

How Poor Posture Causes Neck Pain

Most neck pain that is *not* caused by <u>whiplash</u> or other trauma has a postural component as part of the underlying problem. Sitting atop the body, the health of the neck is subject to the curvature of the spine below and the position of the head above.

• See Types of Neck Pain

The neck muscle pain can be caused by the following neck muscles becoming tight:

- Scalene muscles (three pairs of muscles that help rotate the neck)
- Suboccipital muscles (four pairs of muscles used to rotate the head)
- Pectoralis minor muscles (a pair of thin triangular muscles at the upper part of the chest)
- Subscapularis muscles (a pair of large triangular muscles near each shoulder joint)
- Levator scapulae muscles (a pair of muscles located at the back and side of the neck).

If the alignment of the head and spine is not optimal, the neck can be predisposed to injury and/or the degenerative effects of wear and tear over time.

Forward Head and Shoulder Posture

The most common condition that contributes to neck pain is forward head and shoulder posture. Forward head posture is when the neck slants forward placing the head in front of the shoulders. This head position leads to several problems:

- The forward pull of the weight of the head puts undue stress on the vertebrae of the lower neck, contributing to degenerative disc disease and other degenerative neck problems.
- Similarly, this posture causes the muscles of the upper back to continually overwork to counterbalance the pull of gravity on the forward head.
- This position is often accompanied by forward shoulders and a rounded upper back, which not only feeds into the neck problem but can also cause shoulder pain.

The more time spent with a forward head posture, the more likely it is that one will develop neck and shoulder problems.

Effects of Poor Posture on the Lower Cervical Vertebrae

The part of the neck that is particularly vulnerable to forward head posture is the lower part of the neck, just above the shoulders.

• See Cervical Spine Anatomy and Neck Pain

The lower cervical vertebrae (C5 and C6) may slightly slide or shear forward relative to one another as a result of the persistent pull of gravity on a forward head.

This shear force can be a problem for patients with jobs that require them to look down or forward all day, such as pharmacists who spend many hours counting pills or data entry workers who look at a computer screen.

See Ergonomics of the Office and Workplace: An Overview

Long-Term Negative Effects of Poor Posture

Prolonged shearing of the vertebrae from forward head posture eventually irritates the small facet joints in the neck as well as the ligaments and soft tissues.

This irritation can result in neck pain that radiates down to the shoulder blades and upper back, potentially causing a variety of conditions, including:

- Trigger points in the muscles, which are points of exquisite tenderness that are painful to touch, along with limited range of motion
- Disc degeneration problems, which may potentially lead to <u>cervical degenerative disc disease</u>, <u>cervical osteoarthritis</u>, or a <u>cervical herniated disc</u>.

It is often important to look at the workplace ergonomics as part of treatment and prevention of neck pain. Perhaps the placement of the desk, computer workstation and/or placement of the computer monitor and keyboard can be improved to encourage improved upper back and neck posture.

• See Ergonomics of the Office and Workplace: An Overview

When sitting erect at a desk and looking straight ahead:

- Eyes should point directly at the top third of the screen.
- Forearms should be approximately parallel with the floor when typing.
- Elbows should be at the side.
- Feet should be flat on the floor with the thighs parallel with the floor.
 - o See Posture to Straighten Your Back

If patients have a standing work station or perform other sorts of sitting or driving tasks, make sure that one side of the body is not constantly rotated more than the other side, and that there is as much symmetry in repetitive tasks as possible.

• Read more: Office Chair, Posture, and Driving Ergonomics

Persistent movements to one side or constant rotation of the neck and back to the same side can often aggravate joints and soft tissues causing neck and back pain. Some patients can develop poor posture of the head, neck, and shoulders through repetitive work tasks and/or poor sitting habits.

There are stretches and exercises that are effective at helping restore good posture, thereby taking pressure off the neck and relieving pain.

• See Simple Office Chair Stretch



Article written by: Gavin Morrison, PT

Published: 07 March 2011

Article has been peer reviewed

Morrison, Gavin. "How Poor Posture Causes Neck Pain." *Spine-health: Trusted Information for Back Pain Relief.* Spine-health.com, 07 Mar. 2011. Web. 06 June 2014. http://www.spine-health.com/conditions/neck-pain/how-poor-posture-causes-neck-pain.