

ACUPUNCTURE LEGISLATION: WHAT IS THE POINT?

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We print this commentary on acupuncture by George Ulett, a contributing editor, even though many of our staff may disagree with some of the conclusions about mechanisms of acupuncture efficacy. The editorial staff has not developed a policy on specific methods reviewed in this journal. We generally agree with the National Council against Health Fraud position, which is that acupuncture effects can be accounted for by the multiplicity of nonspecific effects that are often included in the concept of placebo, plus the effect of counterirritation. We generally agree that acupuncture appears to work through conditioning, whatever the intermediary mechanisms are. We will present papers on that subject in future issues.

As for this article, we draw the reader's attention to the evolution of Dr Ulett's thoughts, as perhaps the first US physician to apply acupuncture seriously before and during this present wave of interest. Dr Ulett was successful in extracting himself from a system of belief in a method in which he had considerable personal investment. The principles put forth to incorporate Dr Han's findings can be debated, but the simplicity of Dr Ulett's approach can also be appreciated.—Eds.

TRADITIONAL CHINESE ACUPUNCTURE (TCA) was introduced to the US in 1972 as a "miracle cure-all." In 1974 the American Medical Association (AMA) warned against acupuncture quackery¹ and in 1982 the AMA Council on Scientific Affairs questioned

its effectiveness as a medical treatment.² Despite this, it grew rapidly under the magic umbrella of "alternative" medicine.³ An estimated 20 000 acupuncturists administer millions of treatments each year. In 1997 it was endorsed by a National Institutes of Health/Office of Alternative Medicine (NIH/OAM) panel. However, that report noted a possible placebo action; "so-called 'nonspecific' effects account for a substantial proportion of its effectiveness. . . ."⁴ Now, Chinese researchers have scientifically demonstrated the absurdity of the metaphysical theories of TCA.

Acupuncture is a part of Chinese folk medicine traced from the superstitious cosmology of the Shang Dynasty 3500 years ago. Different kinds of acupuncture are variants of the "body energy/meridian" hypothesis described in the ancient text *The Yellow Emperor's Classic of Medicine*.⁵ Disease is supposedly caused when *qi*, a mysterious body energy, becomes blocked in hypothetical channels called "meridians." Needling selected from among 365 acupoints, "one for each day of the year," is believed to cure disease and balance cosmic "yin and yang." Other mystical concepts describe 5 "elemental forces"—fire, earth, metal, water, and wood—relating to 12 body organs, including an imaginary "triple heater." Such mystical theories are the basis of the acupuncture widely practiced in the United States today.

China was isolated from Western medical knowledge until the arrival of missionaries in 1700. In 1882 the emperor removed acupuncture from the curriculum of China's Royal Medical College as an impediment to scientific medical progress. It returned in 1949 when Maoists, faced with a shortage of Western-trained physi-

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cians, revived traditional Chinese medicine. *The Barefoot Doctor's Manual* became the guide for carrying acupuncture into the countryside. America learned of acupuncture following President Nixon's visit to China. Media reports of this "miraculous needle cure" stirred nationwide interest. US physicians traveling to China were impressed watching surgery done "under acupuncture." Later Michael DeBakey reported that the patients had been premedicated before demonstration to tourists.⁶ US patients with chronic illnesses, however, still clamored for the miracle of the widely advertised acupuncture therapy. Acupuncturists practicing in America's Chinatowns went public. It became profitable to teach Oriental medicine to nonphysicians desiring to practice medicine without having to go to medical school. Thus, with the growth of "alternative" medicine, many acupuncturists have assumed the role of primary physicians. Such charlatanism has become an increasing problem that is now being subsidized by third-party payers.

Forty states have enacted various types of surveillance legislation. Fewer than half specify any need for undergraduate education. With rare exceptions, most do not require even minimal biomedical knowledge. The main requirement is completion of an acupuncture course approved by the state. A few states recognize apprenticeship training. The 1725-hour course recommended by the National Commission for the Certification of Acupuncture and Oriental Medicine (NCCAOM) is acceptable in most states. Early reports of punctured body organs prompted the need for some elementary knowledge of anatomy. Courses in "clean needle technique" and use of sterilized disposable needles have decreased infections.

In some states acupuncture is termed "medical practice," with overall surveillance by the medical board in a dozen states. In 31 states, MD and DO physicians and podiatrists practice without certification. Other states mandate physicians to have the same training given to persons with no medical background. In 3 states chiropractors need no training, while 7 require 100 hours of training, and 2 call it "meridian theory." It is an anachronism that over 3000 MD and DO physicians are currently practicing TCA. This unscientific mockery of a treatment ignores the principles of evidence-based medicine. As with dogmatic political opinions, it exemplifies the old adage, "Don't bother me with facts. My mind is already made up."

The degree "Doctor of Oriental Medicine" is awarded by some of the nation's 50 acupuncture schools. Requirements for continuing education ensure a steady source of entrepreneurial income. The National Center

for Complementary and Alternative Medicine (NCCAM) recommends teaching Chinese herbalism and "body work." The latter includes healthful "internal qigong" with tai chi exercises and breathing techniques. Worrisome is "external qigong," where patients are treated by imagined energies emitted from the hands. Demonstrations that I have seen are reminiscent of the hypnotic antics of stage magicians. Of special concern is the use of unregulated Chinese herbs. A recent issue of the *Scientific Review of Alternative Medicine* published articles on dangers inherent in this practice that include liver and kidney toxicity with deaths.⁷ The Chinese pharmacopoeia contains over 5000 substances, including "deer horn, earthworms, human placenta, bat feces, pearl powder, dragon bones, etc." Mixtures by ancient recipes may or may not contain active substances, while additives, doses, and side effects remain mostly unknown.

In 1999 Missouri legislation established a 5-member, governor-appointed Acupuncture Advisory Committee to license this practice. Acupuncture is defined vaguely as "the use of needles inserted into the body by piercing of the skin and related modalities, for the assessment, evaluation, prevention, treatment or correction and regulating the flow of energy in the body." The bill also supported controversial ear needling for addiction. This has recently been shown by blinded research to be nothing but placebo.⁸ For addicts, needles have a special magic; as one addict remarked, "It is needles that got me here, now needles will get me out."

When Texas passed similar legislation the governor appointed a medical school associate professor to the advisory committee. He resigned after 1 year, stating that legislation that was supposedly enacted to protect the public served only to protect entrepreneurs teaching superstitious nonsense. He told Governor Bush that questions on the certification examination were unscientific, demonstrating the heresy of a pseudomedical discipline.⁹ In the face of modern evidence-based medicine, the definition in the Missouri bill is preposterous. "Body energy" is a vague term widely used in unscientific folk medicine. The James Randi Educational Foundation of Florida has offered \$1 000 000 for proof of its existence. Acupuncturists professing to cure disease by manipulating *qi* have not come forward to claim this money.

My early experiences confirmed reports that TCA can sometimes be a useful treatment. However, I became increasingly concerned over mystical explanations and complicated treatment rituals and I wondered how much a placebo action contributed to my results. In 1972, as University of Missouri recipients of the NIH's first grant to study acupuncture and experimental pain,

we found and reported that electricity was more important than needles. We agreed with others that the most useful acupoints were simply nerve junctures or motor points.¹⁰ I then suggested to the Federation of State Medical Boards that a research appraisal of acupuncture was needed, as, with supporting evidence, a scientific type of acupuncture could become useful in medical practice as an effective method for treating chronic pain without drugs.¹¹

At Beijing Medical University in China I met Professor JiSheng Han who, by spinal fluid transfusion, transferred acupuncture analgesia from a treated to an untreated animal, thus proving the neurochemical basis of acupuncture. His 30 years of scientific research have made obsolete the archaic metaphysics and controversial treatment rituals of TCA.¹² Using his special electrical nerve stimulator, he showed needles to be unnecessary. Studies of spinal fluid from human volunteers demonstrated that specific frequencies of electrical stimulation affect the gene expression of specific brain neuropeptides. Endorphins, important in central pain mechanisms, are activated by 2Hz stimuli, while 100Hz increases dynorphins active in the spinal cord. Acupuncture was shown to be a frequency-specific rather than point-specific phenomenon. Han's evidence-based technique of neuroelectric stimulation enhances body homeostasis. It is a simple, effective, no-drug method for treating chronic pain, addiction, and psychiatric disorders. The treatment has no side effects and can be readily learned.¹³ This simple, effective technique contrasts sharply with the unscientific metaphysical explanations of TCA, encumbered as it is with strange complicated rituals. Recent fMRI studies by Professor Cho of UC Irvine give further support to Professor Han's work.¹⁴

Some have suggested that traditional Chinese medicine should be integrated with modern Western medicine. Certainly, ancient Chinese medicine and the indigenous health-care systems of other countries have played an important role for the peoples of their own cultures. But while it may be of interest to study medical practices from around the world, the usefulness of such prescientific methods for Western physicians is highly questionable. Traditional Chinese needle acupuncture has, over the centuries, been of benefit to many persons. However, it is burdened with an archaic metaphysics and complex rituals that add an unnecessary encumbrance to an otherwise simple method of treatment. Its inclusion in Western medicine would require scientifically trained physicians to accept theories incompatible with their evidence-based medical training. For example, with our modern knowledge of cellular metabo-

lism and neurophysiology, the vague concept of a spiritual "body energy" is meaningless for explaining the action of acupuncture. Medical students would have difficulty trying to fathom the diagnostic equivalents of such statements as "liver *qi* stagnation," "kidney *yin* deficiency," and "*qi* blockage" as causes of illness.

The certification of nonmedical "acupuncturists" presents the widespread problem of medical charlatanism that requires an evidence-based solution. Clarification of roles is necessary. Although "acupuncturists" advertise presenting the use of acupuncture as their mode of therapy, TCA is only one of several methods of Chinese folk medicine that they employ. The public must be fully informed about the inclusion of other unscientific methods in their practice. Some states certify nonphysicians as "Doctors of Oriental Medicine," but the precedent for certifying them as "acupuncturists" has been firmly established and requires some accommodation. It may well require study and action by the Federation of State Medical Boards to recommend and establish a reasonable model state licensing bill that recognizes the difference between mystical and evidence-based acupuncture. Oriental medicine will remain popular with many patients who seek alternative methods of care. While it is important that patients be allowed to select their own preferred kind of medical treatment, it is essential that they do this in an informed manner. It is vital that organized medicine continue its important role of guarding patient welfare. Patients must be warned that proper diagnosis is needed before treatment and that such diagnosis requires the medical skills of MD and DO physicians.

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IN BRIEF

FTC Official Testifies on Campaign to Combat Health Fraud and the Elderly

Health fraud poses a direct and immediate threat of both economic and physical injury to persons already suffering from serious conditions and diseases, with the elderly being particularly vulnerable because of the high incidence of health-related problems in this age group, a Federal Trade Commission (FTC) official told a congressional panel in September. J. Howard Beales III, director of the FTC's Bureau of Consumer Protection, said that despite federal and state enforcement action, unfounded or exaggerated health claims remain common in the marketplace and combatting health fraud remains one of the commission's top priorities. The FTC has a long-standing and active program to combat fraudulent and deceptive advertising claims for health products, Beales said, noting that since the fall of 1997 the FTC has filed 27 cases against companies that used false or deceptive claims to market unproven products that allegedly cure such ailments as cancer, arthritis, sleep apnea, or circulatory diseases.

Beales delivered the FTC testimony at a hearing on health fraud and the elderly before the Senate Special Committee on Aging.

According to the FTC testimony, a number of factors, including lack of information and false beliefs about health and the causes of disease, contribute to consumers' susceptibility to health fraud. "Although aggressive law enforcement is crucial," the testimony noted, "the best consumer protection comes from preventing consumers from being deceived in the first instance." The FTC emphasizes consumer education to help consumers spot and avoid health fraud, and provides businesses with the guidance necessary to avoid violating the law.

"In addition to economic injury," the testimony stated, "some products and services can pose a serious threat to health." For example, in some instances, particularly the area of cancer, marketers have told victims that it is not necessary for them to seek conventional treatment.

"Deterred treatment is not the only risk," Beales said. "Some products and services are themselves dangerous. Safety is a primary criterion in the FTC uses in selecting its cases."

Beales highlighted some of the law enforcement efforts that the FTC and the Food and Drug Administration have taken to protect consumers from health fraud. He summarized "Operation Cure.All"—a comprehensive consumer and business education and law enforcement initiative to combat health fraud on the Internet. The initial phase of Operation Cure.All consisted of two Internet surfs conducted in 1997 and 1998 that, Beales said, identified over 1600 sites worldwide making questionable claims for products marketed as treatments for heart disease, cancer, HIV/AIDS, and other serious illnesses. The FTC has filed 16 Operation Cure.All cases challenging companies that made strong claims about treatments or cures for serious diseases without adequate support. This year, as part of Operation Cure.All, the commission filed an additional eight cases, targeting companies that marketed a variety of devices, herbal products, and other dietary supplements to treat or cure cancer, arthritis, Alzheimer's diabetes, and many other diseases.

In the area of consumer education, the FTC works with other federal agencies as well as organizations such as the AARP to get the commission's consumer education messages to older audiences, Beales said. The commission also uses the Internet to distribute its consumer education messages. Its Web site—www.ftc.gov—provides links to reliable sources of health information. "Our Web-based consumer education material has received nearly 80,000 accesses since October 1, 2000," the testimony noted. The FTC also maintains a number of "teaser" sites that can be found using common search engines and are set up to mimic health fraud sites. The commission's three health-related teaser sites—"Arthricure," "Virility Plus," and "Nordicalite"—have received over 20,000 accesses from October 1999 through August 2001.