## Complementary & Alternative Treatment for Chronic Pain

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| Acupuncture                  | Acupuncture is a ancient form of Chinese medicine which has been used to treat various ailments since 100 BC. It involves the placement of very fine needles into specific points on the human body by a trained practitioner. | Research has shown that acupuncture induces the hypothalamic region of the brain to release endorphins along with a variety of neurotransmitters. This results in a state of deep relaxation and a dampened sensation of pain. Research has also shown that acupuncture inhibits microglial activation. Spinal Cord microglia are cells of the central nervous system involved in inflammation and neuropathic pain. | Three Moons Wellness Center  
(Waitsfield and South Burlington)  
802-496-6600 | Lin L, Sakkavar, N, Lin X, Lin D, Borlongan MC, Borlongan CV, Cao C.  
PMD: 26849399 |
| Cognitive Behavioral Therapy | CBT involves talking with a Psychiatrist who helps patients reframe their negative thoughts and behaviors, so that they perceive their pain in a way that leads to a better quality of life. CBT approaches pain as a product of one’s mind. | CBT has been shown to actually rewire functional connections in participant’s brains. Patient’s that showed the greatest improvement in pain symptoms after CBT also showed the greatest changes in functional brain connectivity. | The Mind Body Medicine Clinic at The University of Vermont  
| Hypnosis                     | Hypnosis involves an interaction in which the patient responds to suggestions that are designed to produce a state of relaxation and focused attention. Hypnotic is said to have an effect on the subconscious constructs driving the patient’s perception of their pain. | Hypnotic inductions have been shown to result in a change in brain activity that is consistent with pain relief. It has been shown that the experience of pain is correlated with faster beta wave brain activity, while pain relief is correlated with slower alpha wave brain activity. Hypnosis results in an increase in alpha brain waves and a decrease in beta brain waves. | There are many hypnotherapists in the state of Vermont. You can search for one’s available in your area using  
| Craniosacral Therapy         | CST involves manipulations that are said to regulate the flow of cerebrospinal fluid leading to a state of increased well-being. | A randomized controlled trial found Craniosacral Therapy to be effective in reducing neck pain intensity. This study also showed the long term efficacy of CST, as patients reported improved functional disability and quality of life up to 3 months after completion of Craniosacral Therapy. | The Vermont Center for Integrative Therapy  
| Binaural Beat Therapy        | Binaural Beat Therapy provides different frequency auditory stimuli to each ear. The interference between these stimuli are processed in the brainstem and result in a single frequency of sound perceived by the listener. Proposed beneficial effects of listening to binaural beat audio tracks include enhanced meditative mind states, relaxation, focus, and motivation. | This form of therapy has not been formally studied to an extent that has elucidated the mechanism behind it effects, however Thet Binaural Beats were found to reduce perceived pain severity for participants. In addition, a Randomized Controlled Study has shown that listening to binaural beat prior to surgery significantly decreased patient’s anxiety. The link between anxiety and the perception of physical pain has been well established. | Binaural Beat audio is available for free on the internet. [Check resources like YouTube and Spotify] | Padmanabhan R, Hildner AI, Lawes D. A prospective, randomised, controlled study examining binaural beat audio and pre-operative anxiety in patients undergoing general anaesthesia for day case surgery. Anesthesia. 2005 Sep;60(9):874–7.  
PMD: 16115248 |
| Flotation-REST Therapy       | Flotation-REST involves laying in an enclosed pool of water & Epsom salt. The water temperature is calibrated to match body temperature. Epsom salt allows weightless flotation, and the pool is enclosed to provide a dark, calm environment. Spending time in a Flotation-REST tank reportedly can provide a state of deep relaxation and result in a sense of freedom from one’s body. | In a study assessing the effect of Flotation-REST treatment on muscle tension pain, it was found that patients with the most severe pain scores reported a significant reduction in pain intensity after treatment. Flotation-REST also resulted in elevated optimism on reduced anxiety. Patients being treated with Flotation-REST also reported falling asleep much more easily at night. | Satori Float Spa  
(Burlington)  
http://www.satorifloatspa.com/  
Floating on Brook  
(Waitsfield, VT)  
PMD: 11854763 |

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