

Acupuncture Headache Relief Discovered

Published by [HealthCMI](#) on November 2017



Acupuncture enhances positive patient outcome rates for patients suffering from headaches. In separate and independent investigations, researchers have determined that acupuncture significantly boosts the effectiveness of occipital nerve stimulation (ONS) and levo-tetrahydropalmatine (l-THP)

drug therapy. Since the late 1970s, neurosurgeons have implanted ONS devices at the base of the skull for the treatment of headaches. An electrical signal is generated by ONS devices to override pain.

Researchers from Jilin University Hospital and Changchun Traditional Chinese Medicine University find that administering acupuncture together with ONS is significantly more effective than using only ONS as a standalone therapeutic modality. Independently, Sichuan Disabled Veterans Hospital researchers have determined that acupuncture combined with levo-tetrahydropalmatine therapy is significantly more effective for the treatment of headaches than using only levo-tetrahydropalmatine as a standalone treatment modality.

Levo-tetrahydropalmatine, known by the drug name rotundine, is a dopamine antagonist with pharmacological actions including the depletion of monamines. Notably, levo-tetrahydropalmatine is an active ingredient in Chinese medicinal herbs, including Qian Jin Teng (*Stephania japonica*) and Yan Hu Suo (*Corydalis rhizome*). In China, levo-tetrahydropalmatine has been administered for its analgesic and sedative effects for over 45 years. Sichuan Disabled Veterans Hospital researchers compared two groups in their controlled trial of patients suffering from headaches. One group received only levo-tetrahydropalmatine and another group received both acupuncture and levo-tetrahydropalmatine. The group receiving both acupuncture and levo-tetrahydropalmatine had a 97.72% total effective rate and the levo-tetrahydropalmatine only group had an 84.09% total effective rate.

A total of 88 subjects with headaches were treated and evaluated. They were randomly divided into two groups, with 44 subjects in each group. For patients receiving acupuncture, a semi-protocolized study design was used for the acupuncture point prescriptions. Variations were standardized based upon differential diagnostics within the Traditional Chinese Medicine (TCM) system. For patients with headaches due to external pernicious influences, acupoints on the following channels were selected: governing, gallbladder. Needles were stimulated with attenuation (xie) manual techniques after insertion. For headaches due to endogenous pernicious influences, the following primary acupuncture points were applied:

- Fengchi (GB20)
- Touwei (ST8)
- Baihui (GV20)

In addition, secondary acupoints were added based upon the physical location of headaches. For both groups, levo-tetrahydropalmatine was administered daily, 3 doses per day, 30 mg each dose. The results indicate that the positive patient outcome rate increases by 13.63% when acupuncture is added to levo-tetrahydropalmatine therapy.

Jilin University Hospital and Changchun Traditional University researchers find integrative medicine effective for increasing positive patient outcome rates for patients with headaches. In their investigation, occipital nerve stimulation (ONS) was combined with acupuncture. In the 45 day clinical trial, one group received only ONS and another group received both acupuncture and ONS. Acupuncture significantly boosted treatment efficacy.

Three metrics were used to evaluate treatment efficacy: frequency of headaches, intensity of pain, and duration of episodes. The post-treatment results were as follows. The frequency of headaches was 2.6 ± 0.9 units for the ONS group, and 1.6 ± 1.5 units for the ONS and acupuncture group. The intensity of pain was 3.3 ± 1.1 units for the ONS group, and 2.0 ± 1.0 units for the ONS and acupuncture group. The duration of episodes was 3.1 ± 1.2 units for the ONS group, and 1.9 ± 1.2 units for the ONS and acupuncture group. The results were statistically significant ($P < 0.05$) for all three metrics. The data demonstrates that when acupuncture is added to the treatment plan, patients experience less frequent headaches, less pain, and shorter episodes. Therefore, acupuncture complements ONS and produces significant positive patient clinical results.

A total of 80 headache patients from Jilin University Hospital and Changchun Traditional Chinese Medicine University were treated and evaluated. They were randomly divided into two groups, with 40

patients in each group. Both groups received ONS but one treatment group also received acupuncture. The following primary acupoints were selected for all patients in the acupuncture group:

- Baihui (GV20)
- Taiyang (MHN9)
- Lieque (LU7)
- Fengchi (GB20)

Secondary acupoints were added according to the location of pain. For Shaoyang channel region pain, the following acupoints were added:

- Shuaigu (GB8)
- Waiguan (TB5)
- Sizhukong (TB23)

For Jueyin channel pain, the following acupuncture points were added:

- Taichong (LV3)
- Neiguan (PC6)

For Taiyang channel pain, the following acupuncture points were added:

- Houxi (SI3)
- Kunlun (BL60)

For Yangming channel pain, the following acupuncture points were added:

- Hegu (LI4)
- Neiting (ST44)

One 30 minute acupuncture session was administered daily, for a total of 45 days. ONS was implemented in two phases: trial and permanent implantation. For the trial, a semi-permanent rod electrode was inserted under the skin at the back of the neck, over the occipital nerves. The patient kept track of the pain relief over the subsequent 5–7 days. After that, if the patient felt that pain relief was significant, permanent implantation was finalized. The rod electrode was replaced with a sheet electrode. A pulse generator was also inserted under the skin and connected to the sheet electrode. Electrical activity was

programmed to suit each individual. The results indicate that acupuncture significantly reduces the frequency of headaches, intensity of pain, and duration of episodes for patients receiving ONS.

The researchers comment that the ancient Chinese medicine principle 不通這痛, 痛則不通 (bu tong ze tong, tong ze bu tong) helps to explain how acupuncture alleviates pain. An approximate translation of this saying, noted in the *Huangdi Neijing*, is that when there is no free flow of qi, there is pain, and that when there is the free flow of qi, there is no pain. One basic action of acupuncture is to clear and dredge the channels to facilitate the free flow of qi. Consequently, there is pain relief.

The analgesic properties of acupuncture have been tested using modern scientific methods. In a study published in *Molecular Neurobiology*, investigators measured the analgesic effects of needling acupoint SP6 (Sanyinjiao). Manual acupuncture stimulation downregulated M1 macrophages (pro-inflammatory cells) and upregulated M2 macrophages (anti-inflammatory cells). As a result, acupuncture reduced pain and swelling. M2 macrophages are a source of IL-10 (interleukin-10), an anti-inflammatory cytokine that plays an important role in immune responses. As a result of greater IL-10 concentrations, acupuncture significantly reduces pain and inflammation.

Researchers at the University of South Florida (Department of Neurosurgery and Brain Repair, Department of Pharmaceutical Sciences) in Tampa and at the Fujian University of Traditional Chinese Medicine in Fuzhou document that acupuncture alleviates pain by regulation of microglial cells. The researchers note that acupuncture inhibits “microglial and astrocytic proliferation coupled with improved functional recovery after SCI [spinal cord injury].” They add, “acupuncture exerts a remarkable analgesic effect on SCI by also inhibiting production of microglial cells through attenuation of p38MAPK and ERK activation.” The researchers note that their investigation summarizes “clinical evidence demonstrating that acupuncture is capable of producing analgesia in neuropathic pain by suppressing microglial activation.”

From the ancient principle of “bu tong ze tong, tong ze bu tong,” mentioned in the *Huangdi Neijing*, to modern research mapping the effects of acupuncture on macrophages and microglial cells, we gain insight into the analgesic actions of acupuncture. An important takeaway from the aforementioned research is that integrative medicine produces greater patient outcomes than isolated therapies. Acupuncture demonstrates a formidable painkilling action and headache patients are best served by having acupuncture services protocolized into conventional medical settings.

References:

Li SL, Ji WP, Huang HY Et al. Occipital nerve stimulation with acupuncture in treating headache [J]. *Nerve Damage and Function Restoration*, 2014, 11(5): 399-400.

Zhang LL. Non-medication treatment for migraines [J]. *International Neurology External Medicine Journal*, 2016, 43(4): 342-345.

Xiong J, Huang SL, Liu YF. TCM acupuncture in treating headache [J]. *Yatai Traditional Medicine*, 2014, 10(13): 65-67.

Zhang JM, Hong K. Acupuncture with western medicine in treating angioneurotic headache [J]. *Inner Mongolia TCM*, 2013, 15(45): 89.

Da Silva, Morgana D., Franciane Bobinski, Karina L. Sato, Sandra J. Kolker, Kathleen A. Sluka, and Adair RS Santos. "IL-10 Cytokine Released from M2 Macrophages Is Crucial for Analgesic and Anti-inflammatory Effects of Acupuncture in a Model of Inflammatory Muscle Pain." *Molecular Neurobiology* (2014): 1-13.

Lin, Lili, Nikola Skakavac, Xiaoyang Lin, Dong Lin, Mia C. Borlongan, Cesar V. Borlongan, and Chuanhai Cao. "Acupuncture-induced analgesia: the role of microglial inhibition." *Cell transplantation* 25, no. 4 (2016): 621-628.