

## Forward Head / Forward Shoulders

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Probably one of the most common postural distortions we see is the forward head, forward shoulders posture. This distortion often appears in teenagers and progresses to old age. Porterfield and DeRosa<sup>1</sup> have provided some important information regarding this problem. They state<sup>1</sup> that while lengthening or weakness of the scapular retractors is often blamed, a major cause is weakness and lengthening of the abdominal muscles, allowing the chest to descend and shifting the weight of the upper trunk anteriorly. This causes the chest to descend with the scapula shifting forward around the rib cage, pressing the clavicle to the first rib. In this position, the humerus internally rotates and the head and neck are brought forward.

As the head and neck are brought forward, the patient is forced to extend the occiput to keep the eyes horizontal, resulting in overactivity of the suboccipital muscles. With the head in a forward position, a passive tensile force is created in the hyoid muscles resulting in hyoid muscle tension, causing the mandible to be depressed and translated posteriorly. The patient is therefore forced to contract the temporalis and masseter muscles to keep the mouth closed.

This abnormal mandibular positioning can cause myofascial stress to the masseter and temporalis and temporomandibular problems. Porterfield and DeRosa<sup>1</sup> state that symptoms such as excessive dry mouth due to mouth breathing, dysphagia, suboccipital headaches, teeth clenching, pain in the head and face over the temporalis area, and tightness over the throat region may occur.

A particular problem with the anterior sagittal glide of the head is the effect on the cervical facet joints. The facets are forced to go into extension and become impacted.<sup>2</sup> Impacted facet joints prevent the hyaline cartilage compression and decompression necessary for normal nutrition, resulting in increased facet degeneration. The internally rotated shoulders increase the axial compression of the acromioclavicular joints to the sternoclavicular joints. There is usually a shortening of the pectoral fascia. Internally rotated shoulders can cause scapular protraction, narrowing the thoracic outlet and thereby compressing the neurovascular bundle. The forward shoulders may also narrow the subacromial space predisposing to subacromial impingement.

Treatment of the forward shoulders and neck therefore requires strengthening of the abdominal muscles and balancing of the anterior and posterior scapular muscles.<sup>1</sup> Having patients stand in a doorway with the arms supporting them while they allow themselves to fall forward for several minutes at a time helps in stretching the fascial component. Using fascial release to restore pelvic torsion and free the pectoral areas is essential for long-term effect. The forward head posture forces the levator scapulae to eccentrically contract on a continuous basis, which is the reason these patients usually have pain and trigger points at the superior medial border of the scapulae. The posterior cervical superficial investing and prevertebral cervical fascia must be evaluated and treated along with the thoracodorsal and thoracolumbar fascia to which the prevertebral fascia is connected.

### *References*

1. Porterfield JA, DeRosa C. *Mechanical Neck Pain. Perspectives in Functional Anatomy*. Philadelphia, PA: W.B. Saunders Co., 1995.
2. Innes K. Lecture notes. Bridgeport College of Chiropractic, July 7, 1999.

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