

In Response to: Hal Bernton's "[Case of the Daily Headache](#)," (*Wall Street Journal*, 3.22.2011)

**Dear Editor,**

Tension headache related to central sensitization is the most important element of your article "Case of the Daily Headache." Australian researcher Nikolai Bogduk, MD, Ph.D. reported in 1995<sup>[i]</sup> that all headaches are mediated by an area of the brain known as the Trigemincervical Nucleus (TN). Headaches are initiated by abnormal stimulation of the endings of the nerves that connect on this nucleus. This happens through irritation of the nerves themselves, or decreasing the level of inhibition of the nucleus itself.

A main factor affecting nerves surrounding the Trigemincervical Nucleus is the biomechanical components of the upper cervical spine. Chiropractic care, specifically cervical spine adjustments, results in inhibition of triggering function mechanisms and ultimately results in decreased central sensitization.

*Think of it in terms of a shower.* There are two ways to get the water temperature perfect: either turn down the hot water or turn up the cold water. Drugs, which can yield side effects and rebound headaches, temporarily lessen the body's awareness of pain signals, "turning down the hot water." Cervical spine adjustments decrease the abnormal feedback to the nucleus and dampen pain signals rather than chemically altering the pain sensation, yielding a natural control of the pain cycle and in essence, "turning up the cold water."

This conceptual model is supported by clinical findings such as those presented by Duke University's Evidence Based Practice Center report entitled "Behavioral and Physical Treatments for Tension-Type and Cervicogenic Headache"<sup>[ii]</sup> wherein they stated "cervical spine manipulation effectively relieved headaches compared with control treatments in two studies of patients with headache and neck pain and/or neck dysfunction."

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<sup>[i]</sup> Bogduk, N., *Anatomy and Physiology of Headache*, Biomedicine and Pharmacotherapy, Volume 49, number 10, pp. 435-445

<sup>[ii]</sup> McCrory, Douglas C., Donald B. Penzien, Bic Hasselblad, and Rebecca N. Gray. *Evidence report: behavioral and physical treatments for tension-type and cervicogenic headache*. Durham, NC: Duke University Evidence-based Practice Center; 2001.

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