

The Importance of Rotator Cuff and Scapular Strength in the Shoulder Impingement Patient

By: Jennifer Watson, MPT

Over the past two decades advances in medicine have allowed people to live longer more active lives. As a result there has been an increase in the number of “weekend warriors” participating in activities such as running, cycling, softball, etc. One common injury seen with this population is the shoulder impingement syndrome. Usually affecting the “active” individual, it is not uncommon to see this diagnosis on the other side of the patient spectrum, the sedentary “couch potato”.

The cause of shoulder impingement stems primarily from two biomechanical factors; structural and functional. Several structural factors affect the shoulder complex, one of the more familiar being acromial shape (i.e. flat, curved, or hooked). In severe cases, surgery is often indicated to relieve symptoms. On the other hand, functional shoulder impingement is more common and usually involves weakness of the rotator cuff (RTC) complex and/or scapular musculature.

It is well documented that the RTC is the primary stabilizer of the glenohumeral joint. It also provides proper glenohumeral movement or “rhythm” with elevation. Scapular musculature in turn provides a good base of support for the shoulder girdle allowing the upper extremity to perform its many activities. Weakness in the RTC and/or scapular stabilizers causes imbalances in the shoulder girdle leading to impingement on the coracoacromial arch. As a result, patients suffer from inflammation and functional pain, or shoulder impingement syndrome.

Treatment for this condition may include rest, ice, NSAIDS, etc. However, this does not address the underlying causes, which are scapular and/or RTC weakness. The shoulder girdle is much like a crane with the RTC and scapula being the base. Without a strong, stable base the crane would not be able to lift up its cargo. In order for it to function properly the base must be “strong” and secure. This is where a comprehensive and monitored strengthening program in conjunction with conservative treatment can be beneficial to the patient. Treatment is performed in stages, the first involving reduction of pain, restoration of full range-of-motion (ROM)/flexibility and patient education on activity modification. Once pain-free ROM is established, strengthening and conditioning begins with the primary focus on the RTC and scapula. In addition, normal neuromuscular control of these two areas is also addressed. The last stage involves functional or sports specific exercises for a gradual return to activity.

Shoulder impingement is a common condition seen in the active as well as sedentary individual. It has been shown that weakness in the RTC complex and scapular musculature tends to be the leading cause. Physical therapy intervention for patients with shoulder impingement can assist in treating the underlying cause of impingement and help them return to pain-free activities.