



Assessing Acupuncture Efficacy

Slide: Regions showing increased activities in MCI subjects in the procession of acupuncture comparing to resting state

Courtesy of: Wang Z, Nie B, Li D, Zhao Z, et al. (2012) Effect of Acupuncture in Mild Cognitive Impairment and Alzheimer Disease: A Functional MRI Study. PLoS ONE 7(8): e42730. doi:10.1371/journal.pone.0042730



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What is acupuncture?

- The Agency for Healthcare Research and Quality (AHRQ), a division of the National Institutes of Health, defines acupuncture as “the insertion of dry needles at specially chosen sites for the treatment or prevention of symptoms and conditions.” Acupuncture can be defined to include traditional body needling, electric acupuncture (electro-acupuncture), and microsystem acupuncture such as ear (auricular), face, hand and scalp acupuncture.
- The Centers for Medicare and Medicaid Services describe Acupuncture in the following manner:
“Acupuncture involves the stimulation of the specific Acupuncture points on the skin, usually by the insertion of needles ranging in length from 1cm to 10cm. Between 5 and 15 needles are used in a typical treatment, with the point combinations varying during a course of sessions. Depth of puncture can be up to 5cm.”



Who uses acupuncture?

- Traditional acupuncture has become popular in the United States and the rest of the world in recent decades. Data released by the National Institutes of Health (NIH) in 2008 reported that 3.1 million American adults and 150,000 children used acupuncture in 2007. Adult use of acupuncture has increased by approximately a million people in the five years from 2002 to 2007.
- The report from a Consensus Development Conference on Acupuncture held at the National Institutes of Health (NIH) in 1997 stated that acupuncture is being "widely" practiced—by thousands of physicians, dentists, acupuncturists, and other practitioners—for relief or prevention of pain and for various other health conditions.

SOURCE: <http://nccam.nih.gov/health/acupuncture/introduction.htm#ususe>



How does acupuncture work?

- The National Cancer Institute, a division of the National Institutes of Health, reports that acupuncture may work by causing physical responses in nerve cells, the pituitary gland, and parts of the brain.
- The International Anesthesia Research Society concludes that “physiological and imaging studies are providing insight into the neurophysiological mechanism of acupuncture analgesia. Recent data suggest that acupuncture triggers a sequence of events involving the release of endogenous opioid-like substances that modulate pain signals processed along the central nervous system pathway.”

SOURCES:

<http://www.cancer.gov/cancertopics/pdq/cam/acupuncture/patient>

<http://www.anesthesia-analgesia.org/content/106/2/602.full.pdf#page=1>



What does acupuncture treat?

The 2003 World Health Organization Report, *Acupuncture: Review and Analysis of Reports on Controlled Clinical Trials*, concluded that diseases, symptoms or conditions for which Acupuncture has been proved-through controlled trials-to be an effective treatment included:

- Adverse reactions to radiotherapy and/or chemotherapy; Allergic rhinitis (including hay fever); Biliary colic; Depression (including depressive neurosis and depression following stroke); Dysentery, acute bacillary; Dysmenorrhoea, primary; Epigastralgia, acute (in peptic ulcer, acute and chronic gastritis, and gastrospasm); Facial pain (including craniomandibular disorders); Headache; Hypertension, essential; Hypotension, primary; Induction of labour; Knee pain; Leukopenia; Low back pain; Malposition of fetus, correction of; Morning sickness; Nausea and vomiting; Neck pain; Pain in dentistry (including dental pain and temporomandibular dysfunction); Periarthritis of shoulder; Postoperative pain; Renal colic; Rheumatoid arthritis; Sciatica; Sprain; Stroke; Tennis elbow.

SOURCE: <http://apps.who.int/medicinedocs/en/d/Js4926e/5.html>



What does acupuncture treat?

The National Cancer Institute, a division of the National Institutes of Health, reports that:

- Acupuncture is used to treat many illnesses and ailments. In cancer patients acupuncture is usually used to relieve pain and other symptoms and improve quality of life.
- There is strong evidence from clinical trials that acupuncture relieves nausea and vomiting caused by chemotherapy.
- Laboratory and animal studies of acupuncture for cancer treatment suggest acupuncture can reduce vomiting caused by chemotherapy.
- Most acupuncture research with cancer patients studies the use of acupuncture to relieve symptoms caused by cancer treatment.

SOURCE: <http://www.cancer.gov/cancertopics/pdq/cam/acupuncture/patient>



What does acupuncture treat?

The National Health Services of the United Kingdom reports that there is reasonably good evidence that acupuncture is an effective treatment for:

- chronic back pain
- dental pain
- pain and discomfort during gastrointestinal endoscopy
- headache
- nausea and vomiting after an operation
- pain and discomfort during oocyte retrieval (a procedure used during IVF)
- osteoarthritis of the knee

Scientific trials conducted to investigate the effect of acupuncture on these conditions found that acupuncture had a beneficial effect.

SOURCE: <http://www.nhs.uk/Conditions/Acupuncture/Pages/Evidence.aspx>



Are patients satisfied with acupuncture treatments?

- Increasing numbers of health plans in the United States offer acupuncture, massage, and naturopathic medicine benefits despite limited information. Utilization of these services and per member per month costs were lower than expected given the high interest in same services reported in consumer surveys. The high level of satisfaction with acupuncture, massage, and naturopathic medicine and self-reported decrease in the use of pain medications suggests the need for prospective studies examining the effect of these treatments.

SOURCE: Bent, S., MD. "Utilization, Patient Satisfaction, and Cost Implications of Acupuncture, Massage, and Naturopathic Medicine Offered as Covered Health Benefits: A Comparison of Two Delivery Models." *National Center for Biotechnology Information*. U.S. National Library of Medicine, 2001. Web. 04 Oct. 2013. <<http://www.ncbi.nlm.nih.gov/pubmed/11452569>>.

- Specific use of acupuncture by cancer patients is estimated to range between 1.7% and 31%. Randomized clinical trials (RCT) have demonstrated that acupuncture is effective for chemotherapy-induced nausea and vomiting. Research studies also suggest acupuncture may be helpful in managing cancer-related pain, chemotherapy-related neutropenia, cancer fatigue, and radiation-induced xerostomia.

SOURCE: Lu, W., E. Deanclower, A. Dohertygilman, and D. Rosenthal. "The Value of Acupuncture in Cancer Care." *Hematology/Oncology Clinics of North America* 22.4 (2008): 631-48. Print.



Are patients satisfied with acupuncture treatments?

- Acupuncture treatment was used in reducing substance use in the marginalized, transient population in Vancouver, Canada. Acupuncture was offered on a voluntary, drop-in basis 5 days per week at two community agencies. During a 3-month period, the program generated 2,755 client visits. A reduction in overall use of substances ($P=.01$) was reported by subjects in addition to a decrease in intensity of withdrawal symptoms including “shakes,” stomach cramps, hallucinations, “muddle-headedness,” insomnia, muscle aches, nausea, sweating, heart palpitations, and feeling suicidal, $P < .05$.
- Acupuncture offered in the context of a community-based harm reduction model holds promise as an adjunct therapy for reduction of substance use.

SOURCE: Janssen, P. A. "Acupuncture for Substance Abuse Treatment in the Downtown Eastside of Vancouver." *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 82.2 (2005): 285-95. Print.

