

# **Slumping Shoulders: Serratus Anterior**

Dr. Todd Turnbull, DC

Slumping shoulders, pain between the shoulder blades, winging scapula and numbness in the hand and arm may all be caused by excess tension in the serratus anterior muscles. The serratus anterior muscle protracts the scapula and stabilizes the shoulder girdle against the ribcage. It assists in inspiration. When a patient complains of shoulder problems this is usually one of the factors that causes dysfunction and pain.

The serratus anterior originates from the lateral aspects of ribs 1 through 8 and inserts along the medial border of the anterior surface of scapula. The long thoracic nerve travels down into the hands through the inferior part of the muscle where it is vulnerable to compression.

## **Symptoms**

Complaints associated with hypertonic serratus anterior muscles include pain between the shoulders, generalized shoulder pain and/or numbness in the arm and hand. The onset of pain can be either acute, due to a specific mechanism of injury, or a gradual chronic condition that slowly develops. Strain can occur from motor vehicle accidents where the hands are on the steering wheel and the impact travels through the arms causing injury to the serratus anterior muscles. Other factors include sleeping on the involved side, excessive throwing or a fall that traumatizes the shoulder.

Winging scapula is noted with those patients that have excess tension in the serratus anterior muscle. The winging should decrease as the muscle is corrected toward a normal tone.

## **Diagnosis**

Evaluate shoulder protraction by having the patient elevate arms to horizontal then protract and retract repeatedly while maintaining straight elbows. Look for a loss of range motion &/or a loss of coordination of scapular motion. Next, muscle test bilaterally and note the deficiency of the involved serratus anterior.

## **Treatment**

Effectively correcting the serratus anterior involves pressing the ribs down and forward. Stand behind the patient and insert your hand high into the axilla. Find the tender muscle attachments into the ribs and use your thenar eminence to press on the ribs. Post treatment evaluation should note increased strength and range of motion function while decreasing pain.

## **Rehabilitation**

Stretch the serratus anterior by placing a hand against the wall at head level or higher then bend forward until the armpit feels like it is getting stretched. Pullovers with a dumbbell or resistance bands are used to strengthen the serratus anterior. These exercises should be incorporated a minimum of three times per week with sets of 15-20 repetitions. I prefer my patients work the good side first then train the injured side.