

## ACUPUNCTURE THE WEST FINALLY GETS THE POINT

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When a University of Pennsylvania researcher recently used a high-tech imaging technique called SPECT to spy on the brains of chronic pain patients while they underwent **acupuncture**, he saw some striking things:

-- A brain structure called the thalamus, important in pain perception, "lit up" after **acupuncture** needles were inserted elsewhere in patients' bodies. This meant that blood flow to the thalamus had increased -- Before **acupuncture**, the SPECT images (it stands for Single Photon Emission Computed Tomography) showed asymmetric blood flow in the thalamus of the pain sufferers. With **acupuncture**, the irregularity disappeared -- and their pain went away.

**Acupuncture**-validating **studies** like this one, which Dr. Abass Alavi will describe at a high-visibility "consensus conference" that begins today at the National Institutes of Health, are beginning to dispel the mystery surrounding a 2,500-year-old Chinese treatment that Westerners are turning to in burgeoning numbers.

The very fact that the NIH, the central pillar of the US research establishment, is convening an **acupuncture** conference is a benchmark of the respectability the once-exotic Eastern discipline has gained among Western scientists and doctors in the quarter-century since President Nixon opened the doors to post-Mao China.

"There's an increasing amount of research on **acupuncture**," says Dr. Wayne Jonas, director of the NIH's Office of Alternative Medicine. "I imagine that as we do good research -- Western-style research -- in this area, we'll learn a lot more."

Conference organizers have brought together two dozen experts to describe evidence on **acupuncture**'s effectiveness for conditions that include severe nausea, headaches, low back pain, arthritis, stroke damage, drug addiction, irritable bowel syndrome, carpal tunnel syndrome, painful menstrual periods, infertility and immune-system dysfunction-- to name just some.

"We're going to have a lot of good data to chew on at this conference, on both safety and effectiveness," said Dr. Alan Trachtenberg, who chaired the planning committee.

He says the gap in the documented effectiveness of **acupuncture**, which is based on 25 centuries of empirical observation, and much of conventional Western medicine is not as great as most Westerners think. "Many of our standard interventions are not necessarily based on evidence," Trachtenberg said, stressing he was not speaking for the NIH. "They're based on experience and what we learned from our illustrious professors and attending physicians when we were students."

Meanwhile, results reported by many of the estimated 15 million Americans who have tried **acupuncture** have already opened the minds of many US physicians in the last 20 years. For instance, Massachusetts General Hospital is among a growing number of temples to science-based medicine that have lately added acupuncturists to their staffs.

Dr. Kathryn Hayward, an MGH internist studying whether **acupuncture** can help obese women lose weight, said she has "come out of the closet" to her colleagues. "Ten years ago, I didn't tell colleagues I was referring patients to acupuncturists because I was afraid I'd be laughed at," she says. "But I can't turn my back on what my patients tell me helps them. I'd like to see more research done so either I can discard **acupuncture** or embrace it."

As the NIH conference indicates, the claims for **acupuncture**'s clinical effectiveness -- what helps patients -- encompasses an astonishingly broad array of conditions.

No one asserts the ancient procedure can cure cancer, normalize a diabetic's blood sugar or mend a scarred heart. But there is substantial evidence in respected Western medical journals that **acupuncture** can ameliorate a diverse collection of ailments that might be described as derangements in normal body functions. These include many of the

chronic and disabling conditions that characterize an aging population -- ailments for which conventional cure-focused Western medicine often has little to offer.

Margaret Naeser, a Boston University researcher who has pioneered **acupuncture** treatment for stroke patients and for carpal tunnel syndrome, points out that such simple and effective treatments could save the US health system billions of dollars compared to current treatments that are less effective.

Sometimes **acupuncture**'s results are dramatic and life-changing.

For instance, Rhoda Sapers, who retired last week as an administrative nurse at a major Boston hospital, threw away her crutches and cancelled surgery to replace her arthritic hip after **acupuncture** treatments with Dr. Glenn Rothfeld, an Arlington doctor who is one of about 3,000 US physicians trained in **acupuncture**.

"I don't really understand it, but I know it **works** for me," Sapers says. "It helps with pain and it certainly reduces inflammation."

**Acupuncture** treatments by Newton physician Agatha Colbert have allowed Robin McCarthy, a 29-year-old Worcester woman with cerebral palsy, to dress herself for the first time in her life, get out of her motorized wheelchair and walk with a cane, sleep without being awakened by painful muscle spasms, write legibly, and contemplate getting a graduate degree.

"I have virtually no spasticity," McCarthy reports. "I can pour liquids without having them spill all over me or the floor. Most important, I don't get looked at or laughed at when I go out. People now ask me when my leg is going to get better." "It gets you to fall into acceptance of your limitations," Weisman, 45, says. "I know it sounds flakey, but **acupuncture** makes me feel more robust and better able to do things."

But testimonials alone are not enough to convince Western skeptics, especially when **acupuncture**'s claims are so diverse and its mechanism so inexplicable in terms that make sense to Western-trained physicians and scientists.

Ask one of the 10,000 certified US acupuncturists to explain how it all **works**, for instance, and she may start saying things like "The kidney fails to grasp the ch'i from the lungs" or "There is insufficient yin to nourish the bones."

Whatever Oriental practitioners mean by the vital energy they called "ch'i" (also spelled "qi"), or its aspects they term yin and yang, it certainly has no equivalent in such basic Western understandings as, say, William Harvey's 1628 treatise describing the circulation of blood. The circulatory system can be dissected, imaged, measured, operated on, and altered by drugs in relatively predictable ways. No one has ever measured ch'i -- not yet at least.

"I think of it as a metaphor for something we don't yet understand," says Dr. Gary Kaplan, a Virginia physician who heads the Medical **Acupuncture** Research Foundation. "It certainly is a different language."

In fact, scientists have already nailed down parts of the phenomenon. Alavi's SPECT **studies** are only the most recent "hard" evidence for **acupuncture**'s effects on specific brain functions. Dr. Bruce Pomerantz of the University of Toronto has labored since the early 1970s to demonstrate how **acupuncture** stimulates the release of endorphins -- the body's natural opium-like pain-killers -- and other so-called neurohormones.

Pomerantz says the evidence for how **acupuncture** dampens pain, and possibly how it **works** on brain chemistry to stimulate the adrenal glands to release inflammation-reducing cortisol, is "very powerful."

"We know more about **acupuncture** analgesia [pain reduction] than we know about the majority of treatments in conventional medicine," he asserts. "That mechanism is pretty nailed down. But I'm not claiming it explains all of **acupuncture**."

The fundamental mechanism of **acupuncture**, some think, may involve the flux of minute amounts of electrical energy within the body, perhaps communicated cell-to-cell through proteins called gap junctions that permit ion flow. Charles Shang, a fourth-year Boston University Medical School student, notes that **acupuncture** points and meridians basically form a map of well-known "organizing centers," collections of cells especially conducive to electrical flow that guide orderly growth in the developing human embryo.

It's an intriguing concept: That a system designed to organize energy flow and cell development before birth --

disruptions of which result in diverse physical and biochemical maladies -- persist throughout life. Could this account for the striking effects that ever-practical Chinese healers observed and systematically recorded over millenia?

Whatever **acupuncture's** underlying mechanism, some believe it will ultimately be captured in Westerners' scientific nets, with the impact of a paradigm shift.

"I don't think it's magic," Kaplan says. "I think we can discover what it is."

#### SIDEBAR:

##### Practice is growing

There are about 14,600 US **acupuncture** practitioners who provide more than 12 million treatments a year -- and the number of professionals trained in the technique may double by the turn of the century.

In general, two types of practitioners offer **acupuncture**:

-- Licensed acupuncturists who have taken a 1,300-hour course in traditional Chinese medicine at one of the nation's 34 nationally accredited schools of **acupuncture** or Oriental medicine. They are represented by the American Association of Oriental Medicine, which can provide the names of certified acupuncturists. Its telephone number in Catasaugua, Pa., is 610-433-2448.

-- Physicians who have completed a 200-hour course, developed at the University of California at Los Angeles, that focuses on **acupuncture** and does not include the use of Chinese herbs. They are represented by the National Academy of Medical **Acupuncture**, which will provide names of local members. Its number is 800-521-2262; email address: KCKD71F(AT SIGN SYMBOL)prodigy.com

About 3,000 chiropractors also practice acupuncture..

An interactive Web site showing **acupuncture** points is at [www.qi-journal.com/AcuPoints/Acu1.htm](http://www.qi-journal.com/AcuPoints/Acu1.htm)

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