SOME DOCUMENTS IN THIS FILE MAY BE DIFFICULT TO READ DUE TO POOR ORIGINALS
Cost Effectiveness of Acupuncture

Legislative Research Services
Division of Legal and Research Services
Legislative Affairs Agency
Alaska State Legislature

Prepared by Kathleen L. Wakefield, Legislative Analyst
SUMMARY

You asked if any studies showed savings to a patient and insurance company if acupuncture was used in lieu of conventional medical treatment. After a brief summary, this report describes methodologies of some cost-benefit studies of acupuncture, research on the effectiveness of acupuncture and alternative medicine, and the current status of insurance coverage of alternative therapies.

Although at least four studies report that using acupuncture treatments reduced costs, we were unable to find any definitive research study which focused on or included treatment costs. Most of the major studies funded by organizations like the National Institutes of Health (NIH) and the Robert Wood Johnson Foundation focus on clinical issues such as how acupuncture works and its effectiveness in treating certain diseases and addictions.\(^1\) NIH investigators did conclude last year that there is "sufficient evidence of acupuncture’s value to expand its use into conventional medicine and to encourage further studies of its physiology and clinical value."\(^2\)

According to the American Association for Oriental Medicine, a 1993 study at the University of Lund in Sweden showed an estimated savings of $26,000 per patient when acupuncture was used as part of the treatment of paralysis in stroke victims.\(^3\) Researchers at the Acupuncture Center in Klampenborg, Denmark, in the mid-1990s, measured the cost-benefit of using a combined approach of acupuncture, Shiatsu (pressure-point massage), and lifestyle changes to treat patients with severe angina pectoris.

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\(^1\) We contacted the National Institutes of Health, National Center for Complimentary & Alternative Medicine, American Association of Medical Acupuncture, American Association for Oriental Medicine, National Conference of State Legislatures, Bastyr University in Seattle, and Dr. Andrew Weil’s Program in Integrative Medicine at the University of Arizona Health Sciences Center in Tucson. In addition, we checked the web sites of the World Health Organization, National Institute on Drug Abuse, National Institute for Neurological Disorders & Stroke, and the Robert Wood Johnson Foundation (a source of grant funding for health studies).


\(^3\) American Association of Oriental Medicine, information faxed December 8, 1998.
They estimated savings of $12,000 per patient. Claire M. Cassidy, Ph.D., director of research at the Traditional Acupuncture Institute, estimated that the number of visits per client over a three-month period averaged six visits for acupuncture with an average total cost of $265, and 2.2 visits for traditional medical care with an average cost of $409. According to an article in Psychology Today, when one insurance company compared 300 patients at Dr. Benjamin’s center [the Arizona Center for Health & Medicine offers herbal medicine, body work, meditation and other alternative therapies along with conventional medical care] with patients with similar diagnoses – such as autoimmune diseases, lower back pain, or migraines – who were not seen at the center, the trends were startling. Treatment costs were cut by 56 percent. Emergency room visits were down. The level of patient satisfaction was 92 percent at the center and 76 percent outside.

**Cost-Benefits of Acupuncture**

**University of Lund, Sweden**

Researchers at the University of Lund divided patients into two groups: the "acupuncture group" with 38 patients, whose average age was 76 years, and the "no acupuncture group" with 40 patients, whose average age was 75. All patients in the study were tested at one week post-stroke and at one, three, and twelve months later. Both groups received physical and occupational therapy for ten weeks. The acupuncture group also received two acupuncture treatments per week during those ten weeks. According to researchers, patients in the acupuncture group spent less time in nursing homes and rehabilitation facilities. Patients in the no-acupuncture group spent approximately $56,000 each for treatment, and the patients who received acupuncture spent approximately $30,000 each. After twelve months, 89% of the patients in the acupuncture group were living at home, but only 66% of the patients in the no-acupuncture group were able to live at home. The report stated that a “significantly better outcome was observed in walking, balance, activities of daily living and quality of life, mobility, and emotion” for the acupuncture group.

**Klampenborg, Denmark**

Researchers in Klampenborg, Denmark treated 69 patients with severe angina pectoris with the combined treatments of acupuncture, Shiatsu, and lifestyle adjustments. The surveyors followed the patients for two years. Of the 69 patients, 49 were candidates for coronary artery bypass surgery. These patients were also compared with patients in another trial study who underwent coronary artery bypass surgery or coronary angioplasty. The comparison showed that 21% of the bypass patients and 15% of the angioplasty patients, but only 7% of the acupuncture patients, subsequently had heart attacks or died. Although researchers found little difference in pain relief between the three groups, 61% of the patients in the acupuncture group experienced improvement in their health. These patients avoided or postponed invasive medical treatments, and they spent 90% fewer days in the hospital than the patients who did not receive the combined treatment, leading to an overall economic savings of approximately $12,000 per patient.

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7 American Association of Oriental Medicine.
Cassidy’s study of six private and public acupuncture clinics in five states, with 575 respondents, measured patient satisfaction, the complaints and symptoms patients reported, and demographic information as well as estimated costs. Among the information collected in the survey:

- 91.5% of respondents reported “disappearance” or “improvement” of symptoms after acupuncture treatment.
- 84% said they see their medical doctors less often as a result of acupuncture treatment.
- 79% said they use fewer prescription drugs as a result of acupuncture treatment.
- 70% of those to whom surgery had been recommended by a conventional medical doctor said they avoided surgery through the use of acupuncture.

The American Association for Oriental Medicine also provided information they believe shows that acupuncture is a successful modality of treatment and is cost effective. This information is in anecdotal form rather than part of a controlled study, and is included in this report as Attachment A.

**Studies on the Effectiveness of Acupuncture and Alternative Medicine**

Several studies show that an increasing number of people in the United States are turning to acupuncture and other forms of complementary and alternative medicine. In 1993, the New England Journal of Medicine published a study showing that one-third of survey respondents had used “unconventional therapies” during the past year (1990). Extrapolating that to the U.S. population as a whole, the surveyors estimated that 61 million Americans had used at least one of the therapies mentioned in the study (which includes relaxation techniques, chiropractic, massage, homeopathy, and acupuncture) and that patients made 425 million visits to providers of alternative therapies. The number of visits exceeded the estimated 388 million visits made in 1990 to all primary care physicians combined (general and family practitioners, pediatricians, and specialists in internal medicine). Americans spent approximately $13.7 billion in 1990 for these visits and commercial diet supplements and megavitamins. The total projected out-of-pocket expenditures were $10.7 billion, which was comparable to out-of-pocket expenditures for all hospital care in the U.S. in 1990 ($12.8 billion), and was nearly half the out-of-pocket amount for all physicians’ services ($23.5 billion).

In 1997, the authors did a follow-up survey, and found that total visits to alternative practitioners had increased 47.3% since 1990, exceeding total visits to primary care physicians. Total out-of-pocket expenditures for alternative therapies in 1997 were “conservatively estimated” at $27.0 billion, which exceeded the out-of-pocket expenditures for that year for all U.S. hospitalizations and physician services.

In November 1997, the National Institutes of Health (NIH) released a “consensus statement” on acupuncture (“Acupuncture, NIH Consensus Statement,” included as Attachment B). NIH publishes...
consensus statements on a variety of health issues. Panels of twelve members, who are not federal employees and are not considered advocates for the issue being studied, research questions and develop conclusions based on evidence presented in open forums and in the scientific literature. These panels prepare draft statements, which are circulated to the audience and the experts for comment, and then resolve conflicting recommendations and release a final statement. In this case, the panel consisted of representatives from the fields of acupuncture, pain, psychiatry, physical medicine, rehabilitation, drug abuse, family and internal medicine, health policy, epidemiology, statistics, physiology, biophysics, and the public. Twenty-five experts from these same fields presented data to the panel, and the panel and conference audience were provided with an extensive bibliography of references and abstracts.11

The acupuncture panel recognized acupuncture’s effectiveness in relieving adult postoperative and chemotherapy nausea and vomiting, and postoperative dental pain. The panel also agreed that acupuncture may be useful as an adjunct treatment or alternative treatment for addiction, stroke rehabilitation, headache, menstrual cramps, tennis elbow, fibromyalgia, myofascial pain, osteoarthritis, low back pain, carpal tunnel syndrome, and asthma. The panel stated that further research “is likely to uncover additional areas where acupuncture interventions will be useful.”12

The consensus panel called for continuing studies to assess the effectiveness of acupuncture, noting that “relatively few high-quality, randomized, controlled trials” have been published about acupuncture.13 The panel cautioned that “acupuncture practice is based on a very different model of energy balance” than conventional Western medicine, that acupuncture focuses on a “holistic, energy-based approach to the patient rather than a disease-oriented diagnostic and treatment model.”14 They believe these differences need to be better understood in order to facilitate the integration of acupuncture into the modern health care system.

The panel also noted that “[c]ontinued access to qualified acupuncture professionals for appropriate conditions should be ensured . . . . There is evidence that some patients have limited access to acupuncture services because of inability to pay. Insurance companies can decrease or remove financial barriers to access depending on their willingness to provide coverage for appropriate acupuncture services.”15

NIH’s National Center for Complimentary & Alternative Medicine (NCCAM – formerly the Office of Alternative Medicine) provides grant funding for research into complimentary and alternative therapies. NIH recently requested proposals for clinical trial pilot grants to study acupuncture.16 The National Institute of Neurological Disorders & Stroke, a part of NIH, is studying the effectiveness of acupuncture in treating chronic pain.17 The National Institute on Drug Abuse, also a part of NIH, is studying the use

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11 NIH, p. 2.
12 NIH, p. 3. Fibromyalgia is a chronic disorder with fatigue and musculoskeletal pain, especially in the neck, spine, shoulder, and hips. Myofascial pain is also called “temporomandibular joint syndrome” or TMJ, which is joint pain and inflammation in the jaw. Osteoarthritis is a degenerative joint disease.
13 NIH, p.10.
14 NIH, pp.11, 8.
15 NIH, p. 9.
of acupuncture in treating drug addictions, and included a session on complimentary and alternative therapies at its 1998 National Conference on Drug Addiction Treatments.\footnote{18}

Although \textit{Time} magazine reported last year that approximately one million Americans use acupuncture and spend about $500 million on treatments each year, there are still those in the medical and scientific communities who are not convinced of acupuncture’s usefulness (or that of other alternative therapies).\footnote{19} The editor of the New England Journal of Medicine says that unconventional therapies are “cheaper than seeing a physician,” but that “roughly a third of unconventional practices entail theories that are patently unscientific and in direct competition with conventional medicine."\footnote{20} According to the Council on Scientific Affairs of the American Medical Association, “[c]ritics contend that acupuncturists, including many traditionally trained physicians, merely stick needles in patients as a way to offer another form of treatment for which they can be reimbursed. . . . [C]ritical reviews of acupuncture . . . conclude that no evidence exists that acupuncture affects the course of any disease.”\footnote{21} The National Council Against Health Fraud states that

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[a]cupuncture is an unproven modality of treatment . . . Its theory and practice are based on primitive and fanciful concepts of health and disease that bear no relationship to present scientific knowledge. Perceived effects of acupuncture are probably due to a combination of expectation, suggestion, counter-irritation, operant conditioning, and other psychological mechanisms. . . . \footnote{22}

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\textbf{Insurance Coverage}

According to \textit{Time} magazine, “[a] Boston researcher told the [NIH acupuncture consensus] panel that the saving from just faster stroke rehabilitation and effective carpal-tunnel-syndrome treatment could cut the nation’s annual medical bill by $11 billion. Such a saving is sure to catch the eye of HMOs and

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\footnote{23} This article is included as Attachment C. NIH panel member Marcellus Walker, M.D., a primary care physician who uses acupuncture in his practice, told the Journal of the American Medical Association that in view of the panel’s recommendations, “it would seem reasonable that third-party reimbursement for acupuncture be considered. Failure to reimburse for the procedure is one of the challenges to patients gaining access to it…”\footnote{24}

Insurance companies are taking another look at alternative therapies. Several companies cover some alternative therapies, either through offering reduced rates for those services and allowing patients direct access, or by allowing patients to be referred by their primary physician. The American Board of

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\footnote{23} Dick Thompson, p. 84.

Eastern Medicine publishes a list of 55 insurance companies that “cover acupuncture in some way.”

The list includes such major insurers as Aetna, Blue Cross of Washington & Alaska (as well as Blue Cross of Oregon and of California), Cigna, Mass Mutual, Metlife, New York Life and Prudential. In 1996, Oxford Health Plans, a major health maintenance organization, was the first HMO to offer a program of comprehensive coverage for complimentary and alternative therapies, allowing patients to see alternative practitioners as their primary caregivers rather than receiving alternative care only through referral by a medical doctor. Kaiser Permanente covers alternative therapies on a limited basis as a non-defined benefit. These businesses explain that they are responding to consumer demand. Other companies say they would consider such coverage if consumers and employers demanded it.

Some insurance companies, like some members of the conventional medical establishment, still question alternative medicine’s effectiveness. But the NIH consensus panel cautioned that, “[w]hile it is often thought that there is substantial research evidence to support conventional medical practices, this is frequently not the case. This does not mean that these treatments are ineffective. The data in support of acupuncture are as strong as those for many accepted Western medical therapies.”

The panel continued:

One of the advantages of acupuncture is that the incidence of adverse effects is substantially lower than that of many drugs or other accepted medical procedures used for the same conditions. As an example, musculoskeletal conditions, such as fibromyalgia, myofascial pain, and tennis elbow, or epicondylitis, are conditions for which acupuncture may be beneficial. These painful conditions are often treated with, among other things, anti-inflammatory medications (aspirin, ibuprofen, etc.) or with steroid injections. Both medical interventions have a potential for deleterious side effects but are still widely used and are considered acceptable treatments. The evidence supporting these therapies is no better than for acupuncture.

The Journal of the American Medical Association recently reported on a study that analyzed malpractice claims against chiropractors, massage therapists, and acupuncturists from 1990 through 1996. Researchers found that “claims against these practitioners occurred less frequently and typically involved injury that was less severe than claims against physicians during the same period.”

In some cases, the push for coverage of alternative medicine is coming from the government rather than consumers. In 1996, Washington State lawmakers mandated that insurers cover expenses for treatment by all licensed, registered, or certified health providers, including acupuncturists, massage therapists, naturopaths, and midwives. A federal judge ruled against the state in an industry lawsuit.


28 NIH, pp. 10, 6.

29 NIH, p. 6.

but the 9th U.S. Circuit Court of Appeals ordered the law reinstated.\(^{31}\) In March 1996, the Food and Drug Administration removed acupuncture needles from the list of experimental medical devices and now regulates them the same as other accepted medical instruments such as scalpels and hypodermic syringes. Experts suggest this change may “open the door,” allowing Medicaid and Medicare programs to someday cover expenses for acupuncture treatment.\(^{32}\)

Federal lawmakers introduced two bills addressing alternative therapies in recent sessions of Congress, but never took final action on them. Rep. Peter DeFazio (D-Oregon) introduced HR 746, the Access to Medical Treatment Act, which would permit “any individual to be treated by a health care practitioner with any medical treatment that the individual desires (including a treatment that is not approved, certified, or licensed by the Secretary of Health and Human Services) if: (1) the practitioner agrees to treat the individual; and (2) the administration of such treatment does not violate licensing laws.”\(^{33}\) Rep. Maurice Hinchey (D-NY) introduced HR 1038, the Federal Acupuncture Coverage Act of 1997, which would provide “coverage of acupuncturist services under the Federal Employees Health Benefits Program and part B (Supplementary Medical Insurance) of title XVIII (Medicare) of the Social Security Act.”\(^{34}\) Although consumer health advocacy groups expected the bills to be reintroduced, sponsors did not reintroduce either bill in 1998.\(^{35}\)

I hope you find this information useful. Please do not hesitate to contact us if you have questions or need additional information.

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**LIST OF ATTACHMENTS**

**Attachment A – American Association of Oriental Medicine**

**Attachment B – “Acupuncture,” NIH Consensus Statement**

**Attachment C – “Acupuncture Works,” Time Magazine**

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\(^{34}\) Bill Summary & Status for the 105th Congress, H.R. 1038, [http://thomas.loc.gov](http://thomas.loc.gov).

Attachment A

American Association of Oriental Medicine
Acupuncture: A Successful and Cost Effective Treatment

Acupuncture

In this growing time of emphasis on health care reform, the importance of such non-Western medicines as acupuncture is becoming more and more apparent. Acupuncture originated in China more than 3,000 years ago and due to its proven effectiveness, has been embraced throughout the world. It is a complete medical system that is used to diagnose and treat illnesses, prevent disease and improve well-being. Acupuncture is a comprehensive system of preventive health care and health maintenance.

A Successful Method of Treatment

Acupuncture has been a successful method of treatment in numerous illnesses and conditions, from arthritis to back pain to nicotine addiction. Patients who have received little or no benefit from traditional medicine are finding relief in the healing act of acupuncture. Throughout its long history, acupuncture has established a solid reputation as a system of health care that works.

A Cost Effective Method of Treatment

Today, the issue of health care is a growing concern among all Americans. With the rapidly rising costs of medical treatment, more and more people are turning to alternative therapies. The following data is a sample of case studies of patients who have been treated with acupuncture, not only successfully but also at considerable cost savings.

It is hoped that with the growing awareness of all the benefits of acupuncture, this ancient form of healing will have a place in the new health care system of the United States.
<table>
<thead>
<tr>
<th>Patient's Condition</th>
<th>Traditional Medicine Used and Cost</th>
<th>Results of Traditional Medicine</th>
<th>Cost of Acupuncture</th>
<th>Results of Acupuncture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lupus</td>
<td>Numerous medication, 2 visits per month to physician, 6 chemotherapy treatments, 1 kidney biopsy, 2 spinal taps.</td>
<td>Some relief but also resulted in side effects such as hairloss and nausea.</td>
<td>$300.00</td>
<td>Patient no longer displays lupus symptoms, patient feels better, has more energy, better eyesight, and no headaches.</td>
</tr>
<tr>
<td>Ovarian Cysts</td>
<td>Surgery recommended.</td>
<td>Only option given was surgery.</td>
<td>$265.00</td>
<td>After 1 treatment pain went away. After 5 treatments with herbal intervention, cyst on right ovary went away, cyst on left ovary had shrunk considerably.</td>
</tr>
<tr>
<td>Depression</td>
<td>Prozac taken daily, psychiatric visits 3 times a week ($150.00 per session).</td>
<td>Alleviated symptoms but medication necessary for remainder of patient's life.</td>
<td>$3,100.00 over 3 years.</td>
<td>Symptoms gone. Patient no longer takes Prozac and only visits psychiatrist 3 times a year.</td>
</tr>
<tr>
<td>Gallstones</td>
<td>Gall bladder removal surgery recommended ($4,000.00+) plus patient would be out of work for six weeks for recovery.</td>
<td>Only option given was surgery.</td>
<td>$130.00</td>
<td>After 2 treatments and herbs, patient passed 150 gall stones and thereafter no longer experienced gall bladder attacks without having gall bladder removed.</td>
</tr>
</tbody>
</table>

**Acupuncture Cost Effectiveness**
<table>
<thead>
<tr>
<th>Patient's Condition</th>
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<th>Results of Traditional Medicine</th>
<th>Cost of Acupuncture</th>
<th>Results of Acupuncture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degenerative arthritis in lower back</td>
<td>$1,000.00 plus cost of recommended surgery.</td>
<td>No relief. Only option left was fusion of the spine or nerve surgery.</td>
<td>$840.00</td>
<td>After 2nd treatment, pain noticeably diminished. By 10th treatment, no pain, patient able to walk straight, patient able to stop taking pain medications</td>
</tr>
<tr>
<td>Slipped lumbar disc</td>
<td>Surgery recommended.</td>
<td>Only option given was surgery.</td>
<td>$400.00</td>
<td>After 5 treatments in 2 weeks, patient was pain-free and spine has regained its appropriate alignment.</td>
</tr>
<tr>
<td>Clinical depression</td>
<td>$106.00 a month for medications.</td>
<td>Alleviated symptoms but also resulted in side effects.</td>
<td>$65.00 per month.</td>
<td>Provided same relief that the medication did but without the side effects.</td>
</tr>
<tr>
<td>Foot pain as a result of blockage</td>
<td>Surgery recommended.</td>
<td>Only option given was surgery.</td>
<td>$30.00</td>
<td>After 1 treatment, patient walks better and without pain.</td>
</tr>
<tr>
<td>Asthma</td>
<td>Medication plus inhaler every day (inhalers- 1/month at $22.00 each).</td>
<td>Alleviated symptoms if used regularly.</td>
<td>$540.00</td>
<td>Many days are now symptom-free for patient; inhaler used only occasionally. Medication no longer needed.</td>
</tr>
<tr>
<td>Patient's Condition</td>
<td>Traditional Medicine Used and Cost</td>
<td>Results of Traditional Medicine</td>
<td>Cost of Acupuncture</td>
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<tr>
<td>Hypermesis</td>
<td>Durring 1rst pregnancy patient spent 7 of 9 months in hospital at a total of $260,000.00.</td>
<td>Helped pregnancy but at considerable cost and hardship.</td>
<td>$3,100.00</td>
<td>Acupuncture treatments during 2nd pregnancy resulted in normal pregnancy.</td>
</tr>
<tr>
<td>Allergies</td>
<td>Weekly allergy shots at $20.00 per shot ($3,120.00 per year).</td>
<td>Helped but didn't make allergies go away.</td>
<td>approx. $200.00</td>
<td>Allergies almost completely gone</td>
</tr>
<tr>
<td>Depression</td>
<td>Group therapy at a cost of $40.00 per week.</td>
<td>Somewhat helpful in providing general improvement.</td>
<td>$400.00</td>
<td>Patient felt immediate improvement in overall mood, easing of depression</td>
</tr>
<tr>
<td>Lower back pain due to protrusion of intervertebral disc following car accident.</td>
<td>Surgery on back twice at over $4,000.00.</td>
<td>Back pain worsened.</td>
<td>$490.00</td>
<td>Pain gone. Patient completely recovered.</td>
</tr>
<tr>
<td>Endometriosis</td>
<td>3 operations at $3,000.00 each plus $100.00 per month for medications. 4th operation recommended.</td>
<td>Condition always returned.</td>
<td>$1,000.00</td>
<td>All symptoms / signs of endometriosis are gone.</td>
</tr>
<tr>
<td>Paraplegia</td>
<td>Hospital treatments at a cost of $5,000.00 per year.</td>
<td>No relief from disease.</td>
<td>$900.00</td>
<td>After three treatments patient able to stand, walk and run. Condition greatly improved.</td>
</tr>
</tbody>
</table>
arm/leg cases with this lesion pattern (chronic and acute cases); and 11/11 hand paresis cases with this lesion pattern (chronic and acute) had Good Response. Almost all stroke cases (12/13) who had lesion on brain CT scan in ≥1/2 of the Motor Pathway areas (severe paraplegia) had Poor Response following 20-40 Acptr. Tx.’s. Across all 3 studies, a total of 31 cases were treated; 18/31 cases (58%) had Good Response.

Stroke patients who have lesion in <1/2 of the Motor Pathway areas on CT scan, with moderate-milder paralysis, are good candidates to show some improvement following 20-40 acupuncture treatments. Stroke patients who have no arm/leg paralysis, but only a weak and clumsy hand, with some preserved isolated finger movement poststroke, are the best candidates for Acptr. Tx. and will show the most dramatic improvement. A chronic CT scan obtained after 2 months poststroke is helpful to evaluate which chronic stroke patients are likely to have improvement following Acptr. Tx.’s.

Functional Outcome and Cost-Effectiveness of Acupuncture in the Treatment of Paralysis in Acute Stroke


The design included Acptr. vs. No Acptr. The study was randomized.

The subjects included 38 stroke patients in the Acptr. Group (who received Acptr. plus physical therapy and occupational therapy), starting at 4 - 10 days poststroke, mean age 76; and 40 stroke patients in the No Acptr. Group (who received only physical therapy and occupational therapy), starting at 4 - 10 days poststroke, mean age 75. The patients were tested at the same time intervals (Baseline at 1 week; and at 1 and 3 months later).

A total of 20 Acptr. Tx.’s (2 times per week, for 10 weeks) was administered to the patients in the Acptr. Group. Acptr. needles and electrical stimulation on the needles was used.

Results: The Acptr. Group recovered faster and to a larger extent than the No Acptr. Group:

Walking - p < .01 at 1 month and p < .004 at 3 months.
Balance - p < .001 at 1 month and at 3 months. (See Figure 3.)
Activities of Daily Living (ADL) - p < .0001 at 3 months and at 12 months (See Figure 4.)
Quality of Life, Mobility and Emotion - p < .01 and beyond at 3, 6 and 12 months

Percent living at home, 12 months post stroke, Acupuncture Group: 89%
Percent living at home, 12 months post stroke, No Acupuncture Group: 66%

The Acupuncture Group had fewer days in nursing homes and rehabilitation facilities, with a savings of $26,000 per patient treated with acupuncture. A mean of $56,000 was spent per patient for the No Acupuncture Group, vs. only $30,000 for the Acupuncture Group.

Summary: This controlled study observed that when acupuncture is initiated at 4-10 days poststroke, and continued twice a week for 10 weeks, there is significantly better outcome for these stroke patients at 1, 3 and 12 months later. Significantly better improvement was observed in walking, balance, activities of daily living and quality of life, mobility and emotion. There was an estimated savings of $26,000 per stroke patient treated with acupuncture beginning in the acute stage poststroke, due to fewer days in nursing homes and rehabilitation facilities.

Acupuncture in the Treatment of Paralysis in Acute Stroke (Within 36 Hours Poststroke)

(Taipei Veterans General Hospital, Taiwan, Republic of China)

Hu et al., (1993) conducted a study on the use of acupuncture in the treatment of paralysis in acute stroke patients (within 36 hours poststroke).

The design included Acptr. vs. No Acptr. It was a randomized study. The Acptr. Group received Acptr. plus supportive treatment, standard rehabilitation program. The No Acptr. Group received supportive treatment, standard rehabilitation program only.

“No sham Acptr. was used on the control group for ethical and practical reasons.” (p. 107)

The subjects included 30 acute stroke patients, age 46-74 years. All cases had suffered a first stroke (ischemic); no acute hemorrhage cases were included. All patients had middle cerebral artery stroke only, with resulting limb weakness.

Acupuncture treatments were initiated within 36 hours poststroke in the Acptr. Group. Patients were treated 3 times a week, for 4 weeks. Patients were treated with Acptr. needles plus electrical stimulation applied to the needles. Needles were inserted into Scalp Acptr. areas (“the motor cortex line”), and Body
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Phone: 907-465-3991

From: Ed Jones
Title: 
Date: 12/8/98
Subject: Cost Effectiveness

Total # of pages including Title Page: 6

-------- COMMENTS --------

FYI: X  PLEASE REPLY:  URGENT:  
Attachment B

“Acupuncture,” NIH Consensus Statement
107. Acupuncture
National Institutes of Health
Consensus Development Conference Statement
November 3-5, 1997

This statement will be published as:


For making bibliographic reference to consensus statement no. 107 in the electronic form displayed here, it is recommended that the following format be used:

Acupuncture. NIH Consens Statement 1997 Nov 3-5; In press.
[cited year, month, day]; 15(5):1-34.

NIH Consensus Statements are prepared by a nonadvocate, non-Federal panel of experts, based on (1) presentations by investigators working in areas relevant to the consensus questions during a 2-day public session; (2) questions and statements from conference attendees during open discussion periods that are part of the public session; and (3) closed deliberations by the panel during the remainder of the second day and morning of the third. This statement is an independent report of the consensus panel and is not a policy statement of the NIH or the Federal Government.

Abstract

Introduction

1. What is the Efficacy of Acupuncture, Compared With Placebo or Sham Acupuncture, in the Conditions for Which Sufficient Data Are Available To Evaluate?

2. What is the Place of Acupuncture in the Treatment of Various Conditions for Which Sufficient Data Are Available, in Comparison or in Combination With Other Interventions (including No Intervention)?

3. What is Known About the Biological Effects of Acupuncture That Helps Us Understand How It Works?

4. What Issues Need To Be Addressed So That Acupuncture Can Be Appropriately Incorporated Into Today's Health Care System?

5. What Are the Directions for Future Research?
Abstract

Objective.

To provide health care providers, patients, and the general public with a responsible assessment of the use and effectiveness of acupuncture for a variety of conditions

Participants.

A non-Federal, nonadvocate, 12-member panel representing the fields of acupuncture, pain, psychology, psychiatry, physical medicine and rehabilitation, drug abuse, family practice, internal medicine, health policy, epidemiology, statistics, physiology, biophysics, and the public. In addition, 25 experts from these same fields presented data to the panel and a conference audience of 1,200.

Evidence.

The literature was searched through Medline, and an extensive bibliography of references was provided to the panel and the conference audience. Experts prepared abstracts with relevant citations from the literature. Scientific evidence was given precedence over clinical anecdotal experience.

Consensus Process.

The panel, answering predefined questions, developed their conclusions based on the scientific evidence presented in open forum and the scientific literature. The panel composed a draft statement, which was read in its entirety and circulated to the experts and the audience for comment. Thereafter, the panel resolved conflicting recommendations and released a revised statement at the end of the conference. The panel finalized the revisions within a few weeks after the conference. The draft statement was made available on the World Wide Web immediately following its release at the conference and was updated with the panel's final revisions.
Conclusions.

Acupuncture as a therapeutic intervention is widely practiced in the United States. While there have been many studies of its potential usefulness, many of these studies provide equivocal results because of design, sample size, and other factors. The issue is further complicated by inherent difficulties in the use of appropriate controls, such as placebos and sham acupuncture groups. However, promising results have emerged, for example, showing efficacy of acupuncture in adult postoperative and chemotherapy nausea and vomiting and in postoperative dental pain. There are other situations such as addiction, stroke rehabilitation, headache, menstrual cramps, tennis elbow, fibromyalgia, myofascial pain, osteoarthritis, low back pain, carpal tunnel syndrome, and asthma, in which acupuncture may be useful as an adjunct treatment or an acceptable alternative or be included in a comprehensive management program. Further research is likely to uncover additional areas where acupuncture interventions will be useful.

Introduction

Acupuncture is a component of the health care system of China that can be traced back for at least 2,500 years. The general theory of acupuncture is based on the premise that there are patterns of energy flow (Qi) through the body that are essential for health. Disruptions of this flow are believed to be responsible for disease. Acupuncture may correct imbalances of flow at identifiable points close to the skin. The practice of acupuncture to treat identifiable pathophysiological conditions in American medicine was rare until the visit of President Nixon to China in 1972. Since that time, there has been an explosion of interest in the United States and Europe in the application of the technique of acupuncture to Western medicine.

Acupuncture describes a family of procedures involving stimulation of anatomical locations on the skin by a variety of techniques. There are a variety of approaches to diagnosis and treatment in American acupuncture that incorporate medical traditions from China, Japan, Korea, and other countries. The most studied mechanism of stimulation of acupuncture points employs penetration of the skin by thin, solid, metallic needles, which are manipulated manually or by electrical stimulation. The majority of comments in this report are based on data that came from such studies. Stimulation of these areas by moxibustion, pressure, heat, and lasers is used in acupuncture practice, but because of the paucity of studies, these techniques are more difficult to evaluate.

Acupuncture has been used by millions of American patients and performed by thousands of physicians, dentists, acupuncturists, and other practitioners for relief or prevention of pain and for a variety of health conditions. After reviewing the existing body of knowledge, the U.S. Food and Drug
Administration recently removed acupuncture needles from the category of "experimental medical devices" and now regulates them just as it does other devices, such as surgical scalpels and hypodermic syringes, under good manufacturing practices and single-use standards of sterility.

Over the years, the National Institutes of Health (NIH) has funded a variety of research projects on acupuncture, including studies on the mechanisms by which acupuncture may produce its effects, as well as clinical trials and other studies. There is also a considerable body of international literature on the risks and benefits of acupuncture, and the World Health Organization lists a variety of medical conditions that may benefit from the use of acupuncture or moxibustion. Such applications include prevention and treatment of nausea and vomiting; treatment of pain and addictions to alcohol, tobacco, and other drugs; treatment of pulmonary problems such as asthma and bronchitis; and rehabilitation from neurological damage such as that caused by stroke.

To address important issues regarding acupuncture, the NIH Office of Alternative Medicine and the NIH Office of Medical Applications of Research organized a 2-1/2-day conference to evaluate the scientific and medical data on the uses, risks, and benefits of acupuncture procedures for a variety of conditions. Cosponsors of the conference were the National Cancer Institute, the National Heart, Lung, and Blood Institute, the National Institute of Allergy and Infectious Diseases, the National Institute of Arthritis and Musculoskeletal and Skin Diseases, the National Institute of Dental Research, the National Institute on Drug Abuse, and the Office of Research on Women's Health of the NIH. The conference brought together national and international experts in the fields of acupuncture, pain, psychology, psychiatry, physical medicine and rehabilitation, drug abuse, family practice, internal medicine, health policy, epidemiology, statistics, physiology, and biophysics, as well as representatives from the public.

After 1-1/2 days of available presentations and audience discussion, an independent, non-Federal consensus panel weighed the scientific evidence and wrote a draft statement that was presented to the audience on the third day. The consensus statement addressed the following key questions:

- What is the efficacy of acupuncture, compared with placebo or sham acupuncture, in the conditions for which sufficient data are available to evaluate?
- What is the place of acupuncture in the treatment of various conditions for which sufficient data are available, in comparison or in combination with other interventions (including no intervention)?
- What is known about the biological effects of acupuncture that helps us understand how it works?
- What issues need to be addressed so that acupuncture can be appropriately incorporated into today's health care system?
- What are the directions for future research?
1. What is the Efficacy of Acupuncture, Compared With Placebo or Sham Acupuncture, in the Conditions for Which Sufficient Data Are Available To Evaluate?

Acupuncture is a complex intervention that may vary for different patients with similar chief complaints. The number and length of treatments and the specific points used may vary among individuals and during the course of treatment. Given this reality, it is perhaps encouraging that there exist a number of studies of sufficient quality to assess the efficacy of acupuncture for certain conditions.

According to contemporary research standards, there is a paucity of high-quality research assessing efficacy of acupuncture compared with placebo or sham acupuncture. The vast majority of papers studying acupuncture in the biomedical literature consist of case reports, case series, or intervention studies with designs inadequate to assess efficacy.

This discussion of efficacy refers to needle acupuncture (manual or electroacupuncture) because the published research is primarily on needle acupuncture and often does not encompass the full breadth of acupuncture techniques and practices. The controlled trials usually have involved only adults and did not involve long-term (i.e., years) acupuncture treatment.

Efficacy of a treatment assesses the differential effect of a treatment when compared with placebo or another treatment modality using a double-blind controlled trial and a rigidly defined protocol. Papers should describe enrollment procedures, eligibility criteria, description of the clinical characteristics of the subjects, methods for diagnosis, and a description of the protocol (i.e., randomization method, specific definition of treatment, and control conditions, including length of treatment and number of acupuncture sessions). Optimal trials should also use standardized outcomes and appropriate statistical analyses. This assessment of efficacy focuses on high-quality trials comparing acupuncture with sham acupuncture or placebo.

Response Rate.

As with other types of interventions, some individuals are poor responders to specific acupuncture protocols. Both animal and human laboratory and clinical experience suggest that the majority of subjects respond to acupuncture, with a minority not responding. Some of the clinical research outcomes, however, suggest that a larger percentage may not respond. The reason for this paradox is unclear and may reflect the current state of the research.

Efficacy for Specific Disorders.

There is clear evidence that needle acupuncture is efficacious for adult postoperative and chemotherapy nausea and vomiting and probably for the nausea of pregnancy.

Much of the research is on various pain problems. There is evidence of efficacy
for postoperative dental pain. There are reasonable studies (although sometimes only single studies) showing relief of pain with acupuncture on diverse pain conditions such as menstrual cramps, tennis elbow, and fibromyalgia. This suggests that acupuncture may have a more general effect on pain. However, there are also studies that do not find efficacy for acupuncture in pain.

There is evidence that acupuncture does not demonstrate efficacy for cessation of smoking and may not be efficacious for some other conditions.

Although many other conditions have received some attention in the literature and, in fact, the research suggests some exciting potential areas for the use of acupuncture, the quality or quantity of the research evidence is not sufficient to provide firm evidence of efficacy at this time.

Sham Acupuncture.

A commonly used control group is sham acupuncture, using techniques that are not intended to stimulate known acupuncture points. However, there is disagreement on correct needle placement. Also, particularly in the studies on pain, sham acupuncture often seems to have either intermediate effects between the placebo and ‘real’ acupuncture points or effects similar to those of the ‘real’ acupuncture points. Placement of a needle in any position elicits a biological response that complicates the interpretation of studies involving sham acupuncture. Thus, there is substantial controversy over the use of sham acupuncture in control groups. This may be less of a problem in studies not involving pain.

2. What is the Place of Acupuncture in the Treatment of Various Conditions for Which Sufficient Data Are Available, In Comparison or in Combination With Other Interventions (including No Intervention)?

Assessing the usefulness of a medical intervention in practice differs from assessing formal efficacy. In conventional practice, clinicians make decisions based on the characteristics of the patient, clinical experience, potential for harm, and information from colleagues and the medical literature. In addition, when more than one treatment is possible, the clinician may make the choice taking into account the patient’s preferences. While it is often thought that there is substantial research evidence to support conventional medical practices, this is frequently not the case. This does not mean that these treatments are ineffective. The data in support of acupuncture are as strong as those for many accepted Western medical therapies.

One of the advantages of acupuncture is that the incidence of adverse effects is substantially lower than that of many drugs or other accepted medical procedures used for the same conditions. As an example, musculoskeletal conditions, such as fibromyalgia, myofascial pain, and tennis elbow, or
epicondylitis, are conditions for which acupuncture may be beneficial. These painful conditions are often treated with, among other things, anti-inflammatory medications (aspirin, ibuprofen, etc.) or with steroid injections. Both medical interventions have a potential for deleterious side effects but are still widely used and are considered acceptable treatments. The evidence supporting these therapies is no better than that for acupuncture.

In addition, ample clinical experience, supported by some research data, suggests that acupuncture may be a reasonable option for a number of clinical conditions. Examples are postoperative pain and myofascial and low back pain. Examples of disorders for which the research evidence is less convincing but for which there are some positive clinical trials include addiction, stroke rehabilitation, carpal tunnel syndrome, osteoarthritis, and headache. Acupuncture treatment for many conditions such as asthma or addiction should be part of a comprehensive management program.

Many other conditions have been treated by acupuncture; the World Health Organization, for example, has listed more than 40 for which the technique may be indicated.

3. What is Known About the Biological Effects of Acupuncture That Helps Us Understand How It Works?

Many studies in animals and humans have demonstrated that acupuncture can cause multiple biological responses. These responses can occur locally, i.e., at or close to the site of application, or at a distance, mediated mainly by sensory neurons to many structures within the central nervous system. This can lead to activation of pathways affecting various physiological systems in the brain as well as in the periphery. A focus of attention has been the role of endogenous opioids in acupuncture analgesia. Considerable evidence supports the claim that opioid peptides are released during acupuncture and that the analgesic effects of acupuncture are at least partially explained by their actions. That opioid antagonists such as naloxone reverse the analgesic effects of acupuncture further strengthens this hypothesis. Stimulation by acupuncture may also activate the hypothalamus and the pituitary gland, resulting in a broad spectrum of systemic effects. Alteration in the secretion of neurotransmitters and neurohormones and changes in the regulation of blood flow, both centrally and peripherally, have been documented. There is also evidence of alterations in immune functions produced by acupuncture. Which of these and other physiological changes mediate clinical effects is at present unclear.

Despite considerable efforts to understand the anatomy and physiology of the "acupuncture points," the definition and characterization of these points remain controversial. Even more elusive is the scientific basis of some of the key traditional Eastern medical concepts such as the circulation of Qi, the meridian system, and other related theories, which are difficult to reconcile with contemporary biomedical information but continue to play an important role in
the evaluation of patients and the formulation of treatment in acupuncture.

Some of the biological effects of acupuncture have also been observed when "sham" acupuncture points are stimulated, highlighting the importance of defining appropriate control groups in assessing biological changes purported to be due to acupuncture. Such findings raise questions regarding the specificity of these biological changes. In addition, similar biological alterations, including the release of endogenous opioids and changes in blood pressure, have been observed after painful stimuli, vigorous exercise, and/or relaxation training; it is at present unclear to what extent acupuncture shares similar biological mechanisms.

It should be noted also that for any therapeutic intervention, including acupuncture, the so-called "non-specific" effects account for a substantial proportion of its effectiveness and thus should not be casually discounted. Many factors may profoundly determine therapeutic outcome, including the quality of the relationship between the clinician and the patient, the degree of trust, the expectations of the patient, the compatibility of the backgrounds and belief systems of the clinician and the patient, as well as a myriad of factors that together define the therapeutic milieu.

Although much remains unknown regarding the mechanism(s) that might mediate the therapeutic effect of acupuncture, the panel is encouraged that a number of significant acupuncture-related biological changes can be identified and carefully delineated. Further research in this direction not only is important for elucidating the phenomena associated with acupuncture, but also has the potential for exploring new pathways in human physiology not previously examined in a systematic manner.

4. What Issues Need To Be Addressed So That Acupuncture Can Be Appropriately Incorporated Into Today's Health Care System?

The integration of acupuncture into today's health care system will be facilitated by a better understanding among providers of the language and practices of both the Eastern and Western health care communities. Acupuncture focuses on a holistic, energy-based approach to the patient rather than a disease-oriented diagnostic and treatment model.

An important factor for the integration of acupuncture into the health care system is the training and credentialing of acupuncture practitioners by the appropriate State agencies. This is necessary to allow the public and other health practitioners to identify qualified acupuncture practitioners. The acupuncture educational community has made substantial progress in this area and is encouraged to continue along this path. Educational standards have been established for training of physician and non-physician acupuncturists. Many acupuncture educational programs are accredited by an agency that is
recognized by the U.S. Department of Education. A national credentialing agency exists for nonphysician practitioners and provides examinations for entry-level competency in the field. A nationally recognized examination for physician acupuncturists has been established.

A majority of States provide licensure or registration for acupuncture practitioners. Because some acupuncture practitioners have limited English proficiency, credentialing and licensing examinations should be provided in languages other than English where necessary. There is variation in the titles that are conferred through these processes, and the requirements to obtain licensure vary widely. The scope of practice allowed under these State requirements varies as well. While States have the individual prerogative to set standards for licensing professions, consistency in these areas will provide greater confidence in the qualifications of acupuncture practitioners. For example, not all States recognize the same credentialing examination, thus making reciprocity difficult.

The occurrence of adverse events in the practice of acupuncture has been documented to be extremely low. However, these events have occurred on rare occasions, some of which are life-threatening (e.g., pneumothorax). Therefore, appropriate safeguards for the protection of patients and consumers need to be in place. Patients should be fully informed of their treatment options, expected prognosis, relative risk, and safety practices to minimize these risks before their receipt of acupuncture. This information must be provided in a manner that is linguistically and culturally appropriate to the patient. Use of acupuncture needles should always follow FDA regulations, including use of sterile, single-use needles. It is noted that these practices are already being done by many acupuncture practitioners; however, these practices should be uniform. Recourse for patient grievance and professional censure are provided through credentialing and licensing procedures and are available through appropriate State jurisdictions.

It has been reported that more than 1 million Americans currently receive acupuncture each year. Continued access to qualified acupuncture professionals for appropriate conditions should be ensured. Because many individuals seek health care treatment from both acupuncturists and physicians, communication between these providers should be strengthened and improved. If a patient is under the care of an acupuncturist and a physician, both practitioners should be informed. Care should be taken to ensure that important medical problems are not overlooked. Patients and providers have a responsibility to facilitate this communication.

There is evidence that some patients have limited access to acupuncture services because of inability to pay. Insurance companies can decrease or remove financial barriers to access depending on their willingness to provide coverage for appropriate acupuncture services. An increasing number of insurance companies are either considering this possibility or now provide coverage for acupuncture services. Where there are State health insurance plans, and for populations served by Medicare or Medicaid, expansion of coverage to include appropriate acupuncture services would also help remove
financial barriers to access.

As acupuncture is incorporated into today's health care system, and further research clarifies the role of acupuncture for various health conditions, it is expected that dissemination of this information to health care practitioners, insurance providers, policymakers, and the general public will lead to more informed decisions in regard to the appropriate use of acupuncture.

5. What Are the Directions for Future Research?

The incorporation of any new clinical intervention into accepted practice faces more scrutiny now than ever before. The demands of evidence-based medicine, outcomes research, managed care systems of health care delivery, and a plethora of therapeutic choices make the acceptance of new treatments an arduous process. The difficulties are accentuated when the treatment is based on theories unfamiliar to Western medicine and its practitioners. It is important, therefore, that the evaluation of acupuncture for the treatment of specific conditions be carried out carefully, using designs that can withstand rigorous scrutiny. In order to further the evaluation of the role of acupuncture in the management of various conditions, the following general areas for future research are suggested.

What are the demographics and patterns of use of acupuncture in the United States and other countries?

There is currently limited information on basic questions such as who uses acupuncture, for what indications is acupuncture most commonly sought, what variations in experience and techniques used exist among acupuncture practitioners, and are there differences in these patterns by geography or ethnic group. Descriptive epidemiologic studies can provide insight into these and other questions. This information can in turn be used to guide future research and to identify areas of greatest public health concern.

Can the efficacy of acupuncture for various conditions for which it is used or for which it shows promise be demonstrated?

Relatively few high-quality, randomized, controlled trials have been published on the effects of acupuncture. Such studies should be designed in a rigorous manner to allow evaluation of the effectiveness of acupuncture. Such studies should include experienced acupuncture practitioners to design and deliver appropriate interventions. Emphasis should be placed on studies that examine acupuncture as used in clinical practice and that respect the theoretical basis for acupuncture therapy.

Although randomized controlled trials provide a strong basis for inferring causality, other study designs such as those used in clinical epidemiology or outcomes research can also provide important insights regarding the usefulness
of acupuncture for various conditions. There have been few such studies in the acupuncture literature.

**Do different theoretical bases for acupuncture result in different treatment outcomes?**

Competing theoretical orientations (e.g., Chinese, Japanese, French) currently exist that might predict divergent therapeutic approaches (i.e., the use of different acupuncture points). Research projects should be designed to assess the relative merit of these divergent approaches and to compare these systems with treatment programs using fixed acupuncture points.

In order to fully assess the efficacy of acupuncture, studies should be designed to examine not only fixed acupuncture points, but also the Eastern medical systems that provide the foundation for acupuncture therapy, including the choice of points. In addition to assessing the effect of acupuncture in context, this would also provide the opportunity to determine whether Eastern medical theories predict more effective acupuncture points.

**What areas of public policy research can provide guidance for the integration of acupuncture into today's health care system?**

The incorporation of acupuncture as a treatment raises numerous questions of public policy. These include issues of access, cost-effectiveness, reimbursement by State, Federal, and private payors, and training, licensure, and accreditation. These public policy issues must be founded on quality epidemiologic and demographic data and effectiveness research.

**Can further insight into the biological basis for acupuncture be gained?**

Mechanisms that provide a Western scientific explanation for some of the effects of acupuncture are beginning to emerge. This is encouraging and may provide novel insights into neural, endocrine, and other physiological processes. Research should be supported to provide a better understanding of the mechanisms involved, and such research may lead to improvements in treatment.

**Does an organized energetic system that has clinical applications exist in the human body?**

Although biochemical and physiologic studies have provided insight into some of the biologic effects of acupuncture, acupuncture practice is based on a very different model of energy balance. This theory might or might not provide new insights to medical research, but it deserves further attention because of its potential for elucidating the basis for acupuncture.

**How do the approaches and answers to these questions differ among populations that have used acupuncture as a part of their healing tradition for centuries, compared with populations that have only recently begun to incorporate acupuncture into health care?**
Conclusions

Acupuncture as a therapeutic intervention is widely practiced in the United States. There have been many studies of its potential usefulness. However, many of these studies provide equivocal results because of design, sample size, and other factors. The issue is further complicated by inherent difficulties in the use of appropriate controls, such as placebo and sham acupuncture groups.

However, promising results have emerged, for example, efficacy of acupuncture in adult post-operative and chemotherapy nausea and vomiting and in postoperative dental pain. There are other situations such as addiction, stroke rehabilitation, headache, menstrual cramps, tennis elbow, fibromyalgia, myofascial pain, osteoarthritis, low back pain, carpal tunnel syndrome, and asthma for which acupuncture may be useful as an adjunct treatment or an acceptable alternative or be included in a comprehensive management program. Further research is likely to uncover additional areas where acupuncture interventions will be useful.

Findings from basic research have begun to elucidate the mechanisms of action of acupuncture, including the release of opioids and other peptides in the central nervous system and the periphery and changes in neuroendocrine function. Although much needs to be accomplished, the emergence of plausible mechanisms for the therapeutic effects of acupuncture is encouraging.

The introduction of acupuncture into the choice of treatment modalities readily available to the public is in its early stages. Issues of training, licensure, and reimbursement remain to be clarified. There is sufficient evidence, however, of its potential value to conventional medicine to encourage further studies.

There is sufficient evidence of acupuncture’s value to expand its use into conventional medicine and to encourage further studies of its physiology and clinical value.

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**Side Effects**


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Attachment C

“Acupuncture Works,” Time Magazine
ACUPUNCTURE WORKS

AN NIH PANEL ENDORSES THE ANCIENT CHINESE NEEDLE TREATMENT--AT LEAST FOR SOME CONDITIONS

BY DICK THOMPSON

For an ancient Chinese custom that turns patients into human pincushions, acupuncture is surprisingly popular these days. America's growing interest in alternative medicine and the quasi endorsement of the Food and Drug Administration (which last year took acupuncture's extra-fine needles off its list of "experimental" medical devices) have helped create a sharp spike in demand for the prickly procedure. About a million Americans spend $500 million a year on acupuncture for complaints ranging from gallstones to migraines to low-back pain; today even dogs and horses are trotting off to see their acupuncturists.

But does it work? Most Western-trained physicians remain skeptical. Explanations that acupuncture restores the balance of yin and yang by tinkering at critical points along life-force meridians sound to scientists suspiciously like quackery. Advocates counter that their claims are supported by hundreds of research studies--as well as a successful track record that extends back 2,500 years.

To sort through the controversy and assess the quality of that research, the National Institutes of Health last week assembled a panel of experts in a scientific court known officially as a consensus conference. After three days of analyzing studies and interrogating practitioners, the panel was unexpectedly upbeat. "It's time to take acupuncture seriously," said its chairman, David Ramsay, president of the University of Maryland. "There are a number of situations where it really does work."
The panel found acupuncture effective in treating painful disorders of the muscle and skeletal systems, such as fibromyalgia and tennis elbow—even more effective, in some cases, than conventional therapies. It was judged to be a "reasonable option" for the relief of postoperative pain and low-back pain. And it won qualified endorsement as a supplement to standard remedies for drug addiction, carpal-tunnel syndrome, osteoarthritis and asthma.

Acupuncture's one great advantage over Western medicine is that it does no harm; unlike drugs and surgery, acupuncture has virtually no side effects. For acupuncturists who have been saying this for years, it was recognition long overdue. "[The panel's report] is a great step toward breaking down the barriers," said Larenz Ng, a pioneer of acupuncture research and now a professor of neurology at George Washington School of Medicine.

One big barrier remains: acupuncture springs from a system of faith that scientists find almost incomprehensible. The treatment rests on the Taoist belief that two life forces, yin and yang, combine to produce a vital life energy, called ch'i (or qi), that flows through the body along pathways known as meridians, which were charted thousands of years ago. People get sick when these life forces are knocked out of balance, and the job of the acupuncturists is to nudge ch'i back into equilibrium. They do this by pushing needles through the skin, sometimes several inches into the body, at specific points along the meridians, and then twisting or twirling them or pulsing them with a low electric current.

What puzzles scientists is that these points and meridians don't correspond to any biological system in the body. How, then, can sticking a needle into the ear, for example, affect a distant organ like the gallbladder? One possible explanation, for which the panel found "considerable evidence," is that acupuncture works at least in part by releasing opioids, natural morphine-like substances, into the central nervous system.

However it happens, scientists know that acupuncture produces measurable changes in the brain. Some of the most compelling evidence presented last week was a series of brain scans taken by Dr. Abass Alavi, chief of nuclear medicine at the University of Pennsylvania Hospital in Philadelphia. Alavi's images showed dramatic changes in regions of the central nervous system that coordinate the perception of pain. "Acupuncture definitely changed the landscape of pain we see in the brain," Alavi told the panel.

Not everyone was persuaded. Dr. Wallace Sampson, a member of the National Council Against Health Fraud, complained that the panel had not invited the naysayers. And although the studies presented were mostly conducted in Western countries using accepted scientific methods, several critics pointed out that the best-designed experiments showed the poorest
results.

The future of acupuncture in the U.S., however, will probably not rest on the quality of these experiments. If it's cheaper and less painful than going to the hospital, and if it gets results, Americans will use it. A Boston University researcher told the panel that the saving from just faster stroke rehabilitation and effective carpal-tunnel-syndrome treatment could cut the nation's annual medical bill by $11 billion. Such a saving is sure to catch the eye of HMOs and private health insurers. As Daniel Cherkin, a senior scientific investigator for a large HMO in Seattle, puts it, "Why something works is not of interest to those individuals and organizations providing care." What matters these days is that it works for less.

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CLEARLY EFFECTIVE

- Postoperative pain from dental surgery
- Nausea and vomiting from chemotherapy and anesthesia

MAY BE EFFECTIVE

- Migraines
- Tennis elbow
- Arthritis
- Menstrual cramps
- Low-back pain

UNCERTAIN

- Stroke rehabilitation
- Asthma
- Carpal-tunnel syndrome
- Immune-system enhancement

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