

Evaluation and Causes of Scapular Dyskinesia

The scapula (more often referred to as your "wing bone" or shoulder blade) is a key reason why your shoulder and arm move and glide smoothly and easily. Not only does the scapula give the shoulder muscles a base of operation, it also acts as a moving platform for the shoulder ball-and-socket joint to function properly.

In short, the scapula is a silent partner with the shoulder in moving the arm in any and all directions. Any injury that affects the shoulder is going to also affect the scapula. This connection may not be apparent at first but over time, a condition known as scapular dyskinesia develops. Dyskinesia just means the body part isn't moving in the normal rhythm or sequence.

This review of the role of the scapula in shoulder injuries with evaluation and treatment of scapular dyskinesia comes from two physicians and an athletic trainer at The Shoulder Center of Kentucky. They provide a detailed description of normal scapular function (motion, coordination, and integration with the arm and trunk). The way in which the scapula contributes to normal shoulder function is also discussed.

In contrast to normal motion, scapular dyskinesia is also described with photos of patients included to help the reader visually understand what is happening. The patient may not feel anything directly wrong with the scapula. Sometimes there is a snapping or grinding sensation as the scapula moves over the ribs. The biggest sign of a scapular problem is what's called scapular winging. As the patient moves the arm up overhead or forward, the scapula pops out away from the body. Reaching behind the back with the hand on the affected side will also result in excessive winging.

When evaluating someone for this problem, it is necessary to look at all components of the shoulder complex: muscles, joints, bones. The cause of scapular dyskinesia is usually mechanical such as muscle stiffness or shortening, bone fractures, alterations in shoulder joint motion, joint instability, or muscle (strength or timing) imbalances.

Three-dimensional (3-D) motion pictures of patients with scapular dyskinesia show that the altered position of the scapula affects all aspects of upper quadrant movement. Clinical tests to examine the scapular position, alignment, and motion include visual inspection, the scapular assistant and scapular retraction tests, and resisted forward shoulder motion with a three to five-pound weight in each hand.

Treatment depends on a thorough and careful evaluation process to detect all areas of involvement. With this information, researchers can move to the next step of determining the best treatment approach for this problem. Of course, addressing fractures, rotator cuff tears or degeneration and the impingement that comes from rotator cuff disease, and labral tears is the first step. But for complete recovery, it will be important to restore normal alignment and movement of the scapula as well.

Anyone working with athletes, aging adults, or any others with shoulder problems will find the information in this article on the cause and effects of scapular involvement helpful. The detailed discussion of anatomy and evaluation of scapular dyskinesia will benefit Physical Therapists and athletic trainers working with shoulder impaired patients.

Reference: W. Benjamin Kibler, MD, et al. Scapular Dyskinesia and Its Relation to Shoulder Injury. In Journal of the American Academy of Orthopaedic Surgeons. June 2012. Vol. 20. No. 6. Pp. 364-372.