula and hold them down against the rib cage. Since the scapulae act as the foundation of the shoulder, if they are not sitting flat against the rib cage, then entire shoulder is subject to instability.



The serratus anterior is especially important to keep conditioned because it is the muscle that acts to protract the scapula away from each other (Figure 5) and upwardly rotate

the scapula (Figure 6). These two movements are imperative to b-boying. Protraction of the scapula is important in movements

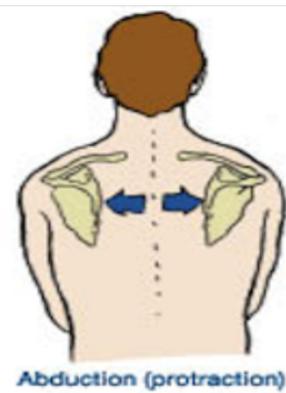


Figure 5

like footwork and flares where the shoulders need to push away from the ground. Upward rotation of the scapula is important in

Figure 6

handstand based movements because without upward rotation of the scapula, the arm could not move into the overhead position. To train the serratus anterior we will use an exercise called the Push-up Plus

Push Up Plus

- Get into a push-up position. The elbows will not move during the exercise.
- Squeeze the shoulder blades together
- Push them apart and hold that position for 3 seconds before moving to the next rep
- The entire movement is in the shoulder blades



Cervical Flexors

The deep cervical flexors called the Longus Capitius and Longus Colli are deep muscles in the front of the neck (Figure 7). They act to flex, laterally flex, and rotate the head and neck. The head and shoulders have an interdependent relationship and the positioning of one affects the other. When the shoulders are moved into the elevated and internally rotated position by muscular imbalances the neck compensates by protruding the head forward. This positioning can cause headaches, shoulder pain, and suboptimal shoulder mechanics.

In the forward head position, the muscles that extend the head and neck (the Trapezius and sub occipitals) are overactive which causes the cervical flexors in the front of the neck to become underactive. Activating the cervical flexors will bring the head back into its proper position and allow the shoulders to function optimally. The exercise chin tucks will activate the deep cervical flexors.

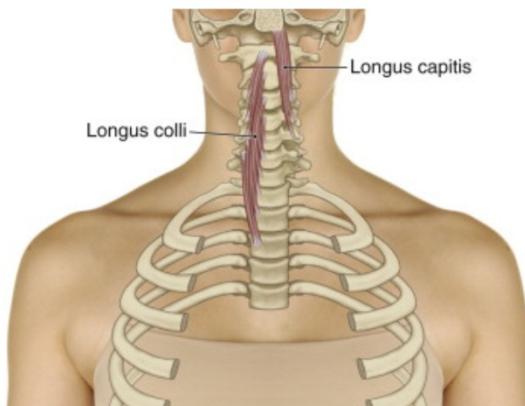


Figure 7

Chin Tuck

- Lie on back with palms facing the neck in neutral
- Tuck the chin to make a “double chin”
- Only the muscles in the front of the neck should be activated. The rest of the neck should not tense up



Cool Down

Strength in the aforementioned muscle groups is important to keeping the shoulders in the correct alignment and for overall shoulder health. The muscle groups discussed in this article are often overlooked in b-boy training programs and should be given the proper attention and focus. Smart training and good health habits will enable more effective, intense training and most important of all...LONGEVITY.



Images

Figure 1 <https://phoenixshoulderandknee.com/wp-content/uploads/2014/02/Shou>

Figure 2 <http://bjdonline.org/the-shoulder/>

Figure 3 <https://en.m.wikipedia.org/wiki/Scapula>

Figure 4 <http://www.rickolderman.com/wp-content/uploads/2014/09/scapula-mm.jpg>

Figure 5 <https://treningsogrehab.no/permanently-resolve-scapular-dyskinesis/>

Figure 6 <http://injuryactive.com/shoulder-pain-part-2-how-do-we-fix-a-scapular-that-doesnt-want-to-upwardly-rotate/>

Figure 7 <https://learnmuscles.com/blog/2017/08/12/unusual-suspects-longus-colli-longus-capitis/>

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