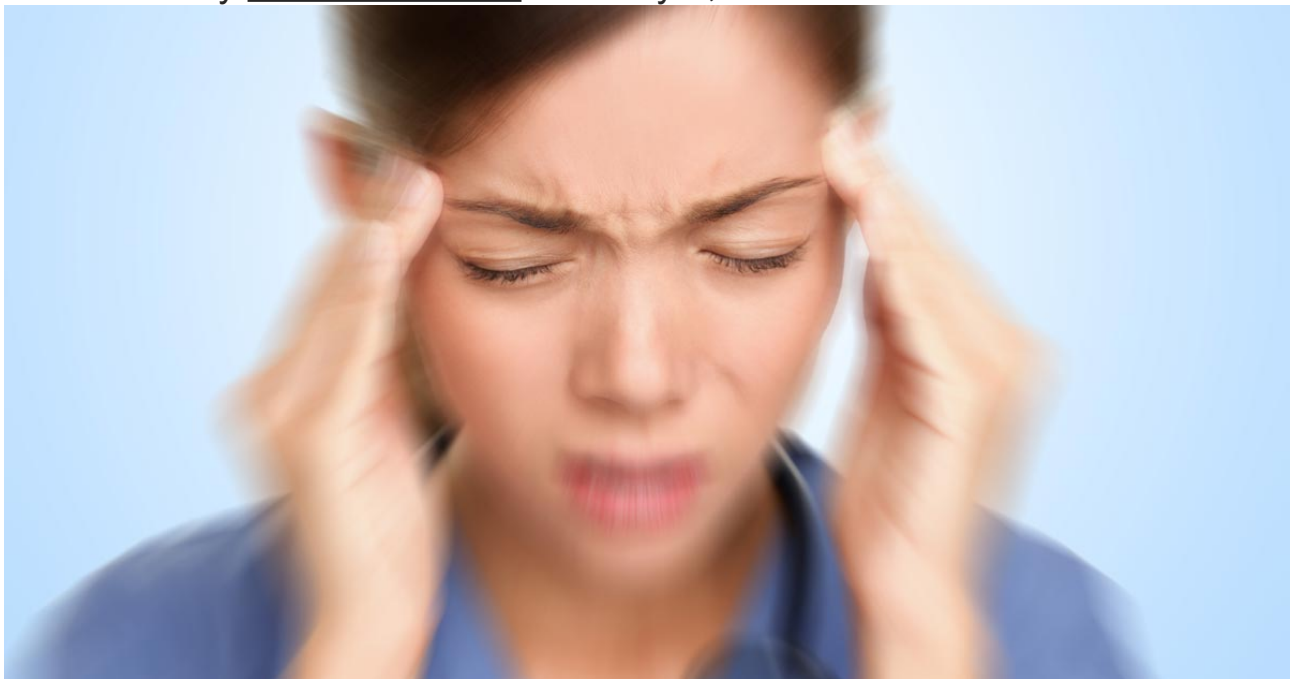


# Cranio PDX

Craniosacral Therapy Portland

## Craniosacral Therapy for Migraine

- by Willem P. Visser February 5, 2019



Migraine is a tedious and common disease. Approximately 15 % of the global population once has to suffer from migraine, with women in the majority. Previously migraine was considered a psychological complaint or dismissed as just a headache. Fortunately, there is increasing awareness about migraines. This article is about what migraine is and how cranio-sacral therapy can help to combat migraines.

### **What is migraine?**

Migraine is particularly characterized by the infernal throbbing headache. In half of the patients on one side of the skull. In the other half is the pain on both sides. Other symptoms include nausea, vomiting and sensitivity to light and sound. A migraine

attack can sometimes take three days. In a third of the patients an attack is preceded by a so-called aura. They see flashes, blurred vision, or a partial loss of vision. Sometimes there is a hemiplegia. The aura usually disappears after about one hour. A headache attack does not always follow is a paralysis after an aura, even if it's aura.

## Cause of migraine

About the cause of migraines is becoming more known. Firstly, since the nineties it is known that genetic predisposition plays a role in migraine, when the first migraine genes were discovered in 1996. Hormonal changes in women also have an influence on the cause of migraine. Women at the beginning of the menstrual cycle have a higher probability of an attack, probably caused by decrease in estrogen. Other factors that play a role are stress, severe fatigue, intense emotion and sleep deprivation.

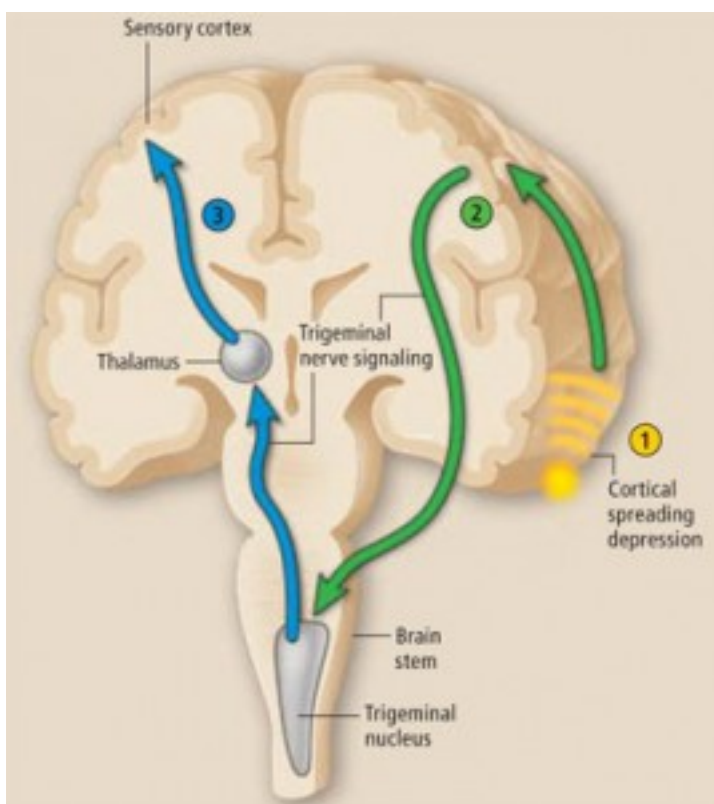


Figure 1: the cause of migraine

But what happens exactly in the brains? The migraine attack is likely to be preceded by a “spreading depression”. This is a brief

sudden heightened electrical activity of nerve cells generally in the occipital lobe of the brain which spreads rapidly over the cortex. This is followed by a prolonged decreased activity of the nerve cells, the so-called “depression”. Researchers now think that before spreading depression begins nerve cells are already on a kind of turning point, leaving only small things to happen like a flash of light or hormonal change to trigger a spreading depression.

The spreading depression itself causes no pain. To spreading depression causes a massive release of activating substances such as potassium, nitrogen oxide, acid and arachnoid acid. These do dilate the blood vessels in the meninges. As a result, the nerve endings of brain membranes are triggered around the brain. The trigeminal nerve or the fifth cranial nerve sends a signal to the brain stem. Here the trigeminal nucleus is activated (see Figure 1). This causes a chain reaction to the thalamus, which will forward the signal to the cerebral cortex, then one feels pain. There is also another theory that the pain is caused directly from the brain stem. And a third theory that the pain caused by migraine patients having an abnormal pain perception. The abnormal pain perception, of course, can also be part of the other theories. See the following video for a clear explanation about the cause of migraines.

Where the spreading depression occurs relates to the kind of aura that is experienced. If the spreading depression is in the visual cortex then one has a visual aura. And if it takes place in the sensory cortex then fall sensory functions, resulting in paralysis. It is also interesting to note that the spreading depression is very slowly moving through the brains at a rate of 3 mm per minute.

**What can craniosacral therapy do for migraine?**

First, craniosacral therapy can help to reduce factors that trigger a migraine attack. I refer in particular to stress the main triggering factor for migraine. Cranio-sacral therapy is very relaxing and is effective in reducing *stress*.

Migraine is often associated with a normal tension headache. Craniosacral therapy can work effectively directly on muscles in the neck, for example, around the neck vertebrae (C1 and C2) or to sternocleidomastoid muscle. This can eliminate the cause of a headache. Headaches can also be caused by tightly tensioned meninges. Craniosacral therapy can elevate the stress on the meninges working on the sacrum area. The spinal cord is indeed surrounded to the sacrum through the same membranes as the brains. This might reduce or make the headache disappear.

If the right conditions are put, one can work on the brain itself. Again, craniosacral therapy can relax and and cleane the brain. Please note the only places in the brains where there are pain sensors are in the meninges. As before with the sacrum also in the skull the meninges can be "relaxed" as in the most literal sense of the word. More relaxed meninges will also give less pressure on the blood vessels, which can reduce migraine. Also read dr. Upledger his column on this.

How cranio work more directly for migraines? Firstly, by making client aware of what happens during migraine attack, then a client learns to anticipate and perhaps even prevent the migraine attack. Depending on whether the client also has an aura before a migraine attack, can also be looked at the aura. If there is a visual aura, the therapist can treat the visual cortex in the occiputale lobe. Just by putting the fingers on to the related part of the skull and relax and discharge. By feedback from the client the site can be made more precise. With an aura with neurological symptoms, of course, one looks at the sensory cortex

visual aura ⇒ discharg visual cortex

sensory aura ⇒ discharge sensory cortex



Figure 2: The vault hold

As previously noted, is an aura probably preceded by a kind of tilting moment. Discharging of the part of the cortex can then possibly take care that this tilting moment will not occur or will be postponed. If there is no specific place that refers to the aura or that no aura occurs may, then you can also place the fingers on the head. The vault hold that meets all the skull bones is the most obvious option. The little finger under the occiput, ring finger and middle finger on temporal bone, sphenoid bone on forefinger and thumb on parietal bone. Then the therapist can layer by layer through skull and meninges make contact with the brain. The craniosacral therapist can probably feel where the spreading depression occurs in the brain.

The next thing the therapist can do is discharge the trigeminal. This trigeminal sends a signal to the brain stem (Figure 1, arrow 2). The cranio standard technique is to discharge the trigeminal nerve at the point where the three branches of the nerve meet in the ganglion of Gasser in the dimple above cheekbone of the ear. The neurons in the trigeminal ganglion are also the main source of the neurotransmitter CGRP. CGRP plays an important role in migraine.

Current migraine medications sumatriptan and suppress the release of CGRP.



Figure 3: In dark blue the trigeminal nuclei in the brain stem  
Thereafter, the therapist can work at the brain stem. Here, the various nuclei can be discharged. In any case, the Trigeminal nuclei. The nuclei are located throughout the brain stem from the medulla to the mid-brain. The most important nuclei for migraine are likely to lie in the pons. Apart from the trigeminal nuclei the therapist can also make contact with the Raphe nuclei. The Raphe nuclei are located along the center line of the pons and are the most important place where serotonin is made for the rest of the brain. Serotonin is a neurotransmitter with a regulating function of, among other sleep, emotions, mood and appetite. Many people with migraine are familiar with relating complaints. In addition, serotonin also plays a role in the processing of pain stimuli. Serotonin and thus the Raphe nuclei thus are likely to play an important role in migraine. Another proof of this is that drugs (triptans) which certain receptors of serotonin in the nerve endings stimulate acute pain may decrease during a migraine attack

The brain stem sends the stimulus further to the thalamus. The Thalamus is the major relay station that transmits the pain stimulus to the cerebral cortex or suppresses it. Approximately 50% of the pain sensations from the brain stem are not diverted by the thalamus. The thalamus consists of two parts which are located around the third ventricle. From the third ventricle the cranio therapist can also make contact with the thalamus. Also, an option could be to check the connection between pons and thalamus.

In short, take in relation known about migraine prove the following craniosacral techniques useful to treat migraines: relax meninges, discharged sensory or visual cortex, discharge trigeminal, treat brain stem and the thalamus-trigeminal nuclei connection. Complemented by bringing relaxation throughout the body, craniosacral therapy is an excellent complementary therapy for migraine. Do you suffer from migraines and want to receive a

craniosacral session? Then go to the [contact page](#) or email [craniopdx@gmail.com](mailto:craniopdx@gmail.com).

Addition on January 11th 2017: In Iceland there has been a small scale study on the effectiveness of craniosacral therapy for migraine. This research showed an improvement on the migraine for most of the randomly selected participants. Eventough the participants were all given the same treatment, same techniques in same order. This must have reduced the effectiveness of the sessions. I always give session unique for each client. Where I react what the body of the clients feeds back to me. Read here about the research from 2013: <https://www.ncbi.nlm.nih.gov/pubmed/23337558>