

Study: Computers can be a real pain in the neck

4 January 2019, by Lisa Owens Viani



Two San Francisco State University students show how people compress their neck at the computer. Credit: San Francisco State University

It's a posture so common we almost don't notice it anymore: someone sitting at a computer jutting his or her head forward to look more closely at the screen. But this seemingly harmless position compresses the neck and can lead to fatigue, headaches, poor concentration, increased muscle tension and even injury to the vertebrae over time. It can even limit the ability to turn your head.

"When your posture is tall and erect, the muscles of your back can easily support the weight of your [head](#) and [neck](#)—as much as 12 pounds," explains San Francisco State University Professor of Holistic Health Erik Peper. "But when your head juts forward at a 45 degree angle, your neck acts like a fulcrum, like a long lever lifting a heavy object. Now the muscle weight of your head and neck is the equivalent of about 45 pounds. It is not surprising people get stiff necks and shoulder and back pain."

Peper, Associate Professor of Health Education Richard Harvey and their colleagues, including two [student](#) researchers, tested the effects of head and

neck position in a recent study [published](#) in the journal *Biofeedback*. First they asked 87 students to sit upright with their heads properly aligned on their necks and asked them to turn their heads. Then the students were asked to "scrunch" their necks and jut their heads forward. Ninety-two percent reported being able to turn their heads much farther when not scrunching. In the second test, 125 students scrunched their necks for 30 seconds. Afterwards, 98 percent reported some level of pain in their head, neck or eyes.

The researchers also monitored 12 students with electromyography equipment and found that trapezius [muscle tension](#) increased in the scrunched, head forward position.

So if you suffer from headaches or neck and backaches from computer work, check your posture and make sure your head is aligned on top of your neck, as if held by an invisible thread from the ceiling. "You can do something about this poor [posture](#) very quickly," said Peper. To increase body awareness, Peper advises purposefully replicating the head-forward/neck scrunched position. "You can exaggerate the position and experience the symptoms. Then when you find yourself doing it, you can become aware and stop."

Other solutions he offers include increasing the font on your computer screen, wearing computer reading glasses or placing your [computer](#) on a stand at eye level, all to make the screen easier to read without strain.

More information: *Biofeedback*, [DOI: 10.5298/1081-5937-46.3.04](#)

Provided by San Francisco State University

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