

Health Bits and Pieces (HFN 30:1)

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Acupuncture in the Modern World

Acupuncture is the treatment method of stimulating points on the body, using thin, solid, metallic needles that are manipulated by hand or by electrical stimulation. The traditional Chinese theory is based on balancing the flow of *qi*, which is considered to be the force that animates life.

Somewhere a Voodoo Doll Shrieks in Agony

The needles are placed in points along “meridians,” invisible channels that flow through the skin as well as internal pathways throughout the body. Needless to say, modern scientific research has sought other explanations. Modern tools such as functional magnetic resonance imaging, PET (positron emission tomography) scans and MEG (magnetoencephalography) scans can map the impact of acupuncture on the brain. *Kong J, Gollub RL, Webb JM, et al., “Test-retest study of fMRI signal change evoked by electro-acupuncture stimulation,” NeuroImage 2007;34(3):1171–1181; Napadow V, Kettner N, Liu J, et al., “Hypothalamus and amygdala response to acupuncture stimuli in carpal tunnel syndrome,” Pain 2007;130(3):254–266.*

But activation of various brain structures is not the only possible mechanism involved. Other studies on the mechanisms underlying acupuncture have revealed that acupuncture stimulates secretion of “endorphins,” endogenous opiates in the central nervous system have a pain-relieving effect and promote a sense of well-being. Studies have even shown that different kinds of endorphins are released by acupuncture using different electrical frequencies to stimulate needles. For example, 2 Hertz accelerates the release of enkephalin, beta-endorphin and endomorphin, while 100 Hertz increases the release of dynorphin. The two frequencies combined produce an optimal effect from simultaneous release of all four of the opioid peptides. Clinical studies in patients with various kinds of chronic pain have confirmed this finding. *Han JS, Neuroscience Letters 2004 May 6;361(1-3):258-61).*

Acupuncture is probably beneficial for anything that could be considered a stress-related disorder and can potentially help with the stress associated

with any type of affliction. Acupuncture treatment is even helpful for post-traumatic stress disorder (PTSD). *Hollifield M, Sinclair-Lian N, Warner TD, Hammerschlag R, "Acupuncture for Posttraumatic Stress Disorder: A Randomized Controlled Pilot Trial," The Journal of Nervous and Mental Disease, June 2007.* Field physicians in the U.S. Army are using acupuncture for mild cases of traumatic brain injury and not-so-mild cases of PTSD. The most recent Veterans Affairs clinical guidance recommends acupuncture as a supplementary therapy for PTSD, anxiety, pain, and insomnia.

Placebo?

Critics point to evidence that acupuncture is only a placebo and that sham acupuncture is equally effective. A study with cancer patients suffering from nausea during radiation treatment responded favorably to acupuncture needles whether they were inserted or just placed on the point at the skin surface. *Vetenskapsrådet (The Swedish Research Council) (2008, December 1). "Acupuncture Just As Effective Without Needle Puncture, Study Shows," ScienceDaily. Retrieved February 11, 2012, from <http://www.sciencedaily.com/releases/2008/12/081201082353.htm>).*

Studies on acupuncture for headaches revealed similar findings. *Linde K, Allais G, Brinkhaus B, Manheimer E, Vickers A, White AR, "Acupuncture for tension-type headache," Cochrane Database of Systematic Reviews, Issue 1. Article No.: CD007587 DOI: 10.1002/14651858.CD007587; Linde K, Allais G, Brinkhaus B, Manheimer E, Vickers A, White AR, "Acupuncture for migraine prophylaxis," Cochrane Database of Systematic Reviews, 2009, Issue 1, Article No.: CD001218 DOI: 10.1002/14651858.CD001218.pub2.*

In the Japanese acupuncture tradition, making contact at the point without insertion is often considered the preferred method of treatment. Your correspondent, acting as an interpreter for a British researcher presenting at a medical conference at Tsukuba University near Tokyo, translated his concept of "placebo acupuncture" to an international group of doctors and researchers. The Japanese researchers visibly tightened up. The tension was palpable as I explained to the presenter that the Japanese researchers consider the light contact or very shallow needle insertion to be the correct therapeutic dose and the deeper and more traumatic insertion to be less effective and even harmful. Acupuncture points are also frequently treated

with laser frequencies, sound waves, magnets, finger pressure, and even emitted *qi* in qi gong treatment.

Animal studies also dispute the placebo hypothesis. One recent study showed that acupuncture in test animals reduced neurochemicals markers for stress. *Eshkevari L, Egan R, Phillips D, et al., "Acupuncture at ST36 prevents chronic stress-induced increases in neuropeptide Y in ra," Experimental Biology and Medicine, 2011; DOI: 10.1258/ebm.2011.011224*

Researchers have also suggested that the effects of acupuncture may be amplified by the expectation of benefit. According to Dr. Bruce Rosen of Harvard Medical School, "Expectation seems to be as powerful an influence on reduction in pain as acupuncture needling, though it appears to work in a different network in the brain that may be complementary." *Research reference: Kong J, Kaptchuk TJ, Polich G, et al., "Expectancy and treatment interactions: a dissociation between acupuncture analgesia and expectancy evoked placebo analgesi," NeuroImage, 2009; 45(3):940–949.* It is difficult to imagine any procedure not benefited by positive expectations, but it is especially difficult to square this notion of positive benefits anticipated from acupuncture with the almost universal deeply-seated fear of needles people have, a fear that often dates back to painful childhood medical encounters.

But researchers today are approaching acupuncture research in an objective and fair-minded way. Dr. Rosen states that "There's something about the specifics of acupuncture that seem to evoke a more dramatic response in certain parts of the brain than other kinds of sensory stimuli. It suggests there's something special about acupuncture that's worth trying to understand."

Etc., Etc.

Patient satisfaction with acupuncture is high. In a nation-wide survey of acupuncture users, conducted by medical anthropologist Dr. Claire M. Cassidy, 91.5% reported "disappearance" or "improvement" of symptoms after their treatment, 84% see their MDs less often, 79% used fewer prescription drugs, and 70% were able to avoid previously recommended surgery.

Clinical research has shown evidence of beneficial effects from acupuncture for carpal tunnel syndrome, hot flashes from prostate cancer treatment, dry mouth from cancer chemotherapy, polycystic ovary syndrome, depression, urinary incontinence, various types of pain (back pain, pelvic pain, arthritis pain, headaches, including migraines, cancer pain, diabetic neuropathic pain, premenstrual pain, post-surgical pain and fibromyalgia), appetite control, drug-addiction withdrawal symptoms, insomnia, an improved success rate with in-vitro fertilization, and even the itching of eczema.