Is Acupuncture Real?

This 5,000 year old healing system of Chinese medicine was introduced into the mainstream in the U.S. after President Nixon's visit to China in 1972. Starting in California in 1976, most States now certify acupuncturists according to national standards. Every year, tens of thousands of acupuncture treatments are performed on patients who experience significant changes in their health. In spite of this, our culture has been slow to embrace acupuncture and its application has been difficult to reconcile with modern science.

Now, CT scans have confirmed the existence of acupuncture points. In a study published by the Journal of Electron Spectroscopy and other Related Phenomenon, in-line phase contrast CT imaging was used with synchrotron radiation on acupuncture points and non-acupuncture points. The CT scan revealed clear distinctions between acupuncture and non-acupuncture point anatomical structures. The acupuncture points were found to have a higher density of micro-vessels and to contain a large amount of micro vascular structures. The non-acupuncture points did not exhibit the same properties.

Within the last 50 years, acupuncture is beginning to find its rightful place. The once skeptical Western medical and scientific communities have now become aware of the intensive research that has increased exponentially over the last decades. The United States and China are taking lead roles in understanding the compelling evidence of the actions of acupuncture at organ system, cellular and sub-cellular levels.

When illness or pain cause imbalance, specific acupuncture points on the body may be accessed, both to restore proper function and energetically unblock these meridians. Had acupuncturists not witnessed a clinical benefit to this practice, they would have stopped performing such techniques several thousand years ago, and would not be using them today.

Acupuncture not only treats existing illness or injury, but also prevents recurrence or new illness. It does this through improving the overall functionality of the body's immune and organ systems: the lymphatic, respiratory, digestive, nervous, musculoskeletal and endocrine.

Significant studies have provided evidence of acupuncture's effects upon arthritis, asthma, anxiety, acne, and pain reduction. It helps with infertility, improving the odds of pregnancy. Acupuncture is effective with addictions, such as smoking, drinking, drug use or overeating. Fatigue and digestive problems can be treated when conventional medicine fails. There are two explanations which might elucidate how acupuncture works, one is scientific, the other environmental.

Acupuncture is often used alongside conventional medicine to treat musculoskeletal problems, pain and stress. It has well been documented in stateside hospitals and combat zones by doctors working with the armed forces. Richard Hobbs states "Understanding acupuncture in the same manner that we understand the mechanism of action and pharmacokinetics of a particular drug will, similarly, enable us to match treatments better with conditions."
According to Peter Dorscher (Mayo Clinic of Jacksonville, Fl.), several meridians track our major arteries and nerves. He has specified that heart attack pain radiates up, across and down left arm - the very location of the heart meridian; and that gall bladder pain radiates to the right upper shoulder, the location of the gallbladder meridian.

Acupuncture has several mechanisms of action: it stimulates blood flow and tissue repair at the acupuncture sites; sends nerve signals to the brain that regulate the perception of pain; and reboots the autonomic nervous system, governing unconscious functions like heart beat, respiration and digestion, according to Alejandro Elorriaga of McMaster University in Ontario.

Meridians are comprised of a polarized medium, most likely stable water clusters with permanent electric dipole moments. They have electrically distinct properties. This follows along with the folklore that water is the source of life. We can see parts of the meridians in some people, some of the time, by using infrared imaging techniques.

MRI Scan:
The Effects of Acupuncture

The top two images are the brain of a healthy subject; the middle two images show a patient with carpal tunnel syndrome registering pain (indicated by red and yellow); while the bottom images show a calming effect (indicated by blue) in the brain after acupuncture.

Neuroimaging studies reveal that acupuncture calms areas of the brain that register pain, whilst activating those areas involved in recuperation and rest. Doppler Ultrasound has determined that acupuncture increases blood flow to treated areas. Thermal imaging records show how acupuncture makes inflammation subside.

At Massachusetts General Hospital in Boston, these neuroimaging studies demonstrated that acupuncture affects a network of systems in the brain. It decreases activity in the limbic system (emotional part of the brain), activates parts of the brain (that typically light up when the brain is at rest), and assists patients with carpal tunnel syndrome and/or fibromyalgia. The number of receptors for pain-reducing neurotransmitters is increased, for extra relief (indicated by red and yellow); while the bottom images show the calming effect (indicated by blue) in the brain after acupuncture.
Researcher Andrew Vickers Ph.D., reports on a study which took six to seven years, and involved about 40 people - pain management specialists, patient advocates, statisticians, acupuncturists and experts from the U.S. and Europe. After reviewing nearly 1,000 studies, 29 high-quality clinical trials were selected (going back to the 1990s) including data from roughly 18,000 participants from the USA, UK, Germany, Spain and Sweden. The research results translated to 30% less pain compared to those taking standard medications and treatments. For those with chronic pain stemming from arthritis, headaches, or back and neck problems, evidence bolstered the success of acupuncture.

**Acupuncture in the Treatment of Physical Problems**

**Blood Pressure**

A new study has shown that acupuncture lowers blood pressure in patients with hypertension. Patients between the ages of 32 and 65 who were taking medication for the treatment of high blood pressure were studied. The effects of acupuncture on Nitric Oxide (NO) levels were also investigated. Researchers found three important changes in the patients: systolic and diastolic blood pressure levels were reduced, and the no concentration increased.

A total of ten acupuncture visits were administered to each patient at a rate of one acupuncture treatment per week. This study administered the same acupuncture points to every patient/participant. Significant clinical results concluded that acupuncture is effective in lowering blood pressure levels for patients with hypertension.

Another recent study concludes that acupuncture reduces hypertension both in the long and short term, concluding that both the systolic and diastolic blood pressure levels were reduced.

Research performed at the University of California (Irvine and Los Angeles campuses) shows similar results with electro-acupuncture successfully reducing hypertension, protecting heart tissue and reducing arrhythmias. The researchers unveiled some of the mysteries surrounding the medical mechanisms of acupuncture, in that electro-acupuncture stimulates neurons in specific brain regions which control sympathetic nerve stimulation throughout the body. Investigators mapped the neurological network which was stimulated, and concluded acupuncture's ability to activate brain centers which lower blood pressure.

In the American Journal of Hypertension (2009), the authors analyzed numerous scientific studies and trials, including Chinese and German results. While it is stated that there is no blood pressure cure, acupuncture remains a viable part of the patients' complementary treatment regime. It is suggested that acupuncture acts to stimulate nitric acid production in the body, acting in a similar fashion as foods known to reduce blood pressure such as chocolate.
Cardiovascular

Increasing evidence shows that acupuncture may be useful for cardiovascular diseases, such as coronary artery disease, hypertension and chronic heart failure. It has been demonstrated that certain acupuncture points have shown to inhibit cardiac sympathetic activation or increase cardiac vagal component in both experimental animals and clinical studies. Recently a small clinical trial by Dr. Kristen, et al has found that acupuncture could improve exercise tolerance in chronic heart failure patients.

The investigators hypothesize that acupuncture treatment may improve the cardiac function and the quality of life in heart failure patients. The suppression of inflammatory reaction with acupuncture treatment may also be associated with these outcomes. In addition to optimized standard heart failure medications, acupuncture may be a safe therapeutic strategy in chronic heart failure treatment.

According to John Longhurst of the University of California at Irvine, "Over the last several decades, there has been an explosion of articles on acupuncture, including studies that have begun to explore mechanisms underlying its analgesic and cardiovascular actions. Modulation of cardiovascular function is most effective during manual and low-frequency, low-intensity electro acupuncture (EA) at a select set of acupoints situated along meridians located over deep somatic nerves on the upper and lower extremities. Stimulation at these acupoints activates underlying sensory neural pathways that project to a number of regions in the central nervous system (CNS) that ultimately regulate autonomic outflow and hence cardiovascular function. A long-loop pathway involving the hypothalamus, midbrain, and medulla underlies EA modulation of reflex increases in blood pressure (BP)."

Actions of excitatory and inhibitory neurotransmitters in the supraspinal CNS underlie processing of the somatic input and adjustment of autonomic outflow during EA. Acupuncture also decreases elevated blood pressure through actions in the thoracic spinal cord. Reflexes that lower BP likewise are modulated by EA through its actions on sympathetic and parasympathetic nuclei in the medulla. The autonomic influence of acupuncture is slow in onset but prolonged in duration, typically lasting beyond the period of stimulation. Clinical studies suggest that acupuncture can be used to treat cardiac diseases, such as myocardial ischemia and hypertension, associated with over-activity of the sympathetic nervous system."

Fibromyalgia

Fibromyalgia is considered somewhat of a medical mystery, but acupuncture appears to be effective in treating its hallmark symptoms of fatigue and general pain. A study of 50 patients at the Mayo Clinic {2005} investigated the effects of acupuncture on severe fibromyalgia sufferers who'd not responded to traditional symptom-relief treatments.

After six acupuncture sessions over a two to three week period, there was significant improvement in pain, fatigue, and anxiety. The greatest improvement came one month after the treatment. But, by seven months, the symptoms were returning to pre-treatment levels. Researchers expected results with pain relief, but the effects of acupuncture treatment on reducing fatigue and anxiety surprised them. Because anxiety and fatigue can exacerbate painful symptoms, it only stands to reason that if they can be relieve or minimized, then pain may also be reduced. The researchers of the study say that if it could help people with treatment-unresponsive fibromyalgia, it may be a good route for others who live with the disease.
**Infertility**

A new study has shown that acupuncture is more effective than clomifene in the treatment of infertility for 65 women whose infertility was due to dysfunction of ovulation. After 6 months of treatment, the acupuncture group had a cure rate of 76.3%, while the clomifene group had a 48.1% cure rate.

Acupuncture also increases the frequency of ovulation for women with polycystic ovarian disease (PCOS), according to the American Journal of Physiology - Endocrinology and Metabolism, which covered a year of investigative research. Acupuncture normalized secretion levels, and increased the frequency of ovulation. Significant changes in sex steroids, hormones, inhibin B and serum cortisol were measured.

It was discovered that women had a higher rate of pregnancy and live births if acupuncture was performed on the day of the embryo transfer of donor eggs for women receiving IVF. Special protocol has been developed and documented. Another recent investigation found that electro-acupuncture not only improves pregnancy rates and live birth rates for women receiving IVF, but also that "the pregnancy outcome and the pregnancy rate are improved" for all women.

Pelvic inflammatory disease (PID) is a major cause of infertility. According for the Center for Disease Control, over 100,000 U.S. women become infertile each year due to PID. Even after an infection has been eliminated, it may still cause scarring of the fallopian tubes. Surgery, acupuncture and Chinese herbal medicine are methods by which this condition may be resolved.

**Lung Injury and Disease**

New research finds that acupuncture is able to heal injuries to the lungs due to cigarette smoke exposure. Acupuncture demonstrated a significant reduction in anti-inflammatory biochemicals, which suggests it may be effective in treating the resultant COPD, chronic obstructive pulmonary disease. The study showed that acupuncture reduced lung injury, stimulated an anti-oxidant effect on erythrocytes, and demonstrated anti-inflammatory biochemical responses.

**How Acupuncture Treats Emotional Problems**

Results using acupuncture to treat patients presenting with some or all of the following complaints: insomnia, emotional disorders (i.e. anxiety, depression or stress) and ADHD (attention deficit hyperactivity disorder). This clinical study shows that acupuncture treats such conditions with fast results and few or no side-effects. During treatment, some patients were able to gradually stop using medications that they had used for years and return to a life free of both symptoms and medication.
Dennis Willmont says that acupuncture creates a bridge between body and mind, using Qi. Thus our body and mind affect each other, as well as our tissues, organs and cells. Emotions which are buried (and their associated thought forms) dictate cellular replacement from our subconscious psycho-emotional patterning. He cites examples of a person who developed low self-esteem in childhood, with accompanying frustration and repressed anger. Stagnation then builds up in the gall bladder and liver meridians, creating physical and emotional symptoms due to the function and pathways involved, such as migraine headaches. As acupuncture adjusts Qi, such patterns may thereby be released. When the body no longer holds onto anger or fear, the energy is effectively channeled through 'appropriate' self-assertion.

Willmont also uses "Yin/Yang counseling" (or acupuncture-without-needles) as part of his practice.

**Depression**

An estimated 19 million Americans are grappling with depression. Depression is a result of an imbalance of chemical activity in the brain caused by trauma/stress, medication, substance/alcohol abuse or even the weather. Depression can affect both sexes and any age group. Living with a chronic medical condition like arthritis or diabetes increases your odds for depression. The World Health Organization (WHO) concluded in its research report that acupuncture is an effective therapy for depression and depressive neurosis.

Traditional Chinese Medicine (TCM) does not recognize depression as a particular illness, but treats specific symptoms unique to the individual with a variety of techniques: acupuncture, Chinese herbs, tui-na massage and energetic exercises to restore imbalances found in the body.

Since the early nineties, studies around the world have shown that treating depression with acupuncture has a positive, holistic effect on depressed patients; and is particularly useful in combination with psychotherapy and herbal treatments.

The very first pilot-controlled study on treating depression symptoms with acupuncture in the Western scientific world was done at the University of Arizona at Tucson. Patients were assigned to one of three treatment groups for eight weeks.

Group One received acupuncture treatment tailored to their depression symptoms. Group Two received a general acupuncture treatment not specific to depression. Group Three was placed on a waiting list for acupuncture treatment, but received none. The study demonstrated that those in Group One experienced a significant reduction in symptoms, compared to those in Group Two's non-specific treatment. Moreover, the key discovery was that 50% of the participants no longer met the DSM-IV diagnostic criteria for depression after the study.

The study findings suggest that using acupuncture alone could be as effective as other types of treatments for relieving depression symptoms. These results have been promising, and the United Nations World Health Organization has approved acupuncture as a treatment for depression.
Bi-Polar

Also of note is the work by Darren Starwynn with the 'Extraordinary Vessels' (or 'Eight Ancestral Meridians') which help distribute source energies stored in the kidneys throughout the body. While not used often, these extra vessels can effectively treat psycho-emotional imbalances. Some of the treatable conditions are psychosis, phobias, lack of concentration, insomnia, exhaustion, lethargy, sad heart (unable to enjoy), insomnia, neurosis, fear, over-thinking, obsession, loss of will, impotence, lack of sexual satisfaction and nervous breakdown. The conditions are treated by stimulating the associated Master point of the Extra Vessel, and enhanced by treatment of its paired Extra Vessel.

Benefits of Real Acupuncture over Sham Needles or Placebo Effect

Studies have been aimed at understanding the differences in patient responses to traditional vs. sham acupuncture. Pressure-pain testing was used to identify patients less likely to respond to sham acupuncture based on levels of neurotransmitters in the brain.

Randomized sham-controlled trials have struggled to show efficacy, because both traditional (TA) and sham (SA) acupuncture reduce clinical pain; but in the most recent analyses the effect sizes of TA and SA were of similar magnitude, albeit with a statistically significant benefit for TA. Less attention has been paid to identifying or exploring analgesic factors operative in SA.

It is of interest that there is a noteworthy advantage of real acupuncture over sham, or fake acupuncture. Real acupuncture has an effectiveness rate of 50%, sham 43%, and conventional treatment tallied in at 30%. Further research is currently underway, observing the importance of traditional acupuncture point usage, in that there is a benefit beyond the placebo effect.

Andrew Vickers, an epidemiologist/biostatistician at Memorial Sloan Kettering Cancer Center, reports acupuncture as effective in reducing people's chronic pain, over standard pain treatment and better than using sham needles. There were clear, "robust" effects in relief of pain in the back, neck and shoulders, as well as that due to osteoarthritis and headaches, Vickers' team found. In his study, those undergoing sham needle treatments, those receiving acupuncture reported drops in back and neck pain of 0.23 standard deviations, and of 0.55 standard deviations compared with those not using acupuncture at all.

"The effects of acupuncture are statistically significant and different from those of sham or placebo treatments," says Vickers. "So we conclude that the effects aren't due merely to the placebo effect."

Acupuncture is an integral part of humankind's oldest, most complete medical system. Patients with many different ailments find it to bring relief. Acupuncture is extremely safe. If you're open to the experience, you can test a few needles to see what it feels like. It is a very individualized experience. Acupuncture is appropriate for all ages, and even children can tolerate it. People might wonder if the needles will hurt. There may be some discomfort or numbness around the area of pain, but many will notice a sense of calm or even euphoria after the treatment. About 3 million Americans are expected to receive an acupuncture treatment this year.
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