



Acupuncture Works – the Proof

A Compendium of Peer Reviewed Research Studies

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Take the Test

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SECTION ONE: PURPOSE AND INTRODUCTION

PURPOSE

As former President of Harvard University Derek Bok once said, “If you think education is expensive, try ignorance.” This quote applies to health care choices as well. Medical costs are skyrocketing in the U.S. when low-cost solutions from the field of acupuncture and Oriental medicine (AOM) are just waiting to be implemented. Sadly most Americans are ignorant about what AOM can do, and barely 1% of the population uses it. The purpose of this book is to give health care providers, patients, and legislators a tool to understand the effectiveness of acupuncture in treating a large number of health conditions. The benefits of Chinese herbal remedies and massage will be explored in ensuing books.

This book is divided into five sections:

1. This introduction
2. The author’s 1993 testimony before the U.S. Senate on the cost-effectiveness of acupuncture.
3. A compendium of acupuncture research studies, listed in alphabetical order by disease category, followed by studies on understanding the placebo effect, the importance of using Chinese research when compiling databases on acupuncture, and the economic effects of including acupuncture into healthcare systems.
4. The very latest research explaining how acupuncture works.
5. The Resolution passed by the National Foundation for Women Legislators at their 2009 Annual Conference supporting the inclusion of licensed acupuncturists in all federal and state insurance plans.

INTRODUCTION

“How is it possible for rich Americans to have diseases lasting five, ten, or fifteen years that only the very poorest people in China would have for such long periods of time – only those too poor to receive any medical care?” This question was posed to me by Dr. John Ho Fen Shen in December, 1975 when I first started my apprenticeship with him at his clinic in Boston. He sincerely wanted to know.

The simple answer is that doctors of Western medicine often do not know how to treat many problems that are easy for practitioners of acupuncture and Oriental medicine (AOM) to resolve inexpensively and quickly. Most Western M.D.’s have not had ready access to the wisdom which comes from thousands of years of accumulated Chinese medical knowledge, although more than 5,000 have studied acupuncture, a tribute to their intellectual curiosity and

integrity. However, by and large Western medical societies and schools have been too proud to adopt the humility needed to learn from another medical culture.

Even worse, ever since 1971 many have fought to maintain professional hegemony by actively suppressing the legal practice of acupuncture. That's when *New York Times* editor James Scotty Reston first reported on its benefits during a trip to China prior to President Nixon's first visit. Back then fewer than 300 unlicensed and unregulated acupuncturists practiced in the U.S., almost all in Chinatowns, and following publication of Reston's articles they were soon engulfed with demand for their services.¹

In response to this frenzy of demand, the American Medical Association (AMA) convened a July, 1972 meeting of the FDA and all 50 state Boards of Medical Examiners (BOMEX). Their purpose? To shut down the practice of acupuncture. The FDA immediately outlawed the use of acupuncture needles, except when used by M.D.'s in pre-approved hospital research protocols (of which there were none); and the various BOMEX ruled the practice of acupuncture by anyone who was not an M.D. to be a third degree felony.

Paul Root Wolpe, Ph. D., Yale University reveals this restraint of trade conspiracy in chilling detail in "The Maintenance of Professional Authority: Acupuncture and the American Physician" which appeared in *Social Problems*, Volume 32, No. 5, June , 1985. Thus, in Wolpe's words, "...an effective but enigmatic modality was removed from the medical regimen."²

Today America cannot afford the luxury of ignoring the benefits of acupuncture and traditional Chinese medicine. With health care costs approaching 18% of our gross national product, our Medicare and Medicaid expenditures are bankrupting the federal budget. There is a furious political debate going on about mechanisms to finance health care costs and structures to administer the delivery of health care services. However, little is being said about the actual types of health care being delivered, and very few politicians have considered AOM as a viable way to reduce health care costs.

For years three arguments have persisted against including the services of licensed acupuncturists in the federal health insurance system.

- 1. One is that there has not been enough research done to validate the cost-effectiveness of acupuncture.** - The research recounted in this book pretty much reveals this first argument to be logically untenable.
- 2. There are too few licensed acupuncturists to make an appreciable difference in the health care system.** - There are now there are 58 nationally accredited colleges of

¹ www.nytimes.com/1995/12/14/opinion/l-reston-helped-open-a-door-to-acupuncture-011282.html

² www.jstor.org/pss/800772

Acupuncture and Oriental Medicine in the U.S. which offer Master's degree programs with approximately 8,100 students in attendance; and there are 26,000+ licensed acupuncturists in America, enough to serve many millions of patients.

- 3. The government can't afford any new health care programs.** - This argument ignores a basic economic fact of life: when consumers are offered a more effective, lower priced product, they will often choose it instead of a higher priced option. Currently Medicare, Medicaid, and other federally and state funded insurances plans require American medical consumers to choose only from among the more expensive Western medical treatment options. The less costly AOM is not an option. Are conservative politicians honoring their oft cited rhetoric to "let the marketplace decide" by denying medical consumers the less expensive option of choosing AOM? Hardly.

Consider this example, which sums up much of what's wrong with our health care system. Because she did not have insurance coverage to pay the \$45,000 needed for a gall bladder removal (open), a 60 year old female patient suffering from an attack of gall stones came to see me after her M.D. insisted she get a cholecystectomy. After one acupuncture treatment and a week's worth of herbal remedies (total cost of \$100), she passed a number of softened gall stones and was pain and symptom free for five years thereafter.

Upon turning 65, she came to my office and thanked me profusely for restoring her health and saving her an enormous out of pocket expense. She also informed me that, because of the acupuncture and herbs, she had been able to wait until she reached Medicare age to get the cholecystectomy her M.D. had required. Of course by this time the operation was completely unnecessary, but the government was stuck with the cost for this frivolous procedure.

What do these cholecystectomy costs look like on a macro or national level? Never mind that cholecystectomies greatly increase the risk of subsequently developing colon cancer. I was unable to find U.S. statistics for the number of open and laproscopic cholecystectomies performed per year, but one Canadian study³ showed that for those over 18 years of age there were about 260 cholecystectomies per 100,000 Canadians per year.

Assuming conservatively that there are 200 million Americans over age 18, one may then calculate that there are 520,000 cholecystectomies performed in the U.S. per year. Over 80% of gall bladder removals are now performed laproscopically at a U.S. average national cost of \$11,400⁴ (whereas the open gall bladder removals are much more expensive). Thus the U.S. is spending more than \$6 billion a year on gall bladder removals! If only ten percent of these surgeries were prevented using AOM, there could be cost savings of \$600 million per year.

³ www.ncbi.nlm.nih.gov/pmc/articles/PMC556039/

⁴ [www.newchoicehealth.com/Laparoscopy.%20Cholecystectomy%20\(Gallbladder%20Removal\)-Cost](http://www.newchoicehealth.com/Laparoscopy.%20Cholecystectomy%20(Gallbladder%20Removal)-Cost)

One politician – a statesman, really - who has considered the possibility of AOM is U.S. Senator Tom Harkin of Iowa. He understands the importance of preventive medicine and of people taking personal responsibility to stay well, and since the early 1990's he's been an advocate for more medical research of all kinds and for research into alternative medicine.

In 1992, while I was President of the American Association of Acupuncture and Oriental Medicine (AAAOM), I met Senator Harkin in Miami at the home of the now departed Jerry Berlin, a great friend of acupuncture. The Senator was both heartened and dismayed to hear my story about the woman with gall bladder problems, and in 1993 he asked me to testify before the Senate Subcommittee on Healthcare Appropriations - which he chaired - on ways that acupuncture could reduce health care costs in America. That testimony immediately follows this section.

When I testified before the committee, there were very few peer reviewed studies about acupuncture published in American and European medical journals. In fact the staff at AAAOM could only find seven studies. To those we added three newspaper articles, five government reports, and two letters. One letter was from Dr. Margaret Naeser, Ph.D., L.Ac. who cited her successes treating stroke patients from the Veterans Administration at the Boston University School of Medicine. The other was from Howard Moffatt, Director of the HIV/AIDS program at the American College of Traditional Chinese Medicine in San Francisco.

Since then there has been an explosion of published research into the effectiveness and mechanisms of acupuncture. In 1997 the National Institutes of Health issued a Consensus Statement on Acupuncture, a summary of which I have included on page 104 of this book. Many, many other studies have followed, and I have chosen a sampling of 156 for your consideration which relate to 52 different health conditions. Most of the studies selected say that acupuncture is effective for the condition discussed; many say that more and better designed research studies are needed; and a few studies conclude that acupuncture is ineffective for the specific ailments being investigated.

HOW THE STUDIES IN THIS BOOK WERE SELECTED

Peer reviewed studies are quite explicit in discussing their methods of research, and they aim to exclude observer error and bias. The process I followed in selecting studies was not nearly so objective, but it was not intentionally skewed to document only positive outcomes for acupuncture treatments. Here are the steps I took:

1. In 2009 the AAAOM was supporting passage of HR 656, the Federal Acupuncture Coverage Act which Congressman Maurice Hinchey had sponsored and repeatedly reintroduced since 1993. As part of that effort, AAAOM gathered together nearly fifty

(50) research articles as evidence that acupuncture is cost-effective. These were passed on to AAAOM's legislative aides Sam Brunelli and Beth Cole who presented them to federal legislators. Among those who were instrumental in gathering these studies were Claudette Baker, L.Ac., Carol Braverman, L.Ac., Michael Jabbour, L.Ac., and Rhonda Shine Wilbur, L.Ac. One such study (on the treatment of lower back pain) appeared in the *American Journal of Chinese Medicine* and was authored by Ralph Coan, M.D. et al. Among the first published in America, it remains one of my favorites.

2. In addition to the AAAOM collected studies, I used Google to find 100+ other examples of peer reviewed acupuncture research. I did not discriminate when choosing from among these as to whether or not the studies were positive or negative. However, I did attempt to select studies from only the most reputable Western journals and greatly minimized use of studies from Asia and explicitly pro-acupuncture American journals.
3. Had I used the latter, I could have provided many more emphatically positive studies about acupuncture. Of the 156 studies in this book, only two came from *Medical Acupuncture*, the journal of those five thousand plus American M.D.'s and D.O.'s (Doctors of Osteopathy) who practice acupuncture. *Medical Acupuncture* has published hundreds of well designed research papers on the efficacy of acupuncture for treating a myriad of diseases. It is a journal peer reviewed by M.D.'s and D.O.'s who themselves practice acupuncture, and few would be able to challenge the legitimacy of the research presented in their journal.
4. Similarly, I did not use any studies from *The American Acupuncturist*, one of the finest peer reviewed journals containing acupuncture research published in America. The Summer 2010 issue contains a comprehensive study on "Acupuncture in the Treatment of Hypertension: A Literature Review" which counters the negative assessments on acupuncture's efficacy in treating hypertension that appear as studies #48 and #49 in this book. Nor did I make use of any of the excellent studies which have appeared in the newsletter of the Society for Acupuncture Research (<http://www.acupunctureresearch.org/>). Finally, except for two studies from Hong Goo Zhen Liu and one from *CHINESE ACUPUNCTURE & MOXIBUSTION*, I did not include any of the literally thousands of studies on the efficacy of acupuncture which have appeared in Chinese, Japanese, and Korean journals.

Regarding Asian research, by omitting reference to their work, I do not mean to offend the legions of dedicated scientists in China, Japan, and Korea who have done exemplary studies on the mechanisms and efficacy of acupuncture. For example, Dr. Ji-Sheng Han deserves enormous praise for his seminal work, [The Neurochemical Basis of Pain Relief by Acupuncture](#). Any serious scientist reading it will understand that there are distinct bio-chemical reasons to explain the pain relieving functions of acupuncture, way beyond any placebo effect.

This book was written to convince Euro-centric American patients, politicians, and scholars that acupuncture works. Thus I have primarily relied on European and American published research in this book. Over the past 40 years too many of these Americans have demonstrated an unwillingness to respect the abundant proof provided by Asian researchers that acupuncture is a legitimate and helpful treatment modality. This unwillingness long ago passed the boundary of ignorance and must be called out for what it is: cultural chauvinism. To ignore the treasure of traditional Asian medicine and to import instead only those goods that can be sold in Wal-Mart is the height of human folly. Unfortunately, this rank Euro-centric arrogance hurts Americans who suffer from ailments easily treated and who pay exorbitant healthcare costs as a result.

Thus, on balance, it is safe to say that the studies compiled herein form a very conservative representation of the efficacy of acupuncture.

I have also included six other studies:

- One explains the placebo effect when it comes to health care and especially acupuncture.
- Another stresses the importance of using Chinese research when compiling databases of acupuncture studies.
- Three more contemplate the economic effects of including acupuncture in a health care system, and
- One shows that no health-care system in the world has yet to implement explicit Cost-Effectiveness ratio thresholds!

Wherever possible, I have provided web hyperlinks to the actual research studies cited in the compendium. Please understand that the list herein of ailments treatable by acupuncture is by no means comprehensive. There are more than enough which have not been included to fill another book.

Regarding the lack of footnotes for attribution, I have quoted extensively from the studies selected, and all quotations come directly from the journal, study, and authors which immediately precede the ABSTRACT in which they appear.

SECTION 2: TESTIMONY BEFORE THE U.S. SENATE

Weblink: For the entire proceedings of this subcommittee, including my testimony delivered June 23, 1993, please visit:

http://www.archive.org/stream/alternativemedic00unit/alternativemedic00unit_djvu.txt

S. Hrg. 103-146

ALTERNATIVE MEDICINE
HEARING BEFORE A
SUBCOMMITTEE OF THE
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE
ONE HUNDRED THIRD CONGRESS
FIRST SESSION

SPECIAL HEARING

Printed for the use of the Committee on Appropriation

STATEMENT OF HARVEY KALTSAS, D.A., PRESIDENT OF THE AMERICAN ASSOCIATION OF ACUPUNCTURE AND ORIENTAL MEDICINE

Senator Harkin. And Dr. Harvey Kaltsas, President of the American Association of Acupuncture and Oriental Medicine. Again, Dr. Kaltsas, I have your statement. It will be made a part of the record.

Please proceed.

Dr. Kaltsas. Thank you, Senator. Mr. Chairman, today I will highlight some of the dramatic cost savings already brought about by acupuncture, a 5,000-year old healing system of traditional Chinese medicine that includes the use of heat therapy, massage, herbs, diet, lifestyle, and exercise counseling.

The AAAOM requests continued support for research by NIH's Office of Alternative Medicine into this discipline. We specifically ask that the OAM include the participation of certified acupuncturists, who are the real experts in this field, in its research plans. We also ask for Senate support of bills now being introduced in the House which will cover acupuncture under Federal health insurance.

Derek Bok, former president of Harvard University, once said, "If you think education is expensive, try ignorance." Well, unfortunately, the Federal Government is relatively uneducated about acupuncture, and its ignorance about what acupuncture can do is costing

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the Federal Government a great deal of money. For example, HCFA has recently ruled — well, 20 years ago ruled — that acupuncture is experimental, despite voluminous research on acupuncture's safety and effectiveness. HCFA has not reversed its ruling and, as a result...

Senator Harkin. Is that ruling still in existence?

Dr. Kaltsas. It is still in existence. And acupuncture is not included under Medicare part-B.

Senator Harkin. Is that FDA?

Dr. Kaltsas. No; that is HCFA, Health Care Financing Administration.

Senator Harkin. HCFA?

Dr. Kaltsas. It was actually a rule promulgated in 1984 under a former administration. Starting with California and Nevada, 23 States, and the District of Columbia now license acupuncturists. Most recently is Iowa. On May 18, 1993, the Governor of Iowa signed into effect an acupuncture bill.

The health care consumers in Iowa called our national organization and requested that we not involve ourselves in any way in their legislative process. They did not want the legislators in Iowa to think that it was acupuncturists pushing to get licensed. They wanted the legislators in Iowa to know that it was consumers who wanted the service available to them. So we completely stayed out of it, and the law passed in Iowa.

The same thing happened 2 months ago in Louisiana where 10,000 consumers who were tired of driving to Texas for acupuncture treatments petitioned their legislature. Unfortunately, the bill failed in Louisiana, but it is being reintroduced.

Now, every year the public demands that acupuncture be included under Medicare and other Federal programs, but in response, many legislators wonder, "With a deficit this big, how can we possibly include another group of health care providers under Medicare?" Actually, the legislators should be asking, "Where can we replace high-cost, high-technology care with low-cost acupuncture?"

We have to ask, "Why do the patients fight to get acupuncture included?" It takes a lot to get legislatures to approve groups of practitioners. The main reason is that patients do not really want health care insurance. They do not really even want health care. They want health. And, for many patients, acupuncture is their only way to regain their health.

A study in Florida showed that 96 percent of all acupuncture patients have already been to the medical doctors for care and could not find relief, and they came to acupuncture as a last

resort. And 80 percent of those very difficult patients got well.

How can acupuncture save the Federal Government money in this country? Let us look at China as an example for a moment. I know China has human rights abuses and it is not the ideal political system, but when it comes to health care, we have something to learn from them. America spends \$3,200 per year per person on health care. China spends \$71 per person per year; \$3,200 versus \$71. We have something to learn from them.

How do they get their health care costs so low? They use two basic capitalist principles. They increase the supply of health care providers. They legalized 500,000 Doctors of Acupuncture who work hand-in-glove with the medical doctors. There is no competition, no hierarchical structure. The medical doctors and the acupuncturists work hand-in-hand together, and they both educate their patients on how to stay well. The focus of health care in China is not treating illness, it is promoting health. And until we start doing that in this country, we are going to keep on with an \$800 billion a year health care bill.

I think 80 percent of all the health care expenditures in China are spent on pregnant women and children in the first 5 years of life. Senator Dodd is always quoting that 75 percent or so of our health care expenditures are on patients in the last 6 months of life in our country. So we have got to shift the focus to prevention.

One way China reduces demand is by having widespread public health education campaigns and by encouraging the use of low-cost acupuncture therapies. One thing we desperately need in this country is a national cancer registry so that all cases of cancer are registered, like they are in China. In China, the Government knows how many cases of a particular type of cancer are in a particular region. They look to see if there is a lead smelter in that region spewing lead downwind, and they close it down and clean up the area so people do not get cancer from the lead that is being spewed out. We do not have statistics like that in our country, but we should and we should put the mechanization to collect them in place.

Most Chinese families practice some very simple acupuncture, massage, and dietary therapies at home as a way of preventing illness. For example, there is an acupuncture point right here, between your thumb and index finger. If you rub it, it is good for preventing constipation and good for preventing and treating headaches. How many Americans know about this point? Very, very few. But the Asian Americans know about this in our own country. And the Federal Government spends less for the care of Asian Americans than for any other ethnic group in the country. We have something to learn from our own Asian Americans, and from our own Federal statistics.

Senator Harkin. Are you saying in America we spend less for the Asian American community on

health care than any other sector?

Dr. Kaltsas. Yes; that is right. Those are from Federal census statistics. Every day, American acupuncturists are educating American patients with this basic preventive Chinese wisdom. And what else are we trying to do to bring the health care costs from \$3,200 down to \$71?

Acupuncture is now used on 90 percent of all drug-related felons going through Miami drug court. Hugh Rodham is the Public Defender of Dade County and he refers all of his drug-related cases to the Miami drug court where they are given a choice of receiving acupuncture; 90 percent of the felons elect to attend acupuncture sessions. The cost for 1 full year of treatment is only \$750 per patient, and criminal recidivism among those who select acupuncture is now less than 7 percent. Normally, 50, 60 percent of people who have been through the criminal justice system get rearrested. The cost to process one case is over \$3,000. The cost for the acupuncture is only \$750.

New York City saves millions of dollars each year with acupuncture drug detox programs which dramatically reduce the time newborns must be sheltered while their mothers recover from crack-cocaine addiction. It is very expensive to keep newborn babies in hospitals instead of in their mothers' arms. Acupuncture puts the mothers back into their proper role of mothering by getting them off the crack-cocaine addiction.

Our own Veterans Administration researchers found that 61 percent of stroke patients with paralysis showed significant improvement following acupuncture. Our VA did the landmark studies of all the world acupuncture community by doing CAT scans of stroke patients' brains, finding out what part of the brain was damaged and then doing acupuncture with laser devices on those parts of the scalp.

In Czechoslovakia, they are doing the same type of work on brain-damaged babies and they do not have to institutionalize their children who have brain damage. Not keeping a child in a hospital saves millions of dollars for the countries of Czechoslovakia and Hungary. And I would like this to be instituted in our country. The laser device they use — you can get it from "Sharper Image." You know, it is the type they use to highlight things during speeches on the wall. It costs \$150. This is very inexpensive technology.

AIDS is another example where acupuncture is saving money. Yearly treatment with acupuncture in San Francisco Department of Health clinics costs less than \$3,400 per patient, and that figure includes herbs, weekly consultations and acupuncture treatments, lab work, and all administrative overhead. Clinical research that was just presented last weekend at a nationwide conference out in San Francisco shows that low-cost acupuncture and herbs are even more effective than treating AIDS with conventional, expensive Western therapies.

Acupuncture is very helpful in treating chronic pain syndromes. The FDA reports that acupuncture is used by doctors in 90 percent of German pain clinics; that the French National Health Plan covers acupuncture. The American Chiropractic, Osteopathic, and Veterinary Associations have all endorsed acupuncture as an effective therapy for the treatment of pain. Even Henry Kissinger's dog has been for acupuncture.

The conference report accompanying the National Institutes of Health Revitalization Act urges the Office of Alternative Medicine to coordinate research with other countries, foster training in alternative medicine, and disseminate its research findings. The AAAOM strongly supports the directive Congress has given OAM. China's Minister of Health, who is the brother-in-law of one of our AAAOM members, has assured our organization of full Chinese cooperation with United States research efforts. Other countries have made similar offers.

AAAOM requests that Congress fund the Office of Alternative Medicine to conduct domestic research staffed by State-licensed acupuncturists and to compile and translate acupuncture research done in Asia and Europe. It costs a lot less to translate than it does to conduct a new study. AAAOM also requests that the Senate pass a companion bill to parity legislation similar to legislation that was introduced in 1989 by Senator Barbara Mikulski.

The new legislation is being introduced in the House by Congressman Maurice Hinchey, and it guarantees that Federal workers have the right to choose a certified acupuncturist when receiving acupuncture care. Presently, the Federal Employees Health Benefits Plan covers acupuncture, but many of the policies only do so when it is provided by a medical doctor and you cannot go for acupuncture to somebody who is not certified in the discipline. We do not think this is fair.

The savings in drug detox costs alone for Federal workers could be substantial — 15 percent of all the American population is affected by chemical dependency. It is a very substantial cost to our society. And our profession is the only one that offers training in the prevention of chemical dependency and the treatment of chemical dependency. Medical schools only provide 2 hours of training in chemical dependency treatment and prevention — 2 hours in a whole course of medical school education. We offer 120 hours, leading to certification as certified addiction professionals. We want to teach the MD's how to approach their patients so they can prevent addiction and treat it when it develops.

We further request that the Senate pass companion legislation to a new House bill which includes acupuncture and acupuncturists under Medicare part-B. Blue Cross & Blue Shield of Maine estimated that covering acupuncture with their own policies, provided by licensed acupuncturists, costs less than \$1 per member per month.

PREPARED STATEMENT

To reiterate, "If you think education is expensive, try ignorance." As a society, we are now being presented with the bill for our ignorance of how to care for ourselves. We should learn from the example of Asian Americans and no longer dismiss their priceless medical heritage as experimental.

Senator Harkin. Very good. Dr. Kaltsas. Thank you very much.

[The statement follows:]

STATEMENT OF DR. HARVEY KALTSAS

Mr. Chairman and members of the Committee, I am Dr. Harvey Kaltsas, a Doctor of Acupuncture and the President of the American Association of Acupuncture and Oriental Medicine (AAAOM) which represents America's 7,000 state licensed acupuncturists. During this proceeding, I will illustrate some of the dramatic cost-savings already brought about by our profession, which has gained popularity in the USA only since President Nixon's visit to China in 1971. I will also request Senate support for research at NIH's Office of Alternative Medicine (OAM) into this discipline. I specifically request that OAM include the participation of state licensed acupuncturist in its research plan. I also ask for Senate support for bills now being introduced in the House which will cover acupuncture under federal health insurance.

I would like to start with a quote from Derek Bok, former President of Harvard University, "If you think education is expensive, try ignorance." The federal government is relatively uneducated about acupuncture, and that ignorance is costing plenty.

Acupuncture is the most commonly known therapy within the 5,000 year old healing system of Traditional Chinese Medicine (TCM), a system which also includes the use of heat therapy, massage, herbs, and dietary, lifestyle, and exercise counseling. When I speak about acupuncture hereafter I am referring to the entire system of Traditional Chinese Medicine. The practitioners of Traditional Chinese Medicine understood the circulation of blood 2,000 years before William Harvey articulated the concept in the West. And one thousand years "before Richard Williamson pioneered a modern glucose level test, Chinese doctors had discovered another method for detecting sugar they had patients pass urine on a wide, flat brick to see if ants gathered to collect the sugar. As far back as 752 A.D., pork pancreas was recommended as treatment for this disease, an approach similar to modern treatment by insulin."⁵

Yet this 5,000 year old system of healing has been ruled experimental by the Health Care Financing Administration (HCFA), which has ignored voluminous research on acupuncture s

⁵ Keli Tomoshaitis, Herbal Crossroads, May, 1993, K'an Herb Co., Soquel, CA.

safety and effectiveness and has excluded acupuncture coverage under Medicare. This is most inconsistent, because Medicaid pays for acupuncture in states such as New York and California; the Federal Employees Health benefits Plan covers acupuncture; millions of federal dollars are being spent on acupuncture drug detoxification programs, and Master's degree level programs in acupuncture are funded by the U.S. Department of Education, with over 500 new graduates each year.

We suspect HCFA is using the experimental label on acupuncture as a cost-containment measure. HCFA should reverse its acupuncture ruling immediately. By demanding acupuncture coverage, HCFA is inflating costs instead of containing them. Ironically, the same research that shows that acupuncture is safe also shows that it is quite dramatically cost-effective.

The Office of Alternative Medicine (OAM) has an opportunity to save the federal government, literally billions of dollars by identifying specific safe and effective acupuncture treatments for specific ailments. This will remove the unjustified blanket label of "experimental" that has been placed over all acupuncture treatment during the past twenty years. But first OAM must reach out for the expertise of the acupuncture community, both domestically and worldwide.

Thus far, the OAM has relied primarily upon the expertise of MDs in approaching acupuncture. This is a serious mistake because practitioners of Traditional Chinese Medicine, with years of schooling are the real experts in this field, not MDs, most of whom do not have the time to explore this discipline adequately. AAAOM strongly urges OAM to include state licensed acupuncturists on any future acupuncture research projects. Moreover, AAAOM urges that OAM follow up on offers from China, Taiwan, Japan, Russia and Europe to share its research. Translation is much faster and inexpensive than conducting new studies. OAM's recommendations can then spur the integration of acupuncture into other federal programs. Every year lost adds to needless human suffering and to the billions in wasted federal funds.

ACUPUNCTURE IN THE UNITED STATES

Over the past twenty years, since President Nixon's visit to China, some 6 percent or 15 million Americans have been treated with acupuncture.⁶ This low-cost, benign therapeutic system is especially helpful for children, the elderly, the chemically dependent, and those whose immune systems are compromised. Acupuncture often precludes the need for chemical pain killers, cortisone, and surgery, all of which carry serious side effects.

Starting with California in 1976, twenty-three states and the District of Columbia now license, certify, or register acupuncturists. Most recent of these is Iowa, where on May 6, 1993 the Governor signed legislation which for the first time in Iowa allowed non-MD's to practice. Since

⁶ Time/CNN poll Oct. 23, 1991 by Yankelovich Clancy Shulman.

so few MD's practice acupuncture, it had been virtually unavailable in Iowa heretofore. Not one acupuncturist or one penny of practitioner support was involved in passing the Iowa law. This was 100 percent the effort of health care consumers in Iowa.

Why are these citizens demanding that acupuncture care be made available to them? Eric Hoffer, LBJ's favorite philosopher, once said, "You can never get enough of what you don't really want to make you happy." The simple truth is that Americans do not really want health care insurance. They do not really even want health care. They want health. And that's what acupuncture offers — a way for many to regain health who could not do so otherwise.

A 1987 Florida study revealed that 96 percent of Florida acupuncture patients had already been unsuccessfully treated with conventional western medical care and then turned to a acupuncture as a last resort. Fully 80 percent of these difficult patients reported satisfactory results from acupuncture.⁷ Our patients are living proof that acupuncture has a unique contribution to make to America's health care system. What we offer is clearly not a replication of services.

Every year acupuncture gains in popularity. More than 82 private insurance carriers⁸ now cover acupuncture, and there has been growing public demand to include acupuncture under Medicare and other federal programs. In response, many legislators are asking "With the deficit this big, how can we possibly mandate coverage for another group of health care providers?"

Actually, legislators should be posing a more appropriate question, "What could the federal government save by including acupuncture in the American health care system?"

THE CHINESE EXAMPLE

Let us look at China for a moment. I expect that some don't want to hear about China because of its human rights abuses, and others don't like the fact that it is a communist country. But the simple truth is that China spends \$71 per person on health care per year, whereas America spends \$3,200.⁹ Granted the American population is healthier as a whole, but not by much. What accounts for this astounding discrepancy in health care costs per person?

China has observed two time-honored capitalistic principles to lower its costs, increase supply and reduce demand. First, China greatly increased its supply of medical providers in 1949 by

⁷ Dr. Christine R. Geiser, University of South Florida Anthropology Ph.d thesis, November 8, 1989, Tampa, FL

⁸ See Exhibit A, list compiled by AAAOM of insurance companies which have paid for acupuncture.

⁹ Chinese expenditures on health care computed as 5 percent of \$1.7 trillion GNP divided by 1.2 billion population. U.S. figure computed by dividing \$800 billion expenditure by 250 million population.

giving equal legal and social status to an army of 500,000 doctors of acupuncture and Traditional Chinese Medicine who offer low-cost, low-tech care.

Second, China has reduced demand by improving food supplies, implementing massive public sanitation projects and widespread public preventive health education campaigns, and encouraging the use of low-cost acupuncture therapies. China's preventive measures are low-cost and low-tech. They combine western medical knowledge and practical measures we should have long ago implemented in our country (such as a national cancer registry) with Traditional Chinese Medical wisdom. Actually, acupuncture is not so much a disease treatment system as it is a health promotion system.

As a result, most Chinese families understand prevention and practice some very simple therapies at home. For example, there are over a thousand acupuncture points on the body that can be useful in reinforcing health. Most people in China know at least some of these points and massage them if a problem is developing.

I'd like everyone here to spread their thumb and index finger of your left hand. Now please take your right thumb and press on the webbed area between your left thumb and forefinger until you feel a tender spot. You've just located a point, Hoku. When used regularly, it is often helpful in treating headaches, constipation, and a number of other ailments. Does it cost anything to rub it? Of course not. How many Americans know about this point? Very, very few.

Similarly, very few Americans understand that drinking cold liquids on a regular basis can disturb the digestive function, thereby weakening the immune and circulatory systems. Americans drink ice water with meals. Chinese drink hot tea. Do Chinese know something we don't? Until very recently, western medicine did not acknowledge the role of diet in creating or preventing disease, something understood for centuries in China. Now this is common knowledge in the West. American acupuncturists are working every day to educate our patients with similar valuable knowledge.

What other steps are acupuncturists taking to bring that \$3,200 figure closer to \$71?

ACUPUNCTURE IN THE TREATMENT OF CHEMICAL DEPENDENCY

The experience of the Miami Drug Court shows that acupuncture is a safe, inexpensive way to help most felons succeed at treatment and avoid continued addiction, probable re-arrest, and possible death. In fact, acupuncture is considered "State-of-the-Art Treatment" in the domain of chemical dependency.¹⁰ The State of Oregon concurred by mandating that "synthetic opiates [i.e. Methadone] shall be used only when . . . detoxification with acupuncture and counseling

¹⁰ "Third National Conference on Drugs and Crime" booklet, 1/31-2/3/93, National Consortium of TASC Programs, 4444 North Capitol Street, N.W. Suite 642, Washington, D.C. 20001.

have proven ineffective or upon the written request of a physician . . . showing medical need.
...¹¹

Why? Because acupuncture works, and it is very inexpensive. Eighty percent of arrestees, nationwide test positive for drugs. Hugh Rodham, Public Defender for Dade County, Florida, [and brother of Hillary Clinton] now refers all of his drug abusing clients for acupuncture through the Miami Drug Courts.¹² Acupuncture provides the physical support which keeps felons enrolled in the treatment and counseling process, dramatically relieving the biochemical stress of withdrawal and rapidly accelerating physiological recovery.

In two full years of operation, 4,296 felony drug possession arrestees entered the Miami program. The 1,600 graduates have a 3 percent re-arrest rate. The 1,153 individuals still in the program have a 7 percent re-arrest rate. Cost is only \$750 per client for a full year of acupuncture treatment.¹³ What would it cost not to treat these patients with acupuncture? On a more positive note, imagine the savings if our national recidivism rate were only 3 percent. The City of New York also saves millions of dollars each year with acupuncture detox programs that dramatically reduce the time the City must house newborns while the mothers recover from crack cocaine addiction.¹⁴ Without acupuncture, what would the expense to society be? Bullock and Culliton noted that in a six month alcoholism treatment study, compliance and retention increased from 5 percent of the patient population without acupuncture to 35 percent with acupuncture.¹⁵

Sir Jay Holder, Director of the 250 bed Village Addiction Treatment Center in Miami and the first American ever to be awarded the Albert Schweitzer Prize in medicine, conducted the first true placebo study of acupuncture in the treatment of chemical dependency. Dr. Holder concluded that "patients who complete at least ten days of auricular [ear acupuncture] therapy and do not receive intercurrent medications would be ten times more likely [96 percent] to complete a thirty day residential program than they would without auricular therapy."¹⁶

¹¹ Oregon Legislative Assembly, 1991 Regular Session, House Bill 2580.

¹² Personal interview with Hugh Rodham, 4/29/93; interview in the St. Petersburg Times, "The Good Points of Acupuncture," May 16, 1993, Page 2F.

¹³ See Exhibit B, Summary of report from the Metropolitan Dade County, Office of Rehabilitation Services, Diversion and Treatment Program.

¹⁴ See Exhibit C, "Acupuncture As a Treatment for Drug Dependent Mothers," Testimony presented by Michael Smith, MD to the NY City Council 4/11/88.

¹⁵ "Acupuncture treatment of alcoholic recidivism; a pilot study" by Bullock, Culliton, et al., Alcoholism — NY, June 1987; reprinted in Lancet, 1989.

¹⁶ See Exhibit D, Sir Jay M. Holder, DC, MD, Robert Duncan, Ph.D, et al. "A New Auricular Therapy Formula to Increase Retention of the Chemical Dependent in Residential Treatment" by Research study funded by the State of Florida, Department of Health and Rehabilitative Services.

In the realm of addictionology, these figures compare with Michael Jordan's performance in basketball.

The real key to resolving the problem of chemical dependency, which afflicts 15 percent of the population, is education — starting with health care professionals, who in turn should educate their patients on the nature, prevention, and treatment of drug addiction. However, acupuncture is presently America's only primary care profession which offers significant, comprehensive training leading to certification as a Certified Addiction Professional. Medical schools generally only teach two to three hours on the treatment of chemical dependency during the entire education of an MD. In fact, the western medical tradition is itself drug dependent and continually sends out a strong pro-drug message with every prescription written. Acupuncture does just the opposite.

In what other areas could our federal government save money by supporting the expanded use of acupuncture in the U.S.?

STROKE, PARALYSIS, AND BRAIN DAMAGED BABIES

The Veterans Administration, in association with the Boston University School of Medicine, has conducted landmark research with the use of acupuncture to treat paralysis caused from stroke. Federal researchers found that "61 percent of the stroke patients with paralysis showed significant improvement following acupuncture", and are now able to predict with 95 percent accuracy which stroke patients are likely to benefit from acupuncture." Once again, acupuncture proves to be safe and cost-effective.¹⁷

Dr. Margaret Naeser, one of the stroke study researchers, also reports the following on the use of acupuncture for the treatment of brain damaged babies in Czechoslovakia and Hungary: "The acupuncture is begun within the first 10 days post- birth, or within the first year, post-birth. Dr. Michaela Lidicka, from Czechoslovakia, has data which shows the brain-damaged babies who begin treatment with acupuncture within the first year of life, do not have to be institutionalized for care. Their records are complete up to 5 years, so far. This represents a great cost saving for medical care in their countries. Their results are better for babies born with brain damage due to lack of oxygen at birth, than for babies born with brain damaged due to genetic defect. The reputation of acupuncture in treating babies with brain damage has spread in Prague and Budapest, and as a result, most babies born with brain damage are now routinely referred to these acupuncturists for treatment ... as soon as possible, post-birth."¹⁸

AIDS

¹⁷ See Exhibit E, letter from Margaret A. Naeser, Ph.D. to AAAOM, September 9, 1991.

¹⁸ See Exhibit E, op. cit.

Acupuncture has proven to be a low-cost, benign complement to conventional medicine in the treatment of AIDS. At the First International Conference of HIV, AIDS, and CHINESE MEDICINE held in San Francisco June 18-20, 1993, research was presented attesting to acupuncture's popularity and effectiveness at treating AIDS related diseases. Acupuncture is especially effective for managing such AIDS symptoms as diarrhea, fatigue, hepatitis, irritable bowel syndrome, joint pain, night sweats, and peripheral neuropathy.

In patients receiving acupuncture treatment, CD4 cells, which indicate the strength of the immune system, showed a decline of only 4 percent after 2.5 years compared to 18 percent and 49 percent in non-acupuncture groups. A sizeable number of patients remained asymptomatic. In one study of 201 HIV patients, those using only acupuncture and herbs did better than those using a combination of Chinese medicine and western medications.

In 1992, the American College of Traditional Chinese Medicine (ACTCM) in San Francisco received a first of its kind contract from the Department of Public Health to provide acupuncture care. Even with such an expensive disease as AIDS, the yearly cost for weekly treatment in this public clinic setting runs less than \$3,400 per patient, and that figure includes herbal care, consultations, lab work, and administrative overhead. Once again, education is an essential part of managing this disease in the ACTCM program, which has a four month waiting list for entry.¹⁹

Sir Jay Holder considers acupuncture and Chinese herbs to be the most promising and cost-effective treatment for AIDS yet discovered. Dr. Holder asserts "There are very few things that can support the immune system as quickly, as effectively, and as inexpensively as acupuncture and traditional Chinese medicine."²⁰

This is not to suggest that acupuncture is a substitute for all other conventional therapies. But when these treatments are coordinated, acupuncture provides a safe and gentle support system for patients too weak to withstand the side effects of pharmaceuticals or surgery.

CANCER

It is often said that there are tremendous medical discoveries awaiting humanity within the flora and fauna of the Amazon rain forests, and that we must save them to preserve their treasures for posterity. Within the world of acupuncture and TCM [Traditional Chinese Medicine], many such treasures have already been found and developed. Over 5,000 herbs and 25,000 herbal formulae are now commonly used in TCM.

¹⁹ See Exhibit F, Report from Howard Moffett, on ACTCM HIV Clinic Program.

²⁰ Personal interview, June 16, 1993.

In China, herbs help significantly in the management of cancer when used as an adjunct to surgery, chemotherapy, and radiation. The Journal of the American Medical Association, 1/27/84, reported that life expectancy doubled for patients with rapidly advancing cancers when Chinese herbs [which cost pennies a day], were added to the treatment plan. JAMA noted that in general "patients who received Fu-Zheng [herbal] therapy survived longer and tolerated their treatment better than those patients who were treated by western medicine alone. ... In addition, the five year survival rate was twice as high among patients with nasopharyngeal cancer . . . (53 percent v. 24 percent)."²¹

Another article in JAMA, 11/10/89, noted acupuncture's success treating nausea for chemotherapy.

PAIN

Acupuncture is perhaps best known for its ability to manage chronic pain syndromes. In one study of over 20,000 patients at UCLA, acupuncture reduced both the frequency and the severity of muscle tension headaches and migraines.²² Other studies document acupuncture's marked ability to reduce neck and back pain, with 58 percent of the treatment groups maintaining improvement after 40 weeks.²³

The American Chiropractic, Osteopathic, and Veterinary Associations have all endorsed acupuncture as an effective therapy. Even Henry Kissinger's dog has been treated with acupuncture!²⁴

And the AMA, while citing its shortcomings, acknowledges that "Acupuncture ... is considered particularly effective in the treatment of migraine and tension headaches, but it is often used in the treatment of visceral pain as seen with cholelithiasis, appendicitis, gastritis, renal colic and peptic ulcer. . . ."²⁵

A 1991 study from the FDA's Office of Science and Technology reports that acupuncture is used by doctors in 90 percent of German pain clinics and is covered under the French national health plan.²⁶ This study goes on to quote R.H. Bannerman, a Programme Manager of the World

²¹ See Exhibit G, JAMA, 1/2/84, "East meets West to balance immunologic yin and yang."

²² Millman, B. "Acupuncture: Context and Critique," American Review of Medicine 28 (1977): 223-36.

²³ See Exhibit H, Coan, Wong, et al., "The Acupuncture Treatment of Neck Pain, Am. Journal of Chinese Medicine, Vol. EX, No. 4, pp. 326-332".

²⁴ Personal interview with Allen Schoen, D.V.M.

²⁵ See Exhibit I, AMA Resolution 126 (A-81).

²⁶ See Exhibit J, C.D. Lytle, Research Biophysicist, Health Sciences Branch, FDA, Division of Life Sciences, Office of Science and Technology, CDRH, "A Review of Acupuncture and Acupuncture Needles in the U.S.," 1991.

Health Organization: ". . . the sheer weight of evidence demands that acupuncture must be taken seriously as a clinical procedure of considerable value."²⁷

REQUESTS FOR CONGRESSIONAL SUPPORT

Acupuncture represents the greatest unexplored treasure trove of medical information on the planet today, and China has freely offered us the benefits of literally millennia of research. One of our members, Cecilia Chang, is sister-in-law to the Minister of Health for all China, and he has assured full Chinese cooperation with almost any U.S. research effort. The Taiwanese, Japanese and Europeans have made similar offers. AAAOM requests that Congress fund the Office of Alternative Medicine to support domestic acupuncture research and to compile and translate acupuncture research done in Asia and Europe.

We remind the Subcommittee that the Act reauthorizing the NIH Office of Alternative Medicine specifies that "[t]he purpose of the Office is to facilitate the evaluation of alternative medical treatment modalities, including acupuncture and Oriental medicine. . . . P.L. 103-43, Section 404E.

In the Conference Report accompanying the NIH Revitalization Act, H.R. Conf. Rep. No. 100, 103d Cong., 1st Sess., p. 117, the Conferees urged the OAM to accomplish the following:

- (1)** formulate a plan for future research activities at NIH;
- (2)** provide fellows authorized under this legislation the opportunity to engage in program and policy analysis, as well as perform clinical research;
- (3)** coordinate research efforts with those of other countries;
- (4)** develop databases which would support both research and information transfer functions;
- (5)** foster training in the area of alternative medicine; and
- (6)** disseminate its research findings through conferences and other forms of professional communication.

AAAOM strongly supports the directives that Congress has given to OAM. We specifically ask that OAM include the meaningful participation of state licensed acupuncturists, as research fellows, in the development, implementation, and evaluation of OAM's research plan to investigate acupuncture. We ask that as part of its research plan, OAM consult with representatives of HCFA to establish reasonable scientific criteria to remove the twenty year old "experimental" status of acupuncture.

²⁷ See Exhibit J, C.D. Lytle, op. cit.

AAAOM also requests that the Senate pass a companion bill to parity legislation being introduced by Congressman Maurice Hinchey which guarantees freedom of choice of health care providers for federal workers insured by the Federal Employees Health Benefits Program.

Some FEHBP policies presently cover acupuncture, but only when performed by an MD. The Hinchey legislation would leave insurance companies with the right to choose whether or not to cover acupuncture. But if they choose to cover acupuncture, then they must pay for the service when provided by a state certified, licensed, or registered acupuncturist. This sounds silly, but some FEHBP policies only cover acupuncture when performed by an MD, and not many MDs are well-trained in acupuncture. Savings in drug detox costs alone for federal employees could be substantial.

When similar parity legislation was reviewed by the State of Maine, its Mandated Benefits Advisory Commission concluded that "[s]ince the proposed mandate applies only to policies which already cover acupuncture, the financial impact would be minimal."²⁸ The Maine study also explored the economic impact of requiring insurance policies to cover acupuncture and include acupuncturists as providers: "Blue Cross and Blue Shield estimate that addition of licensed acupuncturists as providers would add less than \$1 per member per month to pure premium if coverage of the service were mandated."²⁹

As a result, BC/BS of Maine has chosen to provide acupuncture coverage for all State of Maine employees and school teachers. With this in mind, AAAOM requests that the Senate pass a companion bill to one being introduced by Congressman Hinchey which would include acupuncture and acupuncturists under Medicare Part B.

CONCLUSION

To reiterate, "If you think education is expensive, try ignorance." As a society, we are now being presented with the bill for our ignorance of how to care for ourselves. We must increase the supply of those who would teach us how to live in harmony with life. By so doing, we can reduce the demand for expensive health care services.

U.S. Government research shows that Asian-Americans spend less federal health care dollars per person than any other ethnic group. We should learn from their example and not dismiss their medical heritage as "experimental." Frankly, we can no longer afford to do so.

²⁸ See Exhibit K, State of Maine Mandated Benefits Advisory Commission, "Reports on Acupuncture," 1992.

²⁹ See Exhibit K, State of Maine, *op. cit.*

SECTION THREE: PEER-REVIEWED RESEARCH STUDIES

ALLERGIC RHINITIS

1.

Journal: *Ann Allergy Asthma Immunol.* 2008 Nov;101(5):535-43.

Title: [Acupuncture in patients with allergic rhinitis: a pragmatic randomized trial.](#)

Authors: Brinkhaus B, Witt CM, Jena S, Liecker B, Wegscheider K, Willich SN.

Source: Institute of Social Medicine, Epidemiology, and Health Economics, Charité University Medical Center, Berlin, Germany. benno.brinkhaus@charite.de

ABSTRACT:

Objective: “To evaluate the effectiveness of acupuncture in addition to routine care in patients with allergic rhinitis compared with treatment with routine care alone.”

Methods: “In a randomized controlled trial, patients with allergic rhinitis were randomly allocated to receive up to 15 acupuncture sessions during a period of 3 months or to a control group receiving no acupuncture.”

Results: “Of 5,237 patients (mean [SD] age, 40 [12] years; 62% women), 487 were randomly assigned to acupuncture and 494 to control, and 4,256 were included in the nonrandomized acupuncture group. At 3 months, the RQLQ improved by a mean (SE) of 1.48 (0.06) in the acupuncture group and by 0.50 (0.06) in the control group (3-month scores, 1.44 [0.06] and 2.42 [0.06], respectively; difference in improvement, 0.98 [0.08]; $P < .001$). Similarly, quality-of-life improvements were more pronounced in the acupuncture vs. the control group ($P < .001$). Six-month improvements in both acupuncture groups were lower than they had been at 3 months.”

Conclusions: “The results of this trial suggest that treating patients with allergic rhinitis in routine care with additional acupuncture leads to clinically relevant and persistent benefits. In addition, it seems that physician characteristics play a minor role in the effectiveness of acupuncture treatment, although this idea needs further investigation.”

2.

Journal: *Am J Epidemiol.* 2009 Mar 1;169(5):562-71. Epub 2009 Jan 6.

Title: [Cost-effectiveness of acupuncture in women and men with allergic rhinitis: a randomized controlled study in usual care.](#)

Authors: Witt CM, Reinhold T, Jena S, Brinkhaus B, Willich SN.

Source: Social Medicine, Epidemiology, and Health Economics, Charité University Medical Center, Berlin, Germany. claudia.witt@charite.de

ABSTRACT:

Objective: “To assess quality of life and cost-effectiveness of additional acupuncture treatment for allergic rhinitis...”

Methods: 981 patients were randomly allocated to 2 groups; both received usual care, but one group received an additional 10 acupuncture sessions”

- Results:** "At 3 months, quality of life was higher in the acupuncture group than in the control group"
- Conclusion:** "Acupuncture, supplementary to routine care, was beneficial and, according to international benchmarks, cost-effective. However, because of the study design, it remains unclear whether the effects are acupuncture specific."

ANGINA PECTORIS

3.

- Journal:** *J Altern Complement Med. 1999 Oct;5(5):405-13.*
- Title:** [Addition of acupuncture and self-care education in the treatment of patients with severe angina pectoris may be cost beneficial: an open, prospective study.](#)
- Authors:** Ballegaard S, Johannessen A, Karpatschhof B, Nyboe J.
- Source:** Acupuncture Centre, Hellerup, Denmark. ballegaard@akupunktur.dk
- ABSTRACT:**
- Objective:** "A cost-benefit analysis of acupuncture and self-care education in the treatment of patients with angina pectoris."
- Methods:** "An open prospective study on an unselected group of patients. For comparison of risk three control groups were used: (1) published data concerning medical and invasive treatments; (2) an age- and sex matched group obtained from a randomly selected Danish population of 14,000 people; and (3) the 211 patients in this group with angina pectoris symptoms."....."The treatment was carried out on an outpatient basis in a private research clinic."....."105 patients with angina pectoris, 73 candidates for invasive treatment, and 32 for whom this was rejected."..... "Acupuncture and self-care education was added to the pharmaceutical treatment.".....To measure results: "Healthcare expenses, a satisfactory medical status defined as New York Heart Association (NYHA) classification 0-I and/or no use of antianginal medication, and risk measured as cardiac death or myocardial infarction."
- Results:** "The estimated cost savings during 5 years were \$32,000 (U.S.) per patient, mainly due to a 90% reduction in hospitalization and 70% reduction in needed surgery. Compared to 8% before treatment, 53% of the patients achieved a life without limitations (NYHA 0-I) 1 year after treatment, as did 69% after 5 years. No increased risk for myocardial infarction or cardiac death was observed."
- Conclusions:** "The addition of acupuncture and self-care education was found to be cost beneficial in patients with advanced angina pectoris. The results invite further testing in a randomized controlled trial."

BREECH BIRTH VERSION

4.

- Journal:** *Complement Ther Med. 2010 Apr;18(2):67-77. Epub 2010 Feb 7.*
- Title:** [Cost-effectiveness of breech version by acupuncture-type interventions on BL 67, including moxibustion, for women with a breech foetus at 33 weeks gestation: a modelling approach.](#)

Authors: van den Berg I, Kaandorp GC, Bosch JL, Duvekot JJ, Arends LR, Hunink MG.
Source: Department of Epidemiology, Erasmus MC, University Medical Center Rotterdam, Rotterdam, The Netherlands. ineke.vandenberg@erasmusmc.nl

ABSTRACT:

Objective: “To assess, using a modelling approach, the effectiveness and costs of breech version with acupuncture-type interventions on BL67 (BVA-T), including moxibustion, compared to expectant management for women with a foetal breech presentation at 33 weeks gestation.”

Methods: “A decision tree was developed to predict the number of caesarean sections prevented by BVA-T compared to expectant management to rectify breech presentation. The model accounted for external cephalic versions (ECV), treatment compliance, and costs for 10,000 simulated breech presentations at 33 weeks gestational age. Event rates were taken from Dutch population data and the international literature, and the relative effectiveness of BVA-T was based on a specific meta-analysis. Sensitivity analyses were conducted to evaluate the robustness of the results.

“MAIN OUTCOME MEASURES: We calculated percentages of breech presentations at term, caesarean sections, and costs from the third-party payer perspective. Odds ratios (OR) and cost differences of BVA-T versus expectant management were calculated. (Probabilistic) sensitivity analysis and expected value of perfect information analysis were performed.”

Results: “The simulated outcomes demonstrated 32% breech presentations after BVA-T versus 53% with expectant management (OR 0.61, 95% CI 0.43, 0.83). The percentage caesarean section was 37% after BVA-T versus 50% with expectant management (OR 0.73, 95% CI 0.59, 0.88). The mean cost-savings per woman was euro 451 (95% CI euro 109, euro 775; p=0.005) using moxibustion. Sensitivity analysis showed that if 16% or more of women offered moxibustion complied, it was more effective and less costly than expectant management. To prevent one caesarean section, 7 women had to use BVA-T. The expected value of perfect information from further research was euro0.32 per woman.”

Conclusions: “The results suggest that offering BVA-T to women with a breech foetus at 33 weeks gestation reduces the number of breech presentations at term, thus reducing the number of caesarean sections, and is cost-effective compared to expectant management, including external cephalic version.”

CANCER CARE – IMPROVING QUALITY OF LIFE

5.

Journal: *Integr Cancer Ther June 2010 vol. 9 no. 2, 10.1177/1534735409360666 158-167*

Title: [Acupuncture as Palliative Therapy for Physical Symptoms and Quality of Life for Advanced Cancer Patients](#)

Authors: Clower, Doherty-Gilman, Keshaviah, Baker, Kaw, Lu, Manola, Penson, Matulonis, Rosenthal

Source: Dana-Farber Cancer Institute, Boston, MA, USA, Harvard Medical School, Boston, MA, USA

ABSTRACT:

Objective: “Acupuncture is underutilized as an adjunct cancer therapy. The main study objectives were to determine the feasibility of administering acupuncture as palliative therapy to patients with advanced ovarian or breast cancer and to assess the effect on symptoms and quality of life (QOL).”

Methods: “This study was a pilot, single-armed prospective clinical trial for patients with advanced cancer to receive 12 acupuncture sessions over 8 weeks with follow-up at weeks 9 and 12. Ambulatory patients with advanced ovarian or breast cancer were enrolled to receive treatments at an outpatient academic oncology center. Symptom severity was measured before and after each acupuncture session. A composite QOL assessment tool, consisting of validated instruments, was completed at 5 time points.”

Results: “Forty patients enrolled in the study. Twenty-eight patients (70%; 95% confidence interval [CI] = 53%-83%) completed 4 weeks of treatment, and 26 patients (65%; 95% CI = 48%-79%) completed 8 weeks. Eight patients (20%) withdrew before receiving acupuncture, and 6 patients (15%) discontinued treatment early because of disease progression or scheduling demands. Among all 32 assessed patients, there was self-reported improvement immediately post-treatment in anxiety, fatigue, pain, and depression and significant improvement over time for patients with anxiety ($P = .001$) and depression ($P = .02$). Among patients experiencing baseline symptoms, there was improvement in anxiety ($P = .001$), fatigue ($P = .0002$), pain ($P = .0002$), and depression ($P = .003$). QOL measures of pain severity and interference, physical and psychological distress, life satisfaction, and mood states showed improved scores during treatment, with sustained benefit at 12 weeks.”

Conclusions: “This pilot study demonstrates that an 8-week outpatient acupuncture course is feasible for advanced cancer patients and produces a measurable benefit that should be evaluated in controlled trials.”

5.a.

Journal: *Hematol Oncol Clin North Am.* 2008 August; 22(4): 631–viii.
doi: 10.1016/j.hoc.2008.04.005.

Title: [The Value of Acupuncture in Cancer Care](#)

Authors: Weidong Lu, MB, MPH, Elizabeth Dean-Clower, MD, MPH, Anne Doherty-Gilman, MPH, and David S. Rosenthal, MD

Source: Harvard Medical School, Boston, Massachusetts
Leonard P. Zakim Center for Integrative Therapies, Dana-Farber Cancer Institute, Boston, Massachusetts
Corresponding author for proof and reprints
Coauthors addresses: Weidong Lu, MB, MPH, Staff acupuncturist, Leonard P. Zakim Center for Integrative Therapies, Dana-Farber Cancer Institute, 44 Binney Street, SWB Rm. 560, Boston, MA 02115, Tel: 617-632-3322, Fax: 617-632-3988,

Weidong_lu@dfci.harvard.edu

ABSTRACT:

- Objective:** To conduct a “Systematic Review of Acupuncture Use in Clinical Cancer Care”
- Methods:** An exhaustive review of peer-reviewed literature on the topic of Clinical Trails and Systematic Review of Acupuncture Use in Clinical Cancer Care
- Results:** The effects of acupuncture on ten clinical conditions were assessed in ten different studies:
1. Chemotherapy-induced nausea & vomiting: “Patients in the acupressure group experienced less nausea on the day treatment compared to controls ($p<0.05$)”
 2. Post-operative nausea and vomiting: “The complete response rate was 77% vs. 64% and 42% ($p=0.01$); electro-acupoint stimulation is more effective in controlling nausea.”
 3. Cancer pain: “Pain intensity decreased by 36% at 2 month from baseline in the study group ($p<0.0001$)”
 4. Postoperative pain: “Patients in the massage and acupuncture group with usual care experienced a decrease of 1.4 points on a pain scale ($p=0.038$)”
 5. Post-thoracotomy wound pain: “A trend for lower visual analogue scale pain score in the electroacupuncture group was observed. Post-operative morphine use was significantly lower in electro-acupuncture group ($p<0.05$).”
 6. Hot flashes: “True acupuncture was associated with 0.8 fewer hot flashes per day than sham ($p=0.3$).”
 7. Hot flashes and psychological well-being: “Longitudinally, Patients in the electro-acupuncture group experienced a decrease of hot flashes $>50\%$ at 12 weeks and at 6 months follow-up.”
 8. Chemotherapy-induced leucopenia: “WBC counts in study group was significantly higher than that in control group ($p<0.05$).”
 9. Post-chemotherapy fatigue: “The mean improvement from baseline fatigue score was 31.3% (95% CI: 20.6%–41.5%).”
 10. Radiation induced xerostomia: “Response rate as improvement of 10% or better from baseline Xerostomia Inventory (XI) was 70%; 48% of patients received benefit of 10 points or more on the XI.”
- Conclusion:** “Clinical research on acupuncture in cancer care is a new and challenging field in oncology. The results of clinical research will continue to provide us with clinically relevant answers for patients and oncologists. The evidence currently available has suggested that acupuncture is a safe and effective therapy to manage cancer and treatment related symptoms, while giving patients the ability to actively participate in their own care plan.

Future research requires the involvement of clinical researchers, clinicians, and patients. Development of innovative research methods is also crucial. It is expected that as more evidence continues to emerge, oncology acupuncture eventually will be integrated into standard oncology practice. The successful integration of acupuncture at major academic medical and research facilities,

such as DFCI [Dana-Farber Cancer Institute] and other major cancer centers, underscores the need for and value of acupuncture in cancer care.”

CARDIAC ARRHYTHMIAS

6.

Journal: *Heart Lung. 2008 Nov-Dec;37(6):425-31. Epub 2008 Sep 11.*

Title: [The effects of acupuncture on cardiac arrhythmias: a literature review.](#)

Authors: Van Wormer AM, Lindquist R, Sendelbach SE.

Source: Arin M. Van Wormer, MS, University of Minnesota School of Nursing, 4-136 WDH, 308 Harvard St SE, Minneapolis, MN 55455, USA

ABSTRACT:

Objective: To determine the effectiveness of acupuncture on cardiac arrhythmias

Methods: “Several online databases were searched...”

Results: “According to the eight studies reviewed, 87% to 100% of participants converted to normal sinus rhythm after acupuncture.”

Conclusions: “Acupuncture seems to be effective in treating several cardiac arrhythmias, but the limited methodologic quality of the studies necessitates better-controlled clinical trials. For acupuncture to become a more viable intervention in Western medicine, more rigorous studies are needed with standardized treatment protocols, diverse patient populations, and long-term follow-up.”

CARPAL TUNNEL SYNDROME

7.

Journal: *J Altern Complement Med. 1999 Feb;5(1):5-26.*

Title: [Carpal tunnel syndrome: clinical outcome after low-level laser acupuncture, microamps transcutaneous electrical nerve stimulation, and other alternative therapies--an open protocol study.](#)

Authors: Branco K, Naeser MA.

Source: Acupuncture Healthcare Services, Westport, Massachusetts, USA.

ABSTRACT:

Objective: “Outcome for carpal tunnel syndrome (CTS) patients (who previously failed standard medical/surgical treatments) treated primarily with a painless, noninvasive technique utilizing red-beam, low-level laser acupuncture and microamps transcutaneous electrical nerve stimulation (TENS) on the affected hand; secondarily, with other alternative therapies.”

Methods: “Open treatment protocol, patients diagnosed with CTS by their physicians.”....” Treatments performed by licensed acupuncturist in a private practice office.”.....” Total of 36 hands (from 22 women, 9 men), ages 24-84 years, median pain duration, 24 months. Fourteen hands failed 1-2 surgical release procedures. INTERVENTION/TREATMENT: Primary treatment: red-beam, 670 nm, continuous wave, 5 mW, diode laser pointer (1-7 J per point), and microamps TENS (< 900 microA) on affected hands. Secondary treatment: infrared low-level laser (904 nm, pulsed, 10 W) and/or needle

acupuncture on deeper acupuncture points; Chinese herbal medicine formulas and supplements, on case-by-case basis. Three treatments per week, 4-5 weeks.”....Outcome Measures: “Pre- and post-treatment Melzack pain scores; profession and employment status recorded.”

Results: “Post treatment, pain significantly reduced ($p < .0001$), and 33 of 36 hands (91.6%) no pain, or pain reduced by more than 50%. The 14 hands that failed surgical release, successfully treated. Patients remained employed, if not retired. Follow-up after 1-2 years with cases less than age 60, only 2 of 23 hands (8.3%) pain returned, but successfully re-treated within a few weeks.”

Conclusions: “Possible mechanisms for effectiveness include increased adenosine triphosphate (ATP) on cellular level, decreased inflammation, temporary increase in serotonin. There are potential cost-savings with this treatment (current estimated cost per case, \$12,000; this treatment, \$1,000). Safe when applied by licensed acupuncturist trained in laser acupuncture; supplemental home treatments may be performed by patient under supervision of acupuncturist.”

8.

Journal: *Arch Phys Med Rehabil.* 2002 Jul;83(7):978-88.

Title: [Carpal tunnel syndrome pain treated with low-level laser and microamperes transcutaneous electric nerve stimulation: A controlled study.](#)

Authors: Naeser MA, Hahn KA, Lieberman BE, Branco KF.

Source: Department of Neurology, Boston University School of Medicine, Psychology Research Service, MA, USA. mnaeser@bu.edu

ABSTRACT:

Objective: “To investigate whether real or sham low-level laser therapy (LLLT) plus microamperes transcutaneous electric nerve stimulation (TENS) applied to acupuncture points significantly reduces pain in carpal tunnel syndrome (CTS).”

Methods: “Randomized, double-blind, placebo-control, crossover trial. Patients and staff administered outcome measures blinded.”.....” Setting: Outpatient, university-affiliated Department of Veterans Affairs medical center.”.....” Participants: Eleven mild to moderate CTS cases (nerve conduction study, clinical examination) who failed standard medical or surgical treatment for 3 to 30 months.”.....” Intervention: Patients received real and sham treatment series (each for 3-4wk), in a randomized order. Real treatments used red-beam laser (continuous wave, 15mW, 632.8nm) on shallow acupuncture points on the affected hand, infrared laser (pulsed, 9.4W, 904nm) on deeper points on upper extremity and cervical paraspinal areas, and microamps TENS on the affected wrist. Devices were painless, noninvasive, and produced no sensation whether they were real or sham. The hand was treated behind a hanging black curtain without the patient knowing if devices were on (real) or off (sham).”.....” Main Outcome Measures: McGill Pain Questionnaire (MPQ) score, sensory and motor latencies, and Phalen and Tinel signs.”

Results: “Significant decreases in MPQ score, median nerve sensory latency, and Phalen

and Tinel signs after the real treatment series but not after the sham treatment series. Patients could perform their previous work (computer typist, handyman) and were stable for 1 to 3 years.”

Conclusions: “This new, conservative treatment was effective in treating CTS pain; larger studies are recommended.”....Copyright 2002 by the American Congress of Rehabilitation Medicine and the American Academy of Physical Medicine and Rehabilitation

9.

Journal: *J Altern Complement Med. 1999 Feb;5(1):5-26.*

Title: [Carpal tunnel syndrome: clinical outcome after low-level laser acupuncture, microamps transcutaneous electrical nerve stimulation, and other alternative therapies--an open protocol study.](#)

Authors: Branco K, Naeser MA.

Source: Acupuncture Healthcare Services, Westport, Massachusetts, USA.

ABSTRACT:

Objective: “Outcome for carpal tunnel syndrome (CTS) patients (who previously failed standard medical/surgical treatments) treated primarily with a painless, noninvasive technique utilizing red-beam, low-level laser acupuncture and microamps transcutaneous electrical nerve stimulation (TENS) on the affected hand; secondarily, with other alternative therapies.”

Methods: “DESIGN: Open treatment protocol, patients diagnosed with CTS by their physicians.”.....”SETTING: Treatments performed by licensed acupuncturist in a private practice office.”.....”SUBJECTS: Total of 36 hands (from 22 women, 9 men), ages 24-84 years, median pain duration, 24 months. Fourteen hands failed 1-2 surgical release procedures. INTERVENTION/TREATMENT: Primary treatment: red-beam, 670 nm, continuous wave, 5 mW, diode laser pointer (1-7 J per point), and microamps TENS (< 900 microA) on affected hands. Secondary treatment: infrared low-level laser (904 nm, pulsed, 10 W) and/or needle acupuncture on deeper acupuncture points; Chinese herbal medicine formulas and supplements, on case-by-case basis. Three treatments per week, 4-5 weeks.”.....”OUTCOME MEASURES: Pre- and post treatment Melzack pain scores; profession and employment status recorded.”

Results: “Post-treatment, pain significantly reduced ($p < .0001$), and 33 of 36 hands (91.6%) no pain, or pain reduced by more than 50%. The 14 hands that failed surgical release, successfully treated. Patients remained employed, if not retired. Follow-up after 1-2 years with cases less than age 60, only 2 of 23 hands (8.3%) pain returned, but successfully re-treated within a few weeks.”

Conclusions: “Possible mechanisms for effectiveness include increased adenosine triphosphate (ATP) on cellular level, decreased inflammation, temporary increase in serotonin. There are potential cost-savings with this treatment (current estimated cost per case, \$12,000; this treatment, \$1,000). Safe when applied by licensed acupuncturist trained in laser acupuncture; supplemental home treatments may be performed by patient under supervision of

acupuncturist.”

CHRONIC VENOUS ULCERATION

10.

Journal: *Acupunct Med.* 2003 Dec;21(4):150-2.

Title: [Acupuncture for chronic venous ulceration](#)

Authors: Mears T.

Source: tim26@tesco.net

ABSTRACT:

Objective: To investigate the effect of acupuncture on blood flow and healing

Methods: Case Study. “Acupuncture was used to treat a 69-year-old man for bilateral ankle pain related to his rheumatoid arthritis.”

Results: “This led to a dramatic improvement in one of his chronic venous leg ulcers. There is very little recent literature on such cases, where acupuncture may be a useful additional treatment.”

Conclusions: “Case study on 69 y/o man with RA severe ankle pain. The effect of acupuncture on blood flow and healing has been investigated... and the mechanism is thought to be through both regional sympathetic inhibition and the release of vasodilator peptides, particularly calcitonin generated peptide (CGRP). The release of CGRP has been demonstrated in both skin and muscle as a consequence of antidromic stimulation of afferent nerves. The improvement is arterial blood flow following acupuncture improve(s) tissue oxygenation and healing...”

“The use of acupuncture in the specific treatment of ulceration is less widely documented in the English language medical literature. However Bacchini et al and Di Bernardo et al have investigated the use of acupuncture, particularly electroacupuncture in the treatment of arterial conditions, such as thromboangitis obliterans and Raynaud’s syndrome and trophic and venous ulceration, and report significant benefits. They attributed improved healing rates to the relief of arterial spasm and improvement in collateral circulation.”

DEPRESSION

11.

Journal: *Acupunct Med* doi:10.1136/aim.2009.002170

Title: [Acupuncture for depression and myalgia in patients with hepatitis: an observational study](#)

Authors: Tufan, Z., Arslan, H., Yildiz, F., Bulut, C., Irmak, H., Kinkli, S., Demiroz, A.,

Source: Infectious Diseases and Clinical Microbiology Department and Acupuncture Outpatient Department, Ministry of Health Ankara Training and Research Hospital, Etlik Ankara, Turkey

ABSTRACT:

Objective: “To investigate the efficacy of acupuncture treatment on depressive symptoms and myalgia in patients with hepatitis.”

Methods: "Of 44 patients with hepatitis screened for depression and myalgia, 28 were enrolled and included in the study. The main outcome measure for depressive symptoms was Beck's Depression Inventory (BDI). For pain/myalgia, patients rated their pain on a scale from 0 to 10. Patients with a score greater than the cut-off point in either score were allocated to acupuncture treatment. The Chinese method of acupuncture was used. Treatment continued for 6 weeks."

Results: "At baseline, 17/44 patients (39%) had a BDI score ≥ 17 and 24 (55%) had a pain score ≥ 5 . A total of 28 patients were allocated to acupuncture treatment, forming three groups: group 1, 13 patients with high BDI and high myalgia scores; group 2, 11 patients with low BDI score but high myalgia score; group 3, 4 patients with high BDI score but low myalgia score. Adherence to treatment was good; all patients completed the sessions and there were no drop-outs. Significant improvements in end-treatment BDI and in myalgia scores compared with baseline levels was found."

Conclusions: "Acupuncture seems to be a promising treatment for patients with hepatitis. Further studies are warranted in large populations to establish the therapeutic role of acupuncture."

12.

Journal: *J Altern Complement Med, 2009; 15(8): 837-44*

Title: [Combination of acupuncture and fluoxetine for depression: a randomized, double-blind, sham-controlled trial.](#)

Authors: Zhang WJ, Yang XB, et al.,

Source: Address: Beijing MeiTan General Hospital, Beijing, People's Republic of China

ABSTRACT:

Objective: To determine if acupuncture may limit dose of anti-depressant needed

Methods: "In a randomized, double-blinded, sham-controlled study involving 80 patients with major depressive disorder, treatment with acupuncture (5 treatments per week for 6 weeks) in addition to a low-dose of the anti-depressant, fluoxetine (10 mg/d)"

Results: [Acupuncture] "was found to be as effective at improving symptoms of depression as subjects who received a higher dose (the recommended dose) of fluoxetine (20-30 mg/d). Moreover, subjects who received acupuncture reported less side effects of the anti-depressant and greater improvement in symptoms of anxiety.

Conclusions: Acupuncture may benefit "depressive patients with severe anxious symptoms and/or intolerable side-effects of antidepressants...."

13.

Journal: *Obstet Gynecol. 2010 Mar;115(3):511-20.*

Title: [Acupuncture for depression during pregnancy: a randomized controlled trial.](#)

Authors: Manber R, Schnyer RN, Lyell D, Chambers AS, Caughey AB, Druzin M, Carlyle E, Celio C, Gress JL, Huang MI, Kalista T, Martin-Okada R, Allen JJ.

Source: Department of Psychiatry and Behavioral Sciences, Stanford University, Stanford,

California 94305, USA. rmanber@stanford.edu

ABSTRACT:

- Objective:** “To estimate the efficacy of acupuncture for depression during pregnancy in a randomized controlled trial.”
- Methods:** “A total of 150 pregnant women who met Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition) criteria for major depressive disorder were randomized to receive either acupuncture specific for depression or one of two active controls: control acupuncture or massage. Treatments lasted 8 weeks (12 sessions). Junior acupuncturists, who were not told about treatment assignment, needed participants at points prescribed by senior acupuncturists. All treatments were standardized. The primary outcome was the Hamilton Rating Scale for Depression, administered by masked raters at baseline and after 4 and 8 weeks of treatment. Continuous data were analyzed using mixed effects models and by intent to treat.”
- Results:** “Fifty-two women were randomized to acupuncture specific for depression, 49 to control acupuncture, and 49 to massage. Women who received acupuncture specific for depression experienced a greater rate of decrease in symptom severity ($P < .05$) compared with the combined controls (Cohen's $d = 0.39$, 95% confidence interval [CI] 0.01-0.77) or control acupuncture alone ($P < .05$; Cohen's $d = 0.46$, 95% CI 0.01-0.92). They also had significantly greater response rate (63.0%) than the combined controls (44.3%; $P < .05$; number needed to treat, 5.3; 95% CI 2.8-75.0) and control acupuncture alone (37.5%; $P < .05$; number needed to treat, 3.9; 95% CI 2.2-19.8). Symptom reduction and response rates did not differ significantly between controls (control acupuncture, 37.5%; massage, 50.0%).”
- Conclusions:** “The short acupuncture protocol demonstrated symptom reduction and a response rate comparable to those observed in standard depression treatments of similar length and could be a viable treatment option for depression during pregnancy.”

14.

- Journal:** *This is an 81 page reprint of a Cochrane review, prepared and maintained by The Cochrane Collaboration and published in The Cochrane Library 2010, Issue 1*
- Title:** [Acupuncture for depression \(Review\)](#)
- Authors:** Smith CA, Hay PPJ, MacPherson H
- Source:** Copyright © 2010 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

ABSTRACT:

- Objective:** “To examine the effectiveness and adverse effects of acupuncture in the treatment for depression.”
- Methods:** Authors searched the following databases: “CCDAN-CTR, Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE (1966 to Dec 2008), EMBASE (1980 to Dec 2008), PSYCINFO (1874 to Dec 2008), the Database of Abstracts of Reviews of Effectiveness (DARE), CINAHL (1980 to Dec 2008), Wan Fang database

(to Dec 2008).” They used the following terms: “depression, depressive disorder, dysthymic disorder and acupuncture.”

Results: “This review ... contains data from 30 studies.....There was a high risk of bias in the majority of trials. There was insufficient evidence of a consistent beneficial effect from acupuncture compared with a wait list control or sham acupuncture control. Two trials found acupuncture may have an additive benefit when combined with medication compared with medication alone. A subgroup of participants with depression as a co-morbidity experienced a reduction in depression with manual acupuncture compared with SSRIs (RR 1.66, 95%CI 1.03, 2.68) (three trials, 94 participants). The majority of trials compared manual and electro acupuncture with medication and found no effect between groups.”

Conclusions: “We found insufficient evidence to recommend the use of acupuncture for people with depression. The results are limited by the high risk of bias in the majority of trials meeting inclusion criteria.”

DIABETES

15.

Journal: *The Journal of Alternative and Complementary Medicine. April 2008, 14(3): 303-307. doi:10.1089/acm.2006.6064.*

Title: [Effect of Auricular Pellet Acupressure on Antioxidative Systems in High-Risk Diabetes Mellitus](#)

Authors: Chi-Feng Liu, Lee-Fen Yu, Chia-Hsien Lin, Song-Chow Lin

Source: National Taipei College of Nursing, Taipei, 112, Taiwan, R.O.C., Department of Nursing, Taipei Medical University, Wan-Fang Hospital, Taipei, Taiwan, R.O.C., Department of Nursing, Ching Kuo Institute of Management and Health, Keelung, Taiwan, R.O.C., Graduate Institute of Medical Science, College of Medicine, Taipei Medical University, Taipei, 110, Taiwan, R.O.C.

ABSTRACT:

Objective: To evaluate the impact of auricular pellet acupressure on antioxidative status in persons with high-risk Diabetes Mellitus.

Methods: “Subjects: Our study involved 69 persons with high-risk DM, who were allocated either to undergo acupressure as active treatment for the experimental group or to a control group.”.....”Interventions: The experimental group in the study received auricular pellet acupressure three times daily for 5 consecutive days. After a 2-day rest period, the procedure was performed on the contralateral ear. Acupressure was performed twice on each ear, with each application followed by its application to the contralateral ear, over a total treatment period of 20 days. The control groups did not undergo auricular pellet acupressure.”.....”Design and outcome measures: At the end of the 20-day period of treatment of the experimental group, blood was collected from all of the study participants for assay of serum superoxide dismutase (SOD) and catalase concentrations, as was also done for the control group.”

Results: “Serum concentrations of SOD ($p < 0.05$) and catalase ($p < 0.0001$) were

significantly higher in the experimental group than in the control group.”

Conclusions: “Our findings suggest that auricular pellet acupuncture can increase the concentration of antioxidative enzymes in persons with high-risk DM.”

16.

Journal: *J Altern Complement Med. 2008 Sep;14(7):833-9.*

Title: [A single-blinded, randomized pilot study evaluating effects of electroacupuncture in diabetic patients with symptoms suggestive of gastroparesis.](#)

Authors: Wang CP, Kao CH, Chen WK, Lo WY, Hsieh CL

Source: Department of Emergency Medicine, China Medical University Hospital, Taichung City, Taiwan, Republic of China.

ABSTRACT:

Objective: “Acupuncture has been widely used for gastrointestinal symptoms. The aim of this study was to investigate the effects of electroacupuncture (EA) on solid gastric emptying time, serum gastrin, motilin, pancreatic polypeptide (PP), fasting and postprandial blood glucose, and symptoms in patients with diabetic gastroparesis.”

Methods: “INTERVENTIONS: EA at the Zusanli (ST 36) and Hegu (LI 4) points and sham EA as control were administered by an experienced and licensed acupuncturist. DESIGN: This was a pilot study with a randomized, single-blinded design. SUBJECTS AND SETTING: Nineteen (19) patients with type 2 diabetes who had had symptoms of gastroparesis for more than 3 months were included in the trial and randomized into two groups. Each group received EA (n = 9) or sham EA (n = 10) consisting of 4 sessions over 2 weeks. OUTCOME MEASURES: Symptom severity was evaluated using the Gastroparesis Cardinal Symptom Index (GCSI) at baseline, at the end of treatment, and 2 weeks after the end of the trial; solid-phase gastric half-emptying time was measured by scintigraphy; in addition, serum gastrin, motilin, PP, fasting, and postprandial blood glucose levels were also measured.”

Results: “Gastric half-emptying time in 9 patients with diabetic gastroparesis was significantly shortened by EA treatment (143.8 +/- 55.9 minutes versus 98.8 +/- 28.6 minutes, p < 0.03). Half-emptying time did not change (98.9 +/- 26.4 minutes versus 90.9 +/- 24.8 minutes, p > 0.05) in the sham EA group. Symptom severity, as measured by GCSI total score, improved significantly both at the end of treatment (2.38 +/- 0.56 versus 1.48 +/- 0.19, p < 0.001) and 2 weeks after the end of the trial (2.38 +/- 0.56 versus 1.65 +/- 0.44, p < 0.01) when compared with the baseline in the EA group, but did not change from baseline with sham EA treatment. There were no significant changes in fasting and postprandial blood glucose, serum gastrin, motilin, and PP in both groups. No significant adverse events occurred.”

Conclusions: “This study demonstrates that short-term EA at the Zusanli and Hegu points effectively reduces the dyspeptic symptoms of diabetic gastroparesis and accelerates solid gastric emptying. Sustained improvement in dyspeptic

symptoms was observed at 2 weeks after the end of the trial. Its potential for treating gastroparesis may be explored, and a larger trial is required to draw definitive conclusions.”

DIABETIC PERIPHERAL NEURITIS AND NEUROPATHY

17.

Journal: *J Tradit Chin Med.* 2006 Mar;26(1):8-12.

Title: [Clinical study on the wrist-ankle acupuncture treatment for 30 cases of diabetic peripheral neuritis.](#)

Authors: Jiang H, Shi K, Li X, Zhou W, Cao Y.

Source: Department of Traditional Chinese Medicine, the 47th Hospital of Chengdu Military Medical College of the Third Military Medical University, Chengdu 610500, China.

ABSTRACT:

Objective: To study the mechanisms of wrist-ankle acupuncture for prevention and treatment of diabetic peripheral neuritis.

Methods: “Ninety cases of diabetic peripheral neuritis were randomly divided into 3 groups, and treated respectively with wrist-ankle acupuncture, body-acupuncture, and the western routine medical treatment, with 30 cases in each of the groups; and therapeutic effects and laboratory results compared.

Results: “It is proved that the therapeutic effects of the wrist-ankle acupuncture group and body acupuncture group were significantly superior to those of the control group, with no significant differences between the former two groups.”

Conclusions: “Wrist-ankle acupuncture has the actions of improving the metabolisms of blood sugar and blood-lipid, lowering down blood viscosity, and restoring the functions of peripheral nerve cells, thus giving definite therapeutic effects for diabetic peripheral neuritis.”

18.

Journal: *Diabetes Care.* 2000 Mar;23(3):365-70.

Title: [Percutaneous electrical nerve stimulation: a novel analgesic therapy for diabetic neuropathic pain.](#)

Authors: Hamza MA, White PF, Craig WF, Ghoname ES, Ahmed HE, Proctor TJ, Noe CE, Vakharia AS, Gajraj N.

Source: Eugene McDermott Center for Pain Management, Department of Anesthesiology and Pain Management, University of Texas Southwestern Medical Center at Dallas, 75235, USA.

ABSTRACT:

Objective: “To evaluate the use of percutaneous electrical nerve stimulation (PENS) in the management of patients with painful diabetic peripheral neuropathy.”

Methods: “A total of 50 adult patients with type 2 diabetes and peripheral neuropathic pain of >6 months duration involving the lower extremities were randomly assigned to receive active PENS (needles with electrical stimulation at an

alternating frequency of 15 and 30 Hz) and sham (needles only) treatments for 3 weeks. Each series of treatments was administered for 30 min three times a week according to a standardized protocol. After a 1-week washout period, all patients were subsequently switched to the other modality. A 10-cm visual analog scale (VAS) was used to assess pain, physical activity, and quality of sleep before each session. The changes in VAS scores and daily requirements for oral analgesic medication were determined during each 3-week treatment period. Patients completed the MOS 36-Item Short-Form Health Survey (SF-36), the Beck Depression Inventory (BDI), and the Profile of Mood States (POMS) before and after completion of each treatment modality. At the end of the crossover study, a patient preference questionnaire was used to compare the effectiveness of the two modalities.”

Results: “Compared with the pain VAS scores before active (6.2 +/- 1.0) and sham (6.4 +/- 0.9) treatments, pain scores after treatment were reduced to 2.5 +/- 0.8 and 6.3 +/- 1.1, respectively. With active PENS treatment, the VAS activity and sleep scores were significantly improved from 5.2 +/- 1.0 and 5.8 +/- 1.3 to 7.9 +/- 1.0 and 8.3 +/- 0.7, respectively. The VAS scores for pain, activity, and sleep were unchanged from baseline values after the sham treatments. Patients' daily oral nonopioid analgesic requirements decreased by 49 and 14% after active and sham PENS treatments, respectively. The post-treatment physical and mental components of the SF-36, the BDI, and the POMS all showed a significantly greater improvement with active versus sham treatments. Active PENS treatment improved the neuropathic pain symptoms in all patients.”

Conclusions: “PENS is a useful nonpharmacological therapeutic modality for treating diabetic neuropathic pain. In addition to decreasing extremity pain, PENS therapy improved physical activity, sense of well-being, and quality of sleep while reducing the need for oral nonopioid analgesic medication.”

DRY EYE SYNDROME

19.

Journal: *J Altern Complement Med, 2010 Dec; 16(12): 1291-4.*

Title: Acupuncture reduces symptoms of dry eye syndrome: a preliminary observational study

Authors: Jeon JH, Sin MS, et al,

Source: unknown

ABSTRACT:

Objective: To determine if acupuncture can effectively reduce the symptoms of dry eye syndrome

Methods: “a prospective, observational study involving 36 patients with dry eye disease, treatment with acupuncture (3 treatments per week for 4 weeks)”

Results: Acupuncture “was found to significantly reduce symptom scores, ocular surface disease index scores, and the number of dry eye symptoms. In addition, tear wettings were significantly higher, but there were no significant differences in

break-up times.”

Conclusions: "This study suggests that acupuncture treatment can effectively relieve the symptoms of dry eye and increase watery secretion."

DYSMENNORHEA

20.

Journal: *Am J Obstet Gynecol. 2008 Feb;198(2):166.e1-8.*

Title: [Acupuncture in patients with dysmenorrhea: a randomized study on clinical effectiveness and cost-effectiveness in usual care.](#)

Authors: Witt CM, Reinhold T, Brinkhaus B, Roll S, Jena S, Willich SN.

Source: Institute for Social Medicine, Epidemiology, and Health Economics, Charité University Medical Center, Berlin, Germany. claudia.witt@charite.de

ABSTRACT:

Objective: “To investigate the clinical effectiveness and cost-effectiveness of acupuncture in patients with dysmenorrhea.

Methods: “In a randomized controlled trial plus non-randomized cohort, patients with dysmenorrhea were randomized to acupuncture (15 sessions over three months) or to a control group (no acupuncture). Patients who declined randomization received acupuncture treatment. All subjects were allowed to receive usual medical care.”

Results: Of 649 women (mean age 36.1 +/- 7.1 years), 201 were randomized. After three months, the average pain intensity (NRS 0-10) was lower in the acupuncture compared to the control group: 3.1 (95% CI 2.7; 3.6) vs. 5.4 (4.9; 5.9), difference - 2.3 (-2.9; -1.6); P<.001. The acupuncture group had better quality of life and higher costs. (overall ICER 3,011 euros per QALY).

Conclusions: Additional acupuncture in patients with dysmenorrhea was associated with improvements in pain and quality of life as compared to treatment with usual care alone and was cost-effective within usual thresholds.

DYSPEPSIA

21.

Journal: *Complement Ther Med. 2003 Jun;11(2):78-84.*

Title: [Treating dyspepsia with acupuncture and homeopathy: reflections on a pilot study by researchers, practitioners and participants.](#)

Authors: Paterson C, Ewings P, Brazier JE, Britten N.

Source: Warwick House Medical Centre, Taunton, Somerset, UK. c.paterson@bristol.ac.uk

ABSTRACT:

Objective: For people with dyspepsia who are receiving orthodox general practice care, what is the effect on outcome and on NHS costs of adding treatment by a choice of acupuncture or homeopathy? This paper describes and reflects upon a pilot study with user involvement.

- Methods:** “DESIGN: A randomised pilot study. Patients chose between acupuncture and homeopathy and were then randomised to this preference or to the control group of normal GP care. SETTING AND PARTICIPANTS: SF-36 health survey, Measure Yourself Medical Outcome Profile (MYMOP), and General Well-being Index (GWBI). Counts of prescriptions, consultations and referrals from practice computer records.”
- Results:** No trend or significant difference between the groups for clinical outcome or NHS costs. Major costs for the 6 months, mean (S.D.) cost per patient, were general practitioner consultations pound 8 (18), prescriptions pound 64 (73), acupuncture pound 175 (52), homeopathy pound 105 (33). Participants gave insights and suggestions which will inform the full trial design.
- Conclusions:** Reflection on the pilot study data and experience by participants, treating practitioners and researchers led to modifications in the design and a sample size calculation. How to demonstrate individual responses to treatment remains a problem.

ENDOMETRIOSIS

22.

- Journal:** *J Pediatr Adolesc Gynecol.* 2008 Oct;21(5):247-57.
- Title:** [Japanese-style acupuncture for endometriosis-related pelvic pain in adolescents and young women: results of a randomized sham-controlled trial.](#)
- Authors:** Wayne PM, Kerr CE, Schnyer RN, Legedza AT, Savetsky-German J, Shields MH, Buring JE, Davis RB, Conboy LA, Highfield E, Parton B, Thomas P, Laufer MR.
- Source:** Harvard Medical School, Osher Research Center, Boston, Massachusetts 02215, USA. peter_wayne@hms.harvard.edu
- ABSTRACT:**
- Objective:** “To assess feasibility, and collect preliminary data for a subsequent randomized, sham-controlled trial to evaluate Japanese-style acupuncture for reducing chronic pelvic pain and improving health-related quality of life (HRQOL) in adolescents with endometriosis.”
- Methods:** “DESIGN: Randomized, sham-controlled trial. SETTINGS: Tertiary-referral hospital. PARTICIPANTS: Eighteen young women (13-22y) with laparoscopically-diagnosed endometriosis-related chronic pelvic pain. INTERVENTIONS: A Japanese style of acupuncture and a sham acupuncture control. Sixteen treatments were administered over 8 weeks. MAIN OUTCOME MEASURES: Protocol feasibility, recruitment numbers, pain not associated with menses or intercourse, and multiple HRQOL instruments including Endometriosis Health Profile, Pediatric Quality of Life, Perceived Stress, and Activity Limitation.
- Results:** Fourteen participants (out of 18 randomized) completed the study per protocol. Participants in the active acupuncture group (n = 9) experienced an average 4.8 (SD = 2.4) point reduction on a 11 point scale (62%) in pain after 4 weeks, which differed significantly from the control group's (n = 5) average reduction of 1.4 (SD = 2.1) points (P = 0.004). Reduction in pain in the active group persisted

through a 6-month assessment; however, after 4 weeks, differences between the active and control group decreased and were not statistically significant. All HRQOL measures indicated greater improvements in the active acupuncture group compared to the control; however, the majority of these trends were not statistically significant. No serious adverse events were reported.

Conclusions: Preliminary estimates indicate that Japanese-style acupuncture may be an effective, safe, and well-tolerated adjunct therapy for endometriosis-related pelvic pain in adolescents. A more definitive trial evaluating Japanese-style acupuncture in this population is both feasible and warranted.

FACIAL PARALYSIS

23.

Journal: *Zhongguo Zhen Jiu*. 2006 Apr;26(4):259-60.

Title: [Clinical application of electroacupuncture plus Chinese medicine in treatment of peripheral facial paralysis](#). [Article in Chinese]

Authors: Liu YS, Ouyang YY, Yin Y.

Source: Yunnan Provincial People's second Hospital, Kunming, 650021, China. ynrehb@126.com

ABSTRACT:

Objective: "To probe into the role of electroacupuncture in treatment of peripheral facial paralysis."

Methods: "Eighty-six cases were divided into a treatment group (n=45) treated with electroacupuncture plus Chinese medicine, and a control group (n=41) treated with acupuncture plus Chinese medicine. Taiyang (EX-HN 5), Yangbai (GB 14) and other points on the affected side were selected and Chinese medicine modified Qianzheng powder was administered. Their clinical therapeutic effects were analyzed and evaluated."

Results: "The effective rate was 97.8% in the treatment group and 82.9% in the control group with a significant difference between the two groups ($P < 0.05$). the treatment group being higher than the control group."

Conclusions: "Chinese medicine plus acupuncture combined with electroacupuncture has a better therapeutic effect on peripheral facial paralysis."

FERTILITY SUPPORT

24.

Journal: *Explore (NY)*. 2010 Sep-Oct;6(5):330-4.

Title: [An exploratory study of the effect of acupuncture on self-efficacy for women seeking fertility support](#).

Authors: Kovárová P, Smith CA, Turnbull DA.

Source: School of Psychology, The University of Adelaide, Adelaide, South Australia.

ABSTRACT:

Objective: "The aim of this study was to examine the effect of acupuncture on self-efficacy for women receiving acupuncture for fertility support."

- Methods:** “DESIGN: Pretest and posttest measurement of infertility self-efficacy was conducted in this prospective observational study. SETTING: Subjects were recruited from three acupuncture practices in South Eastern Australia. PARTICIPANTS: Women aged 18 to 45 years presenting for acupuncture treatment for natural conception or as an adjunct to assisted reproductive technology participated in this study. Consecutive new patients were invited to take part if they were planning a minimum of four acupuncture treatments as part of a current episode of care. OUTCOME MEASURES: Measurement at baseline and post-acupuncture treatment was performed with the infertility self-efficacy (ISE) scale.”
- Results:** Seventeen women met the entry criteria for the study, 15 (88%) entered the study, 13 (76%) completed both questionnaires. We found a significant increase in total ISE scores from baseline and after four acupuncture treatments (N = 13; t [12] = 3.15, P = .008). Four women showed clinically significant improvement on ISE total scores using the significant change index.
- Conclusions:** “We have preliminary data suggesting that acupuncture improves self-efficacy and psychological coping for women experiencing delays with falling pregnant. Further rigorous research is needed to examine the overall therapeutic effect from acupuncture to support women while undergoing the stressful repetitive process of assisted reproductive technology or natural fertility, and to examine the role of outcome and self-efficacy expectations.”

25.

- Journal:** *Gynecol Endocrinol. 1992 Sep;6(3):171-81.*
- Title:** [Auricular acupuncture in the treatment of female infertility.](#)
- Authors:** Gerhard I, Postneek F.
- Source:** Department for Gynecological Endocrinology and Reproduction, Women's Hospital, University of Heidelberg, Germany.

ABSTRACT:

- Objective:** To determine if auricular acupuncture would be of benefit in the treatment of female infertility vs. hormone treatment
- Methods:** “Following a complete gynecologic--endocrinologic workup, 45 infertile women suffering from oligomenorrhea (n = 27) or luteal insufficiency (n = 18) were treated with auricular acupuncture. Results were compared to those of 45 women who received hormone treatment. Both groups were matched for age, duration of infertility, body mass index, previous pregnancies, menstrual cycle and tubal patency.”
- Results:** “Women treated with acupuncture had 22 pregnancies, 11 after acupuncture, four spontaneously, and seven after appropriate medication. Women treated with hormones had 20 pregnancies, five spontaneously, and 15 in response to therapy. Four women of each group had abortions. Endometriosis (normal menstrual cycles) was seen in 35% (38%) of the women of each group who failed to respond to therapy with pregnancy. Only 4% of the women who responded to acupuncture or hormone treatment with a pregnancy had endometriosis, and

7% had normal cycles. In addition, women who continued to be infertile after hormone therapy had higher body mass indices and testosterone values than the therapy responders from this group. Women who became pregnant after acupuncture suffered more often from menstrual abnormalities and luteal insufficiency with lower estrogen, thyrotropin (TSH) and dehydroepiandrosterone sulfate (DHEAS) concentrations than the women who achieved pregnancy after hormone treatment. Although the pregnancy rate was similar for both groups, eumenorrhic women treated with acupuncture had adnexitis, endometriosis, out-of-phase endometria and reduced postcoital tests more often than those receiving hormones. Twelve of the 27 women (44%) with menstrual irregularities remained infertile after therapy with acupuncture compared to 15 of the 27 (56%) controls treated with hormones, even though hormone disorders were more pronounced in the acupuncture group. Side-effects were observed only during hormone treatment. Various disorders of the autonomic nervous system normalized during acupuncture.”

Conclusions: “Based on our data, auricular acupuncture seems to offer a valuable alternative therapy for female infertility due to hormone disorders.”

26.

Journal: *Acupunct Med* 2010; 28:180-184 doi:10.1136/aim.2009.002022

Title: [Effect of acupuncture on assisted reproduction treatment outcomes](#)

Authors: Madaschi, C., Braga, D., Figueira, R. Iaconelli, A., Borges, E

Source: Dr Edson Borges Jr, Fertility – Assisted Fertilization Center, Avenue, Brigadeiro Luis Antônio, 4545, São Paulo – SP 01401-002, Brazil; edson@fertility.com.br

ABSTRACT:

Objective: “To examine the hypothesis that acupuncture treatment may increase the pregnancy rate in patients undergoing intracytoplasmic sperm injection cycles.”

Methods: “Patients enrolled in the study were stratified according to age and randomised to either a control group (n=208) or acupuncture group, (n=208). The pregnancy, implantation and abortion rates of the two groups were compared.”

Results: “No influence of acupuncture treatment on clinical outcomes was seen; however, when cycles in which the causes of infertility were exclusively tubal-uterine or idiopathic were evaluated separately, a positive influence of acupuncture on pregnancy (OR=5.15, 95% CI 1.03 to 34.5; p=0.048) was noted. Moreover, trends toward an increase in implantation were seen when acupuncture was performed (regression coefficient: 0.645; p=0.092).”

Conclusions: “The results suggest that acupuncture treatment had no influence when performed immediately before and immediately after embryo transfer, on clinical outcomes overall. In a subgroup analysis, when the embryo was not affected by an ovarian or seminal influence, a benefit was noted.”

FIBROIDS, UTERINE

27.

Journal: *Cochrane Database Syst Rev. 2010 Jan 20;(1):CD007221.*

Title: [Acupuncture for uterine fibroids.](#)

Authors: Zhang Y, Peng W, Clarke J, Liu Z.

Source: The Department of Acupuncture, Beijing Traditional Chinese Medicine Hospital, Capital Medical University, No.23 Back Road of Art Gallery, Dongcheng District, Beijing, Beijing, China, 100010.

ABSTRACT:

Objective: “To assess the benefits and harms of acupuncture in women with uterine fibroids”

Methods: “The following electronic databases were searched 21st May 2009: the Cochrane Central Register of Controlled Trials (CENTRAL); MEDLINE; EMBASE; AMED; the Menstrual Disorders and Subfertility Group's Specialised Register of Trials; Chinese Biomedical Literature Database (CBM); Traditional Chinese Medical Literature Analysis and Retrieval System (TCMLARS); Chinese Medical Current Contents (CMCC) and China National Knowledge Infrastructure(CNKI). Citation lists, experts in the field and grey literature were also referred to. No restrictions such as language were applied.” **SELECTION CRITERIA:** All randomised controlled trials (RCTs) comparing acupuncture management with placebo acupuncture, no management, Chinese medication, Western medication or other managements of uterine fibroids were considered for inclusion. Acupuncture management included either traditional acupuncture or contemporary acupuncture, regardless of the source of stimulation (for example, body, electro, scalp, elongated, fire, hand, fine needle, moxibustion). Acupuncture management without needling was excluded. **DATA COLLECTION AND ANALYSIS:** Two review authors assessed trial risk of bias according to our a priori criteria. No trials were included in this version of the review, therefore no data was collected.”

Results: “No randomized double-blind controlled trials met the inclusion criteria.”

Conclusions: “The effectiveness of acupuncture for the management of uterine fibroids remains uncertain. More evidence is required to establish the efficacy and safety of acupuncture for uterine fibroids. There is a continued need for well designed RCTs with long term follow up.”

FIBROMYALGIA

28.

Journal: *Ann Intern Med 2005; 143(1):10-19.*

Title: [A randomized clinical trial of acupuncture compared with sham acupuncture in fibromyalgia.](#)

Authors: Assefi NP, Sherman KJ, Jacobsen C, Goldberg J, Smith WR, Buchwald D.

Source: unknown

ABSTRACT:

Objective: “To determine whether acupuncture relieves pain in fibromyalgia.”

Methods: “DESIGN: Randomized, sham-controlled trial in which participants, data

collection staff, and data analysts were blinded to treatment group. SETTING: Private acupuncture offices in the greater Seattle, Washington, metropolitan area. PATIENTS: 100 adults with fibromyalgia. INTERVENTION: Twice-weekly treatment for 12 weeks with an acupuncture program that was specifically designed to treat fibromyalgia, or 1 of 3 sham acupuncture treatments: acupuncture for an unrelated condition, needle insertion at nonacupoint locations, or noninsertive simulated acupuncture. MEASUREMENTS: The primary outcome was subjective pain as measured by a 10-cm visual analogue scale ranging from 0 (no pain) to 10 (worst pain ever). Measurements were obtained at baseline; 1, 4, 8, and 12 weeks of treatment; and 3 and 6 months after completion of treatment. Participant blinding and adverse effects were ascertained by self-report. The primary outcomes were evaluated by pooling the 3 sham-control groups and comparing them with the group that received acupuncture to treat fibromyalgia."

Results: "The mean subjective pain rating among patients who received acupuncture for fibromyalgia did not differ from that in the pooled sham acupuncture group (mean between-group difference, 0.5 cm [95% CI, -0.3 cm to 1.2 cm]). Participant blinding was adequate throughout the trial, and no serious adverse effects were noted. LIMITATIONS: A prescription of acupuncture at fixed points may differ from acupuncture administered in clinical settings, in which therapy is individualized and often combined with herbal supplementation and other adjunctive measures. A usual-care comparison group was not studied."

Conclusions: "Acupuncture was no better than sham acupuncture at relieving pain in fibromyalgia."

29.

Journal: *J Fam Pract.* 1999 Mar;48(3):213-8.

Title: [Is acupuncture effective in the treatment of fibromyalgia?](#)

Authors: Berman BM, Ezzo J, Hadhazy V, Swyers JP.

Source: Complementary Medicine Program, University of Maryland School of Medicine, Baltimore 21207, USA.

ABSTRACT:

Objective: "We conducted this study to assess the effectiveness of acupuncture in the treatment of fibromyalgia syndrome (FMS), report any adverse effects, and generate hypotheses for future investigation."

Methods: "We searched MEDLINE, EMBASE, Manual Therapy Information System, the Cochrane registry, the University of Maryland Complementary and Alternative Medicine in Pain, the Centralized Information Service for Complementary Medicine, and the National Institutes of Health Office of Alternative Medicine databases for the key words "acupuncture" and "fibromyalgia." Conference abstracts, citation lists, and letters supplemented the search. We selected all randomized or quasi-randomized controlled trials, or cohort studies of patients with FMS who were treated with acupuncture. Methodologic quality, sample characteristics, type of acupuncture treatment, and outcomes were extracted.

Statistical pooling was not performed because of the differences in control groups.”

Results: “Seven studies (3 randomized controlled trials and 4 cohort studies) were included; only one was of high methodologic quality. The high-quality study suggests that real acupuncture is more effective than sham acupuncture for relieving pain, increasing pain thresholds, improving global ratings, and reducing morning stiffness of FMS, but the duration of benefit following the acupuncture treatment series is not known. Some patients report no benefit, and a few report an exacerbation of FMS-related pain. Lower- quality studies were consistent with these findings. Booster doses of acupuncture to maintain benefit once regular treatments have stopped have been described anecdotally but not investigated in controlled trials.”

Conclusions: “The limited amount of high-quality evidence suggests that real acupuncture is more effective than sham acupuncture for improving symptoms of patients with FMS. However, because this conclusion is based on a single high-quality study, further high- quality randomized trials are needed to provide more robust data on effectiveness.”

30.

Journal: *Clin Exp Rheumatol* 2005; 23(5):693-696.

Title: [Perceived efficacy among patients of various methods of complementary alternative medicine for rheumatologic diseases.](#)

Authors: Breuer GS, Orbach H, Elkayam O, Berkun Y, Paran D, Mates M et al.

Source: unknown

ABSTRACT:

Objective: “The purpose of this cross-sectional survey was to obtain and analyze data on self-perceived efficacy of different types of complementary alternative medicine (CAM) by patients with various rheumatologic conditions.”

Methods: “Patients followed in rheumatology outpatient clinics were screened for the use of CAM. Patients reporting the use of CAM were asked to participate in face-to-face structured interviews, specifying the various CAM types they used, and grading their subjective impression of efficacy of each CAM type on a scale of 1-10.”

Results: “350 consecutive patients were screened and 148 reported using CAM. In general, homeopathy and acupuncture were the most commonly used CAM types (44% and 41% of the CAM users, respectively). The mean number of different CAM methods used by a CAM user was 1.9 +/- 1.1. Patients with fibromyalgia used significantly more CAM methods (2.7 +/- 1.4, p = 0.005). On patients' self-perceived efficacy scale of 1-10, the mean score of the whole group was 5.3 +/- 3.2. Acupuncture and homeopathy achieved significantly higher self-perceived efficacy scores in CAM users with spondylo-arthropathies and osteoarthritis, respectively, when compared to some of the other disease groups. Satisfaction was lowest among CAM users with rheumatoid arthritis, vasculitis and connective tissue diseases.”

Conclusion: “In general, CAM users were less than moderately satisfied with self-perceived-efficacy of CAM therapies. However efficacy of specific CAM methods differed significantly among patients in different disease groups.”

31.

Journal: *J Altern Complement Med* 2005; 11(4):663-671.

Title: [Treatment of fibromyalgia with formula acupuncture: investigation of needle placement, needle stimulation, and treatment frequency.](#)

Authors: Harris RE, Tian X, Williams DA, Tian TX, Cupps TR, Petzke F et al.

Source: unknown

ABSTRACT:

Objective: “to investigate whether typical acupuncture methods such as needle placement, needle stimulation, and treatment frequency were important factors in fibromyalgia symptom improvement.”

Methods: “Design/settings/subjects: A single-site, single-blind, randomized trial of 114 participants diagnosed with fibromyalgia for at least 1 year was performed. Intervention: Participants were randomized to one of four treatment groups: (1) T/S needles placed in traditional sites with manual needle stimulation (n = 29); (2) T/O traditional needle location without stimulation (n = 30); (3) N/S needles inserted in nontraditional locations that were not thought to be acupuncture sites, with stimulation (n = 28); and (4) N/O nontraditional needle location without stimulation (n = 27). All groups received treatment once weekly, followed by twice weekly, and finally three times weekly, for a total of 18 treatments. Each increase in frequency was separated by a 2-week washout period. Outcome measures: Pain was assessed by a numerical rating scale, fatigue by the Multi-dimensional Fatigue Inventory, and physical function by the Short Form-36.”

Results: “Overall pain improvement was noted with 25%-35% of subjects having a clinically significant decrease in pain; however this was not dependent upon "correct" needle stimulation (t = 1.03; p = 0.307) or location (t = 0.76; p = 0.450). An overall dose effect of treatment was observed, with three sessions weekly providing more analgesia than sessions once weekly (t = 2.10; p = 0.039). Among treatment responders, improvements in pain, fatigue, and physical function were highly codependent (all p <= 0.002).”

Conclusions: “Although needle insertion led to analgesia and improvement in other somatic symptoms, correct needle location and stimulation were not crucial.”

32.

Journal: *Mayo Clin Proc* 2006; 81(6):749-757.

Title: [Improvement in fibromyalgia symptoms with acupuncture: results of a randomized controlled trial.](#)

Authors: Martin DP, Sletten CD, Williams BA, Berger IH.

Source: Department of Anesthesiology, Mayo Clinic College of Medicine, 200 First St SW, Rochester, MN 55905, USA. martin.david@mayo.edu

ABSTRACT:

- Objective:** “To test the hypothesis that acupuncture improves symptoms of fibromyalgia.”
- Methods:** “We conducted a prospective, partially blinded, controlled, randomized clinical trial of patients receiving true acupuncture compared with a control group of patients who received simulated acupuncture. All patients met American College of Rheumatology criteria for fibromyalgia and had tried conservative symptomatic treatments other than acupuncture. We measured symptoms with the Fibromyalgia Impact Questionnaire (FIQ) and the Multidimensional Pain Inventory at baseline, immediately after treatment, and at 1 month and 7 months after treatment. The trial was conducted from May 28, 2002, to August 18, 2003.”
- Results:** “Fifty patients participated in the study: 25 in the acupuncture group and 25 in the control group. Total fibromyalgia symptoms, as measured by the FIQ, were significantly improved in the acupuncture group compared with the control group during the study period ($P = .01$). The largest difference in mean FIQ total scores was observed at 1 month (42.2 vs. 34.8 in the control and acupuncture groups, respectively; $P = .007$). Fatigue and anxiety were the most significantly improved symptoms during the follow-up period. However, activity and physical function levels did not change. Acupuncture was well tolerated, with minimal adverse effects.”
- Conclusions:** “This study paradigm allows for controlled and blinded clinical trials of acupuncture. We found that acupuncture significantly improved symptoms of fibromyalgia. Symptomatic improvement was not restricted to pain relief and was most significant for fatigue and anxiety.”

33.

- Journal:** Rheumatology (Oxford) 2006; 19
- Title:** [Acupuncture for fibromyalgia--a systematic review of randomized clinical trials. Rheumatology \(Oxford\) 2006; 19](#)
- Authors:** Mayhew E, Ernst E.
- Source:** unknown
- ABSTRACT:**
- Objective:** “Acupuncture is often used and frequently advocated for the symptomatic treatment of fibromyalgia. A systematic review has previously demonstrated encouraging findings. As it is now outdated, we wanted to update it. “
- Methods:** “We searched seven electronic databases for relevant randomized clinical trials (RCTs). The data were extracted and validated independently by both authors. As no meta-analysis seemed possible, the results were evaluated in narrative form.”
- Results:** “Five RCTs met our inclusion criteria, all of which used acupuncture as an adjunct to conventional treatments. Their methodological quality was mixed and frequently low. Three RCTs suggested positive but mostly short-lived effects and two yielded negative results. There was no significant difference between the quality of the negative and the positive RCTs. All positive RCTs used electro-acupuncture.”

Conclusion: “The notion that acupuncture is an effective symptomatic treatment for fibromyalgia is not supported by the results from rigorous clinical trials. On the basis of this evidence, acupuncture cannot be recommended for fibromyalgia.”

34.

Journal: *Altern Ther Health Med* 2006; 12(2):34-41.

Title: [Effectiveness of acupuncture in the treatment of fibromyalgia.](#)

Authors: Singh BB, Wu WS, Hwang SH, Khorsan R, Der-Martirosian C, Vinjamury SP et al.

Source: unknown

ABSTRACT:

Objective: To assess the effectiveness of acupuncture in the treatment of fibromyalgia

Methods: “DESIGN: Using a quasi-experimental clinical design and following the criteria of the American College of Rheumatology (ACR), for FMS, 21 participants completed the study. The mean age was 53.6 years. The data were collected at baseline and at 1 and 2 months. Acupuncture treatments included 17 points for FMS symptoms, and 8 outcome measures were collected.”

Results: “The Fibromyalgia Impact Questionnaire (FIQ) showed significant differences at 1 and 2 months. For the SF-12, 3 subscales showed significant differences between baseline and 2 months. Four of 6 items were significantly changed. The mean number of general health symptoms was significantly decreased by 2 months. For the Catastrophe Index, significant differences were found for baseline vs. 2 months. Pain threshold scores were significantly different at end of treatment for 5 bilateral tender points. There was significant improvement in Beck Depression items for both 1- and 2-month periods. In a multivariate regression model, 5 covariates were included--age, number of weeks in treatment, number of doctors treating, number of general symptoms, and baseline FIQ score. The results indicated significant age effect. This analysis showed that the higher the FIQ score, the more positive the change experienced by study participants. Number of weeks in treatment, number of doctors who treated, and total number of general health symptoms did not have a significant effect on outcomes.”

Conclusions: “Significant improvement was experienced by participants at 8 weeks of treatment. Acupuncture treatment as delivered was effective at reducing FMS symptoms in this outcome study.”

35.

Journal: *Curr Pain Headache Rep* 2002; 6(5):379-383.

Title: [Pain treatment with acupuncture for patients with fibromyalgia.](#)

Authors: Targino RA, Imamura M, Kaziyama HH, Souza LP, Hsing WT, Imamura ST.

Source: unknown

ABSTRACT:

Objective: To present “a literary review on the use of acupuncture as an adjunct or chief treatment for patients with fibromyalgia.”

Methods: “comparing it [acupuncture] with an ongoing clinical experience that has been

carried out at Hospital das Clinicas in the city of Sao Paulo.

Results: “traditional acupuncture... demonstrated positive rates in the Visual Analogue Scale, myalgic index, number of tender points, and improvement in quality of life based on the SF-36 questionnaire...”

Conclusions: Not expressed

GALL BLADDER DISORDERS - CHOLECYSTITIS

36.

Journal: *CHINESE ACUPUNCTURE & MOXIBUSTION* 1996-01

Title: [Clinical Study on Regulatory Action of Combination of Body Acupuncture with auricular Acupuncture on Gallbladder Motor Function](#)

Author: Gong Chuanmei; Shao Rongshi; Zhu Yuangen

Source: NantongMunicipal Hospital of Traditional Chinese Medicine, Jiangshu Province, 226001, Institute of Acupuncture and Moxibustion, China Academy of Traditional Chinese Medicine

ABSTRACT:

Objective: To discern if acupuncture affected gall baldder motor function

Methods: “Changes of gallbladder area and motor function were observed in 80 cases of cholecystitis with a B mode ultrasound diagnostic apparatus.”

Results: “Results indicated that in experimental group mean contraction area of the gallbladder increased after acupuncture as compared with that before acupuncture with very significant differences (P0.01) at both 30 min and 60 min after fat meal. The numbers of the case who had a improvement of gallbladder motor function increaed significantly (p0.01) after acupuncture. After acupuncture, 74 cases of cholecystitis (92.5%) cured and 9 cases (32.1%) in the control group cured. There was a significant difference (P0.01) between the two groups.”

Conclusions: “Changes of gallbladder area and motor function were observed in 80 cases of cholecystitis with a B mode ultrasound diagnostic apparatus. It is suggested that acupuncture has a marked regulatory action on gallbladder motor function.”

37.

Journal: *J. Acupunct. Tuina. Sci.* 2011, 9 (1): 37-38

DOI: 10.1007/s11726-011-0466-8

Title: [Clinical Observation on Chronic Cholecystitis Treated by Acupuncture](#)

Author: Pan Jihua

Source: Lianzhou Health School of Guangdong Province, Lianzhou 513400, P. R. China

ABSTRACT:

Objective: The author adopted electroacupuncture in treatment of 74 cases of chronic cholecystitis to compare the effects with a medication group.

Methods: 74 cases in the acupuncture group; 42 in the medicated control group. Acupuncture done to BL 17, BL 19, GB 24, ST 19 (all right side); Extra leg 6 (Dannang) – bilaterally; BL 18, Liver 14, Liver 3, GV 14, L.I. 11, and TW 6. Pointe

were connected to an electro-acupuncture device with intense wave for three minutes and sparse-intense wave for 12 minutes. Treatment once a day for 7 days. Stools were washed to count for gall stones. "Control group took Xiao Yan Li Dan Tablets, 3 times a day, 6 tablets each time, before dinner" for ten days.

Results: "Table 1. Comparison of the therapeutic effect (Cases)

Groups	n	R	ME	E	Invalid	MER (%)	TER(%)
Treatment:	74	48	13	8	5	82.41)	93.2
Control:	42	8	16	14	4	57.1	90.5

Note: R = Recovered; ME = Markedly effective; E = Effective; MER = Markedly effective rate, TER = Total

Conclusions: "It has proved that electroacupuncture is effective in treating chronic cholecystitis[4,5], better than medication and other therapies. Regarding the relief of belching and abdominal distention caused by chronic cholecystitis, electroacupuncture is far superior to Xiao Yan Li Dan Tablet. Therefore, it is worth a further study to promote the adoption of electroacupuncture."

GLAUCOMA

38.

Journal: *Evid Based Complement Alternat Med, 2011 March 7. Published online 2011 March 7. doi: 10.1155/2011/157090.*

Title: [Short-Term Effects of Acupuncture on Open-Angle Glaucoma in Retrobulbar Circulation: Additional Therapy to Standard Medication](#)

Authors: Shin Takayama,1 Takashi Seki,1* Toru Nakazawa,2 Naoko Aizawa,2 Seri Takahashi,2 Masashi Watanabe,1 Masayuki Izumi,1 Soichiro Kaneko,1 Tetsuharu Kamiya,1 Ayane Matsuda,1 Akiko Kikuchi,1 Tomoyuki Yambe,3 Makoto Yoshizawa,4 Shin-ichi Nitta,3 and Nobuo Yaegashi1

Source: 1Department of Traditional Asian Medicine, Graduate School of Medicine, Tohoku University, 1-1 Seiryomachi, Aoba-ku, Sendai, Miyagi 980-8574, Japan; 2Department of Ophthalmology and Visual Science, Graduate School of Medicine, Tohoku University, Sendai 980-8574, Japan; 3Institute of Development, Aging and Cancer, Tohoku University, Sendai 980-8575, Japan 4Research Division on Advanced Information Technology, Cyberscience Center, Tohoku University, Japan

ABSTRACT:

Objective: To investigate the effects of acupuncture on retrobulbar circulation in open-angle glaucoma (OAG) patients.

Methods: "Eleven OAG patients (20 eyes with OAG) who were treated by topical antiglaucoma medications for at least 3 months were enrolled. Acupuncture was performed once at acupoints BL2, M-HN9, ST2, ST36, SP6, KI3, LR3, GB20, BL18, and BL23 bilaterally. Retrobulbar circulation was measured with color Doppler imaging, and intraocular pressure (IOP) was also measured at rest and one hour after rest or before and after acupuncture."

Results: “The Δ value of the resistive index in the short posterior ciliary artery ($P < .01$) and the Δ value of IOP ($P < .01$) were decreased significantly by acupuncture compared with no acupuncture treatment. “

Conclusions: “Acupuncture can improve the retrobulbar circulation and IOP, which may indicate the efficacy of acupuncture for OAG.”

HEADACHE

39.

Journal: *Military Medicine*, 2009; 174(12): 1276-81.

Title: [The Effectiveness of Acupuncture for Chronic Daily Headache: An Outcomes Study](#)

Authors: Sharon Plank, MD, LAc; Janet Goodard, RN, BSN, CCRC, CCAP

Source: U.S. Military

ABSTRACT:

Objective: “With the increased incidence of migraine headaches noted in the military population it becomes imperative to find safe and effective treatment options for soldiers.” This study was conducted to determine if “Acupuncture may be one of those options.”

Methods: “This pilot study used a standardized set of well-known acupuncture points over a predetermined time interval on 26 subjects suffering from chronic daily headache, the majority being migraineurs, and found a reduction in the frequency and intensity of their headaches. Headache calendars and validated measurements were compared 12 weeks before and 12 weeks after the acupuncture intervention.

Results: “...showed continued improvements 12 weeks after the last treatment.”

Conclusions: “These results suggest that acupuncture may be beneficial in the treatment of patients with chronic daily headaches.” ...“Traditionally, acupuncture treatments are individualized at each visit. However the absence of a standardized treatment regimen obstructs data reproducibility across the discipline. A standardized approach may be useful. Variations of these acupuncture points have been used in recent research studies for migraines and acupuncture for headaches for the past 2,000 years.”

40.

Journal: *Anesth Analg*. 2008 Dec;107(6):2038-47.

Title: [Acupuncture for the management of chronic headache: a systematic review.](#)

Authors: Sun Y, Gan TJ.

Source: Duke University Medical Center, Department of Anesthesiology, Box 3094, Durham, NC 27710, USA.

ABSTRACT:

Objective: “The objective of this review was to evaluate the efficacy of acupuncture for treatment of chronic headache.”

Methods: “We searched the databases of Medline (1966-2007), CINAHL, The Cochrane

Central Register of Controlled Trials (2006), and Scopus for randomized controlled trials investigating the use of acupuncture for chronic headache. Studies were included in which adults with chronic headache, including migraine, tension-type headache or both, were randomized to receive needling acupuncture treatment or control consisting of sham acupuncture, medication therapy, and other nonpharmacological treatments. We extracted the data on headache intensity, headache frequency, and response rate assessed at early and late follow-up periods.”

Results: “Thirty-one studies were included in this review. The majority of included trials comparing true acupuncture and sham acupuncture showed a trend in favor of acupuncture. The combined response rate in the acupuncture group was significantly higher compared with sham acupuncture either at the early follow-up period (risk ratio [RR]: 1.19, 95% confidence interval [CI]: 1.08, 1.30) or late follow-up period (RR: 1.22, 95% CI: 1.04, 1.43). Combined data also showed acupuncture was superior to medication therapy for headache intensity (weighted mean difference: -8.54 mm, 95% CI: -15.52, -1.57), headache frequency (standard mean difference: -0.70, 95% CI: -1.38, -0.02), physical function (weighted mean difference: 4.16, 95% CI: 1.33, 6.98), and response rate (RR: 1.49, 95% CI: 1.02, 2.17).”

Conclusions: “Needling acupuncture is superior to sham acupuncture and medication therapy in improving headache intensity, frequency, and response rate.”

41.

Journal: BMJ 328 : 744 doi: 10.1136/bmj.38029.421863.EB (Published 15 March 2004)

Title: [Acupuncture for chronic headache in primary care: large, pragmatic, randomized trial](#)

Authors: Andrew J Vickers, (vickersa@mskcc.org), Rebecca W Rees, Catherine E Zollman, Rob McCarney, Claire M Smith, Nadia Ellis, Peter Fisher, Robbert Van Haselen

Source: Integrative Medicine Service, Biostatistics Service, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, NY, NY 10021

ABSTRACT:

Objective: “To determine the effects of a policy of “use acupuncture” on headache, health status, days off sick, and use of resources in patients with chronic headache compared with a policy of “avoid acupuncture.”

Methods: “Design: Randomised, controlled trial. Setting: General practices in England and Wales. Participants: 401 patients with chronic headache, predominantly migraine. Interventions: Patients were randomly allocated to receive up to 12 acupuncture treatments over three months or to a control intervention offering usual care. Main outcome measures: Headache score, SF-36 health status, and use of medication were assessed at baseline, three, and 12 months. Use of resources was assessed every three months.”

Results: “Headache score at 12 months, the primary end point, was lower in the acupuncture group (16.2, SD 13.7, n = 161, 34% reduction from baseline) than in controls (22.3, SD 17.0, n = 140, 16% reduction from baseline). The adjusted

difference between means is 4.6 (95% confidence interval 2.2 to 7.0; P = 0.0002). This result is robust to sensitivity analysis incorporating imputation for missing data. Patients in the acupuncture group experienced the equivalent of 22 fewer days of headache per year (8 to 38). SF-36 data favoured acupuncture, although differences reached significance only for physical role functioning, energy, and change in health. Compared with controls, patients randomised to acupuncture used 15% less medication (P = 0.02), made 25% fewer visits to general practitioners (P = 0.10), and took 15% fewer days off sick (P = 0.2). “

Conclusions: “Acupuncture leads to persisting, clinically relevant benefits for primary care patients with chronic headache, particularly migraine. Expansion of NHS acupuncture services should be considered.”

42.

Journal: *BMJ*. 2004 Mar 27;328(7442):747. Epub 2004 Mar 15.

Title: [Cost effectiveness analysis of a randomised trial of acupuncture for chronic headache in primary care.](#)

Authors: Wonderling D, Vickers AJ, Grieve R, McCarney R.

Source: Health Services Research Unit, London School of Hygiene and Tropical Medicine, London WC1E 7HT. David.Wonderling@lshtm.ac.uk

ABSTRACT:

Objective: To evaluate the cost effectiveness of acupuncture in the management of chronic headache.

Methods: “DESIGN: Cost effectiveness analysis of a randomised controlled trial. SETTING: General practices in England and Wales. PARTICIPANTS: 401 patients with chronic headache, predominantly migraine. Interventions Patients were randomly allocated to receive up to 12 acupuncture treatments over three months from appropriately trained physiotherapists, or to usual care alone. MAIN OUTCOME MEASURE: Incremental cost per quality adjusted life year (QALY) gained.”

Results: “Total costs during the one year period of the study were on average higher for the acupuncture group (403 pounds sterling; 768 dollars; 598 euros) than for controls (217 pounds sterling) because of the acupuncture practitioners' costs. The mean health gain from acupuncture during the one year of the trial was 0.021 quality adjusted life years (QALYs), leading to a base case estimate of 9180 pounds sterling per QALY gained. This result was robust to sensitivity analysis. Cost per QALY dropped substantially when the analysis incorporated likely QALY differences for the years after the trial.”

Conclusions: Acupuncture for chronic headache improves health related quality of life at a small additional cost; it is relatively cost effective compared with a number of other interventions provided by the NHS.

43.

Journal: *Cephalalgia*. 2008 Sep;28(9):969-79. Epub 2008 Jul 8.

Title: [Acupuncture in patients with headache.](#)

Authors: Jena S, Witt CM, Brinkhaus B, Wegscheider K, Willich SN.
Source: Institute for Social Medicine, Epidemiology, and Health Economics, Charité Medical Centre, Berlin, Germany.

ABSTRACT:

Objective: “We aimed to investigate the effectiveness of acupuncture in addition to routine care in patients with primary headache (> 12 months, two or more headaches/month) compared with treatment with routine care alone and whether the effects of acupuncture differ in randomized and non-randomized patients.”

Methods: “In a randomized controlled trial plus non-randomized cohort, patients with headache were allocated to receive up to 15 acupuncture sessions over 3 months or to a control group receiving no acupuncture during the first 3 months. Patients who did not consent to randomization received acupuncture treatment immediately. All subjects were allowed usual medical care in addition to study treatment. Number of days with headache, intensity of pain and health-related quality of life (SF-36) were assessed at baseline, and after 3 and 6 months using standardized questionnaires.”

Results: “Of 15,056 headache patients (mean age 44.1 +/- 12.8 years, 77% female), 1613 were randomized to acupuncture and 1569 to control, and 11,874 included in the non-randomized acupuncture group. At 3 months, the number of days with headache decreased from 8.4 +/- 7.2 (estimated mean +/-s.e.) to 4.7 +/- 5.6 in the acupuncture group and from 8.1 +/- 6.8 to 7.5 +/- 6.3 in the control group (P < 0.001). Similarly, intensity of pain and quality of life improvements were more pronounced in the acupuncture vs. control group (P < 0.001). Treatment success was maintained through 6 months. The outcome changes in non-randomized patients were similar to those in randomized patients.”

Conclusions: Acupuncture plus routine care in patients with headache was associated with marked clinical improvements compared with routine care alone.

44.

Journal: *BMJ. 2005 Aug 13;331(7513):376-82. Epub 2005 Jul 29.*

Title: [Acupuncture in patients with tension-type headache: randomised controlled trial.](#)

Authors: Melchart D, Streng A, Hoppe A, Brinkhaus B, Witt C, Wagenpfeil S, Pfaffenrath V, Hammes M, Hummelsberger J, Irnich D, Weidenhammer W, Willich SN, Linde K.

Source: Centre for Complementary Medicine Research, Department of Internal Medicine II, Technische Universität München, Kaiserstr 9, 80801 Munich, Germany.

ABSTRACT:

Objective: To investigate the effectiveness of acupuncture compared with minimal acupuncture and with no acupuncture in patients with tension-type headache.

Methods: DESIGN: Three armed randomised controlled multicentre trial. SETTING: 28 outpatient centres in Germany. PARTICIPANTS: 270 patients (74% women, mean age 43 (SD 13) years) with episodic or chronic tension-type headache. INTERVENTIONS: Acupuncture, minimal acupuncture (superficial

needling at non-acupuncture points), or waiting list control. Acupuncture and minimal acupuncture were administered by specialised physicians and consisted of 12 sessions per patient over eight weeks. MAIN OUTCOME MEASURE: Difference in numbers of days with headache between the four weeks before randomisation and weeks 9-12 after randomisation, as recorded by participants in headache diaries.

Results: The number of days with headache decreased by 7.2 (SD 6.5) days in the acupuncture group compared with 6.6 (SD 6.0) days in the minimal acupuncture group and 1.5 (SD 3.7) days in the waiting list group (difference: acupuncture v minimal acupuncture, 0.6 days, 95% confidence interval -1.5 to 2.6 days, P = 0.58; acupuncture v waiting list, 5.7 days, 3.9 to 7.5 days, P < 0.001). The proportion of responders (at least 50% reduction in days with headache) was 46% in the acupuncture group, 35% in the minimal acupuncture group, and 4% in the waiting list group.

Conclusions: The acupuncture intervention investigated in this trial was more effective than no treatment but not significantly more effective than minimal acupuncture for the treatment of tension-type headache.

45.

Journal: *Cochrane Database Syst Rev. 2009 Jan 21;(1):CD007587.*

Title: [Acupuncture for tension-type headache.](#)

Authors: Linde K, Allais G, Brinkhaus B, Manheimer E, Vickers A, White AR.

Source: Centre for Complementary Medicine Research, Department of Internal Medicine II, Technische Universitaet Muenchen, Wolfgangstr. 8, Munich, Germany, 81667. Klaus.Linde@lrz.tu-muenchen.de

ABSTRACT:

Objective: "To investigate whether acupuncture is a) more effective than no prophylactic treatment/routine care only; b) more effective than 'sham' (placebo) acupuncture; and c) as effective as other interventions in reducing headache frequency in patients with episodic or chronic tension-type headache."

Methods: "SEARCH STRATEGY: The Cochrane Pain, Palliative & Supportive Care Trials Register, CENTRAL, MEDLINE, EMBASE and the Cochrane Complementary Medicine Field Trials Register were searched to January 2008. SELECTION CRITERIA: We included randomized trials with a post-randomization observation period of at least 8 weeks that compared the clinical effects of an acupuncture intervention with a control (treatment of acute headaches only or routine care), a sham acupuncture intervention or another intervention in patients with episodic or chronic tension-type headache. DATA COLLECTION AND ANALYSIS: Two reviewers checked eligibility; extracted information on patients, interventions, methods and results; and assessed risk of bias and quality of the acupuncture intervention. Outcomes extracted included response (at least 50% reduction of headache frequency; outcome of primary interest), headache days, pain intensity and analgesic use."

Results: "Eleven trials with 2317 participants (median 62, range 10 to 1265) met the

inclusion criteria. Two large trials compared acupuncture to treatment of acute headaches or routine care only. Both found statistically significant and clinically relevant short-term (up to 3 months) benefits of acupuncture over control for response, number of headache days and pain intensity. Long-term effects (beyond 3 months) were not investigated. Six trials compared acupuncture with a sham acupuncture intervention, and five of the six provided data for meta-analyses. Small but statistically significant benefits of acupuncture over sham were found for response as well as for several other outcomes. Three of the four trials comparing acupuncture with physiotherapy, massage or relaxation had important methodological or reporting shortcomings. Their findings are difficult to interpret, but collectively suggest slightly better results for some outcomes in the control groups.”

Conclusions: “In the previous version of this review, evidence in support of acupuncture for tension-type headache was considered insufficient. Now, with six additional trials, the authors conclude that acupuncture could be a valuable non-pharmacological tool in patients with frequent episodic or chronic tension-type headaches.”

HOT FLASHES AND POST-MENOPAUSAL SYMPTOMS

46.

Journal: *Evid Based Complement Alternat Med.* 2009 Feb 2.

Title: [Acupuncture and Auricular Acupressure in Relieving Menopausal Hot Flashes of Bilaterally Ovariectomized Chinese Women: A Randomized Controlled Trial.](#)

Authors: Zhou J, Qu F, Sang X, Wang X, Nan R.

Source: No. 604 Room in B Building, School of Medicine, Zhejiang University, 388 Yuhang Tang Road, Hangzhou, Zhejiang 310058, P. R. China. qufan43@yahoo.com.cn.

ABSTRACT:

Objective: “The objective of this study is to explore the effects of acupuncture and auricular acupressure in relieving menopausal hot flashes of bilaterally ovariectomized Chinese women.”

Methods: “Between May 2006 and March 2008, 46 bilaterally ovariectomized Chinese women were randomized into an acupuncture and auricular acupressure group (n = 21) and a hormone replacement therapy (HRT) group (Tibolone, n = 25). Each patient was given a standard daily log and was required to record the frequency and severity of hot flashes and side effects of the treatment felt daily, from 1 week before the treatment started to the fourth week after the treatment ended. The serum levels of follicle stimulating hormone (FSH), LH and E(2) were detected before and after the treatment.”

Results: “After the treatment and the follow-up, both the severity and frequency of hot flashes in the two groups were relieved significantly when compared with pre-treatment (P < 0.05). There was no significant difference in the severity of hot flashes between them after treatment (P > 0.05), while after the follow-up, the severity of hot flashes in the HRT group was alleviated more. After the treatment

and the follow-up, the frequency of menopausal hot flashes in the HRT group was reduced more ($P < 0.05$). After treatment, the levels of FSH decreased significantly and the levels of E(2) increased significantly in both groups ($P < 0.05$), and they changed more in the HRT group ($P < 0.05$)."

Conclusions: "Acupuncture and auricular acupressure can be used as alternative treatments to relieve menopausal hot flashes for those bilaterally ovariectomized women who are unable or unwilling to receive HRT."

47.

Journal: *Acupunct Med* 2011;29:27-31 doi:10.1136/aim.2010.003285

Title: [The effect of acupuncture on postmenopausal symptoms and reproductive hormones: a sham controlled clinical trial](#)

Authors: Sunay, S., Ozdiken, M., Arslan, H., Seven, A., Aral, Y.

Source: Department of Family Medicine, Ministry of Health, Ankara Training and Research Hospital, Kiz kulesi sokak 3/5 Gaziosmanpasa Çankaya, 06450 Ankara, Turkey; didemsunay@gmail.com

ABSTRACT:

Objective: "In this study, the authors aimed to investigate whether acupuncture has an effect on menopausal symptoms and to explore whether this effect is related to changes in hormone levels."

Methods: "A total of 53 postmenopausal women were alternately assigned into two treatment groups: acupuncture (n=27) and sham acupuncture (n=26). Menopausal symptoms were assessed using the Menopause Rating Scale (MRS). The serum oestradiol, follicular stimulating hormone (FSH) and luteinising hormone (LH) levels were measured at baseline and again after the first and last sessions. The Student t test was used for normally distributed data and the Wilcoxon signed rank test for not normally distributed data. The group differences in MRS scores were assessed using non-parametric Mann–Whitney U test."

Results: "After treatment, total MRS, and the somatic and psychological subscale scores were significantly lower in the acupuncture group than the sham group (all $p=0.001$). The severity of hot flushes was found to be significantly decreased after treatment in acupuncture group ($p=0.001$). In the acupuncture group LH levels were lower and oestradiol levels were significantly higher than sham group ($p=0.046$ and $p=0.045$, respectively) after treatment, but there was no difference in FSH levels."

Conclusions: "Acupuncture was effective in reducing menopausal complaints when compared to sham acupuncture and can be considered as an alternative therapy in the treatment of menopausal symptoms."

HYPERTENSION

48.

Journal: *Altern Ther Health Med*, 2010; 16(2): 18-29

Title: [Acupuncture for essential hypertension.](#)
Authors: Kim LW, Zhu J.
Source: Department of Oriental Medicine Resources, College of Science and Engineering, Far East University, Korea. leowikim@naver.com

ABSTRACT:

Objective: To assess the efficacy of acupuncture for treatment of essential hypertension and the efficacy of acupuncture using prescription adhering to the principles of "syndrome differentiation."

Methods: "DATA SOURCES: Medline, Embase, Cochrane Central Register, and China National Knowledge Infrastructure (September 2008). STUDY SELECTION: Randomized, controlled trials comparing acupuncture with sham acupuncture, antihypertensive drugs, Chinese herbal medicine, or exercise in essential hypertension. DATA EXTRACTION: Two reviewers independently assessed trials for inclusion, extracted data, assessed methodological quality, and extracted outcome data on blood pressure. DATA SYNTHESIS: Treatment effects were summarized as mean differences with 95% confidence intervals. Twenty trials were included: three trials were relatively rigorous while others were methodologically suboptimal. Acupuncture arms achieved significant effect modification on blood pressure compared with control arms (19 comparisons: systolic blood pressure [SBP]: mean difference -4.23 mmHg, 95% confidence intervals -6.47 to -1.99; diastolic blood pressure [DBP]: -2.53, -3.99 to -1.08), with significant heterogeneity. In high-quality trials, blood pressure was significantly lower in treatments of acupuncture plus antihypertensive drug arms than in sham-acupuncture plus hypertensive drug arms (two comparisons: SBP: -5.72 mmHg, -8.77 to -2.68; DBP: -2.80, -5.07 to -0.54), with no significant heterogeneity."

Results: "As for trials using prescription adhering to the principles of syndrome differentiation, we found a significant blood pressure reduction with acupuncture arms in comparison with control arms (11 comparisons: SBP: -6.46 mmHg, -8.04 to -4.87; DBP: -3.07, -4.17 to -1.96) with no significant heterogeneity. In contrast, in trials not using prescription adhering to the principles of syndrome differentiation, we found no significant reduction in blood pressure with acupuncture arms in comparison with control arms (eight comparisons: SBP: -1.55 mmHg, -5.39 to 2.29; DBP: -2.12, -4.97 to 0.73) with significant heterogeneity."

Conclusions: "Because of the paucity of rigorous trials and the mixed results, these findings result in limited conclusions. More rigorously designed and powered studies are needed."

49.

Journal: *Hypertension*. 2006;48:838.)
Title: [Stop Hypertension With the Acupuncture Research Program \(SHARP\)](#)
Authors: Eric A. Macklin; Peter M. Wayne; Leslie A. Kalish; Peter Valaskatgis; James Thompson; May C.M. Pian-Smith; Qunhao Zhang; Stephanie Stevens; Christine

Source: Goertz; Ronald J. Prineas; Beverly Buczynski; Randall M. Zusman
From the New England Research Institutes (E.A.M., L.A.K., S.S.), Watertown, Mass; New England School of Acupuncture (P.M.W., P.V.), Watertown, Mass; Children's Hospital Boston (L.A.K.), Boston, Mass; Massachusetts General Hospital (J.T., M.C.M.P.-S., Q.Z., B.B., R.M.Z.), Harvard Medical School, Boston, Mass; Samueli Institute (C.G.), Alexandria, Va; and the School of Medicine (R.J.P.), Wake Forest University, Winston-Salem, NC.

ABSTRACT:

Objective: "Case studies and small trials suggest that acupuncture may effectively treat hypertension, but no large randomized trials have been reported."

Methods: "The Stop Hypertension with the Acupuncture Research Program pilot trial enrolled 192 participants with untreated blood pressure (BP) in the range of 140/90 to 179/109 mm Hg. The design of the trial combined rigorous methodology and adherence to principles of traditional Chinese medicine. Participants were weaned off antihypertensives before enrollment and were then randomly assigned to 3 treatments: individualized traditional Chinese acupuncture, standardized acupuncture at preselected points, or invasive sham acupuncture. Participants received 12 acupuncture treatments over 6 to 8 weeks. During the first 10 weeks after random assignment, BP was monitored every 14 days, and antihypertensives were prescribed if BP exceeded 180/110 mm Hg."

Results: "The mean BP decrease from baseline to 10 weeks, the primary end point, did not differ significantly between participants randomly assigned to active (individualized and standardized) versus sham acupuncture (systolic BP: -3.56 versus -3.84 mm Hg, respectively; 95% CI for the difference: -4.0 to 4.6 mm Hg; P=0.90; diastolic BP: -4.32 versus -2.81 mm Hg, 95% CI for the difference: -3.6 to 0.6 mm Hg; P=0.16). Categorizing participants by age, race, gender, baseline BP, history of antihypertensive use, obesity, or primary traditional Chinese medicine diagnosis did not reveal any subgroups for which the benefits of active acupuncture differed significantly from sham acupuncture."

Conclusions: "Active acupuncture provided no greater benefit than invasive sham acupuncture in reducing systolic or diastolic BP."

IMPROVED GAIT PERFORMANCE IN GERIATRIC PATIENTS

50.

Journal: *Arch Phys Med Rehabil.* 2011 Jan;92(1):7-14.

Title: [Stimulation of acupoint ST-34 acutely improves gait performance in geriatric patients during rehabilitation: A randomized controlled trial.](#)

Authors: Hauer K, Wendt I, Schwenk M, Rohr C, Oster P, Greten J.

Source: Department of Geriatric Research, Bethanien-Hospital/Geriatric Centre at the University of Heidelberg, Germany. khauer@bethanien-heidelberg.de

ABSTRACT:

Objective: To determine whether a specific regimen of acupoint stimulation improved gait

performance in geriatric patients.

Methods: “SETTING: Multiple-blinded, randomized, controlled intervention trial. PARTICIPANTS: 60 geriatric patients during rehabilitation. INTERVENTIONS: Both groups received a 1-time acupoint stimulation according to randomization. Stimulation of a verum acupoint (verum treatment) according to principles of traditional Chinese medicine was compared with a technically identical needle application on a nonacupoint (control treatment) in the control group. MAIN OUTCOME MEASURES: Descriptive parameters were documented by valid, established tests. Gait performance was objectively measured by an electronic walkway before needling and after needling.”

Results: “All gait parameters showed statistically significant improvement after verum treatment compared with control treatment (velocity, cadence, stride length, cycle time, step time, single support, double support: P values all <.05) except for the base of support (P=.163). Effect sizes achieved by 1-time stimulation of an acupoint were low and ranged from .08 to .24. No severe adverse clinical events related to the intervention occurred.”

Conclusions: “Study results showed that a 1-time administration of a specific acupoint stimulation regimen statistically significantly improved gait performance during geriatric ward rehabilitation. If sustainability of effects can be documented, acupuncture may prove to be an inexpensive intervention that may mildly improve motor performance in frail geriatric patients.”

INFLAMMATION

51.

Journal: *J Altern Complement Med.* 2005 Feb;11(1):135-42.

Title: [Electroacupuncture attenuates inflammation in a rat model.](#)

Authors: Zhang RX, Lao L, Wang X, Fan A, Wang L, Ren K, Berman BM.

Source: Center for Integrative Medicine, School of Medicine, University of Maryland, Baltimore, MD, USA.

ABSTRACT:

Objective: To evaluate the effectiveness of electroacupuncture (EA) on inflammation in a rat model.

Methods: “Four experiments were conducted on male Sprague-Dawley rats (n = 8-9 per group). Inflammation was induced by injecting complete Freund's adjuvant (CFA) subcutaneously into the plantar surface of one hind paw of the rat. Experiment 1: To determine the effect of EA (10 and 100 Hz) versus sham treatment on inflammation. Experiment 2: To investigate the involvement of the adrenal glands on the effect of EA treatment using adrenalectomized (ADX) rats. Experiment 3: To determine the effects of EA on plasma levels of corticosterone. Experiment 4: To determine the effects of EA treatment versus immobilization on such stress indicators as heart rate and blood pressure.”

Results: “At 10 Hz EA significantly reduced CFA-induced hind paw edema. The effect was partially blocked in the ADX rats. EA significantly increased plasma levels of

corticosterone but produced no noticeable signs of stress.”

Conclusion: “At 10 Hz but not 100 Hz, EA suppresses inflammation by activating the hypothalamus-pituitary-adrenal axis (HPA) and the nervous system.”

52.

Journal: *J Altern Complement Med. 2006 Jan-Feb;12(1):39-44.*

Title: [The anti-inflammatory effects of low- and high-frequency electroacupuncture are mediated by peripheral opioids in a mouse air pouch inflammation model.](#)

Authors: Kim HW, Roh DH, Yoon SY, Kang SY, Kwon YB, Han HJ, Lee HJ, Choi SM, Ryu YH, Beitz AJ, Lee JH.

Source: Department of Veterinary Physiology, College of Veterinary Medicine, Seoul National University, Seoul, South Korea.

ABSTRACT:

Objective: “The objective was to determine whether electroacupuncture (EA) is able to suppress the peripheral inflammatory response (e.g., zymosan-induced leukocyte migration into air pouch). As part of a mechanistic approach, it was further evaluated whether endogenous opioid systems are involved in the “EA-induced anti-inflammatory effect” (EA-AI).”

Methods: “EA (1 or 120 Hz) was performed bilaterally in the Zusanli acupoint (ST36) or in a nonacupoint (gluteal muscle) for 30 min in ICR mice under anesthetic condition. The number of leukocytes that migrated into the air pouch was counted 4 hours after zymosan injection. EA was performed at 0, 0.5, 1, or 2 hours prior to zymosan injection, respectively. To evaluate opioid involvement in EA-AI, intrathecal naloxone (36 microg/mouse) and intraperitoneal naloxone methiodide (30 mg/kg) were administered 10 min before EA stimulation.”

Results: “Both the 1 and 120 Hz frequencies of EA into Zusanli acupoint at the same time with zymosan injection significantly reduced leukocyte migration into the air pouch as compared with those of control groups (i.e., anesthetic control and needling control into Zusanli acupoint without electrical stimulation). The EA stimulation into nonacupoint did not produce any significant anti-inflammatory effect. EA treatment at 0.5 hours prior to zymosan injection also produced an anti-inflammatory effect but 1 and 2 hours prior to zymosan injection did not elicit any effect. Peripheral opioid blockage significantly reversed EA-AI, whereas spinal opioid blockage did not alter EA-AI.”

Conclusion: “EA can suppress peripheral inflammation through a peripheral opioid mechanism. To achieve the full effectiveness of EA, repeated application is recommended for the treatment of a variety of inflammatory diseases.”

INSOMNIA

53.

Journal: *Chin Med J (Eng), 2009; 122(23): 2869-73*

Title: [Electroacupuncture treatment of chronic insomniacs](#)

Authors: Ruan JW, Wang CH, et al

Source: Department of Acupuncture and Moxibustion, Department of Respiratory Medicine (Yan YS), First Affiliated Hospital of Sun Yat-sen University, Guangzhou, Guangdong 510080, China. Email: ruanjw@163.com

ABSTRACT:

Objective: To assess the efficacy of treating insomniacs with electroacupuncture

Methods: 47 patients with chronic insomnia were treated with four courses of electroacupuncture therapy

Results: "...four courses of electroacupuncture therapy (a form of acupuncture) were found to be associated with improvements in sleep quality and social function during the daytime. Specifically, increases in slow wave sleep time and REM sleep time were found. One month post-treatment, the insomnia rebound rate was 23%."

Conclusions: "...electroacupuncture therapy could be a promising avenue of treatment for chronic insomnia."

54.

Journal: *Minerva Med.* 2008 Dec;99(6):539-47.

Title: [Efficacy of wrists overnight compression \(HT 7 point\) on insomniacs: possible role of melatonin?](#)

Authors: Nordio M, Romanelli F.

Source: Department of Medical Physiopathology University of Rome 'Sapienza', Rome, Italy. maurizionordio1@gmail.com

ABSTRACT:

Objective: "Insomnia is a major problem which decreases life quality. Many causes are involved with it and anxiety is often associated. The underlying mechanism is not completely understood, even though different factors seem to be associated. Among them melatonin and its circadian rhythm is thought to have an important role. In addition, acupressure and acupuncture are known to ameliorate insomnia and anxiety, when a specific wrist point is stimulated (HT 7 Shenmen). With these bases, the aim of the present study has been to evaluate the efficacy of an acupressure device, "H7-insomnia control", positioned on HT 7 points, during the night, in terms of general health and anxiety levels, together with the evaluation of sleep quality and the urinary melatonin metabolite 6-hydroxymelatonin sulphate determination, in a number of insomniacs."

Methods: "Forty patients with insomnia were divided into two groups and randomly received either the H7 or placebo treatments, in a double-blind protocol, for 20 nights. Before and after treatments every subject answered a series of questionnaires (General Health Questionnaire 28 items; State-Trait Anxiety Inventory; Pittsburgh Sleep Quality Index) and collected 24 h urines, divided into two samples of 12 h each. Urinary melatonin metabolite was then determined using a RIA method."

Results: "Data obtained indicate that the device H7-insomnia control is efficacious to ameliorate quality of sleep and reduce anxiety levels in insomniacs, at a higher extent than in the placebo group. In addition, the 24 hours urinary melatonin

metabolite rhythm, obtained at the end of treatment, was considered as being normal in a higher percentage of H7-treated patients, with respect to the placebo group.”

Conclusions: “It is plausible to hypothesize that the wrist acupressure device might be considered a valid tool, without adverse effects since it does not contain pharmaceutical products, that is able to naturally ameliorate sleep quality in insomniacs, acting through a not yet completely clarified mechanism, that may involve melatonin.”

55.

Journal: *Cochrane Database of Systematic Reviews 2007, Issue 3. Art. No.: CD005472. DOI: 10.1002/14651858.CD005472.pub2*

Title: [Acupuncture for insomnia.](#)

Authors: Cheuk DKL, Yeung J, Chung K, Wong

Source: The Cochrane Collaboration, currently published in The Cochrane Database of Systematic Reviews 2011 Issue 5, Copyright © 2011

ABSTRACT:

Objective: To determine the efficacy and safety of acupuncture in people with insomnia.

Methods: “SEARCH STRATEGY: We searched the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, PsycINFO, Dissertation Abstracts International, CINAHL, AMED (the Allied and Complementary Medicine Database), TCMLARS (Traditional Chinese Medical Literature Analysis and Retrieval System), National Center for Complementary and Alternative Medicine, the National Institute of Health Clinical Trials Database, the Chinese Acupuncture Trials Register, the Trials Register of the Cochrane Complementary Medicine Field, from inception to 2006, and the sleep bibliography, which is available at www.websciences.org/bibliosleep. We searched reference lists of retrieved articles, and contacted trial authors and experts in the field for information on ongoing/completed trials. SELECTION CRITERIA: Randomised controlled trials evaluating any form of acupuncture involving participants of any age with any type of insomnia were included. Included trials compared acupuncture with placebo or sham or no treatment, or acupuncture plus other treatments compared with the same other treatments. Trials that compared only acupuncture methods or compared acupuncture alone against other treatments alone were excluded, since they did not yield the net effect of acupuncture. DATA COLLECTION AND ANALYSIS: Two review authors independently extracted data and assessed quality according to a set of criteria for risk of selection bias, performance bias, attrition bias and detection bias. Relative risk (RR) and standardised mean difference (SMD) with 95% confidence intervals were used for binary and continuous outcomes respectively. Data were combined in meta-analyses (on an intention-to-treat basis), where more than one trial without significant clinical heterogeneity presented the same outcome.”

Results: “Seven trials met the inclusion criteria. The studies included 590 participants with insomnia, of whom 56 dropped out. Participant age ranged from 15 to 98

years, and the duration of insomnia varied from 6 months to 19 years. Co-existing medical conditions contributing to insomnia included stroke, end-stage renal disease and pregnancy. Apart from conventional needle acupuncture, different variants of acupuncture such as acupressure, auricular magnetic and seed therapy, and transcutaneous electrical acupoint stimulation (TEAS) were evaluated. Meta-analysis was limited because of considerable heterogeneity between comparison groups and between outcome measures.”

“Based on the findings from individual trials, the review suggested that acupuncture and acupressure may help to improve sleep quality scores when compared to placebo (SMD = -1.08, 95% CI = -1.86 to -0.31, p=0.006) or no treatment (SMD -0.55, 95% CI = -0.89 to -0.21, p=0.002). TEAS also resulted in better sleep quality score in one trial (SMD = -0.74, 95% CI = -1.22 to -0.26, p=0.003). However, the efficacy of acupuncture or its variants was inconsistent between studies for many sleep parameters, such as sleep onset latency, total sleep duration and wake after sleep onset. The combined result from three studies reporting subjective insomnia improvement showed that acupuncture or its variants was not more significantly effective than control (RR = 1.66, 95% CI = 0.68 to -4.03) and significant statistical heterogeneity was observed. Only one study reported an adverse event, with one out of 16 patients (6.3%) withdrawing from acupuncture because of pain.”

Conclusions: “The small number of randomised controlled trials, together with the poor methodological quality and significant clinical heterogeneity, means that the current evidence is not sufficiently extensive or rigorous to support the use of any form of acupuncture for the treatment of insomnia. Larger high quality clinical trials employing appropriate randomisation concealment and blinding with longer follow-up are needed to further investigate the efficacy and safety of acupuncture for the treatment of insomnia.”

IRRITABLE BOWEL SYNDROME

56.

Journal: *Gastroenterol Nurs*, 2009; 32(4): 243-55.

Title: [Symptom management for irritable bowel syndrome: a pilot randomized controlled trial of acupuncture/moxibustion](#)

Authors: Anastasi JK, McMahon DJ, et al,

Source: Columbia University School of Nursing, New York, NY 10032, USA. E-mail: jka8@columbia.edu

ABSTRACT:

Objective: “to assess the effect of an individualized traditional Chinese medicine (TCM) acupuncture and moxibustion (Acu/Moxa) treatment on symptom control in patients with irritable bowel syndrome (IBS) in a preliminary, randomized, sham/placebo-controlled trial.”

Methods: “Twenty-nine men and women with IBS were randomized to either

individualized Acu/Moxa (treatment group) or sham/placebo Acu/Moxa (control group). All subjects were assessed by a diagnostic acupuncturist for a TCM evaluation and individualized point prescription. Only those subjects assigned to the experimental group received the individually prescribed treatment. The diagnostic acupuncturist did not administer treatments and was blind to treatment assignments. All subjects kept a symptom diary for the duration of the study, enabling measurement of symptom frequency, severity, and improvement. The Clinical Global Impression Scale was administered preintervention to establish baseline severity and on completion of the 4-week, eight-session treatment intervention.”

Results: “After 4 weeks of twice-weekly Acu/Moxa treatment, average daily abdominal pain/discomfort improved whereas the control group showed minimal reduction. This between-group difference adjusted for baseline difference was statistically significant. The intestinal gas, bloating, and stool consistency composite score showed a similar pattern of improvement.”

Conclusions: The findings indicate that Acu/Moxa treatment shows promise in the area of symptom management for IBS.

LABOR PAIN

57.

Journal: *Zhongguo Zhen Jiu*. 2010 Aug;30(8):623-6.

Title: [Effect on moxibustion at Sanyinjiao \(SP 6\) for uterine contraction pain in labor: a randomized controlled trial](#)

Authors: Ma SX, Wu FW, Cui JM, Jin ZH, Kong LJ.

Source: TCM Department, North China Coal Medical University, Tangshan 063000, China.

ABSTRACT:

Objective: “To investigate the effect of moxibustion at Sanyinjiao (SP 6) for uterine contraction pain in labor, and evaluate the safety of the parturient and newborn.”

Methods: “One hundred and seventy-four cases of singleton pregnancy and cephalic presentation primipara were single blinded and randomly divided into three groups: observation group (59 cases), placebo treated group (57 cases) and blank group (58 cases). The observation group was treated with moxibustion at Sanyinjiao (SP 6) for 30 min when the uterus cervix opening at 3 cm, the placebo treated group was treated with moxibustion at no acupoint for 30 min and the blank group was treated with routine labor nursing, the uterine contraction pain and the safety of the mother and infant were compared among three groups.”

Results: “1) The uterine contraction pain was tested by Visual Analogue Scale (VAS): the scores of VAS in the observation group were obviously decreased after 15 min and 30 min of moxibustion (both $P < 0.05$), there were no obvious changes of the VAS scores in placebo treated group and the blank group, the scores of VAS in observation group decreased much more obviously than those in the other two groups (all $P < 0.05$); 2) Midwife rating of the uterine contraction pain: after 30

min of moxibustion, the effective rate of labor analgesia was 69.5% (41/59) in observation group, which was higher than that of 45.6% (26/57) in placebo treated group and 43.1% (25/58) in blank group, with significant differences between them (both $P < 0.05$); 3) The postpartum hemorrhage amount of the observation group was obviously lower than those of placebo treated group and blank group (both $P < 0.05$); 4) The Apgar score of newborn was higher in observation group and placebo treated group than that of blank group (both $P < 0.05$)."

Conclusion: "Moxibustion at Sanyinjiao (SP 6) can relieve the uterine contraction pain, and has no side effect to mother and infant, it is one of the safe, effective and simple non-drug analgesia methods."

LEUKOPENIA AND NEUTROPENIA INDUCED BY CHEMOTHERAPY

58.

Journal: *J Altern Complement Med.* 2009 July; 15(7): 745–753.
doi: 10.1089/acm.2008.0589.

Title: [Acupuncture for Chemotherapy-Induced Neutropenia in Patients with Gynecologic Malignancies: A Pilot Randomized, Sham-Controlled Clinical Trial](#)

Authors: Weidong Lu, M.B., M.P.H., Lic.Ac.,^{1,2,3*} Ursula A. Matulonis, M.D.,^{4*} Anne Doherty-Gilman, M.P.H.,¹ Hang Lee, Ph.D.,⁵ Elizabeth Dean-Clower, M.D., M.P.H.,¹ Andrew Rosulek, B.S.,¹ Carolyn Gibson,⁶ Annekathryn Goodman, M.D.,⁶ Roger B. Davis, Sc.D.,³ Julie E. Buring, Sc.D.,³ Peter M. Wayne, Ph.D.,^{2,3} David S. Rosenthal, M.D.,^{1,4} and Richard T. Penson, M.D.⁶

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*These authors contributed equally to the study.

ABSTRACT:

Objective: "The objective of this study was to investigate the effect of acupuncture administered during myelosuppressive chemotherapy on white blood cell (WBC) count and absolute neutrophil count (ANC) in patients with ovarian cancer."

Methods: Design: "This study is a pilot, randomized, sham-controlled clinical trial. Patients received active acupuncture versus sham acupuncture while undergoing chemotherapy. A standardized acupuncture protocol was employed with manual and electrostimulation. The frequency of treatment was 2–3 times per week for a total of 10 sessions, starting 1 week before the second cycle of chemotherapy.

Setting The setting was two outpatient academic centers for patients with cancer. Outcome measures WBC count, ANC, and plasma granulocyte colony-stimulating factor (G-CSF) were assessed weekly.”

Results: “The median leukocyte value in the acupuncture arm at the first day of the third cycle of chemotherapy was significantly higher than in the control arm after adjusting for baseline value (8600 cells/ μ L, range: 4800–12,000 versus 4400 cell/ μ L, range: 2300–10,000) ($p = 0.046$). The incidence of grade 2–4 leukopenia was less in the acupuncture arm than in the sham arm (30% versus 90%; $p = 0.02$). However, the median leukocyte nadir, neutrophil nadir, and recovering ANC were all higher but not statistically significantly different ($p = 0.116$ – 0.16), after adjusting for baseline differences. There were no statistically significant differences in plasma G-CSF between the two groups.”

Conclusions: “We observed clinically relevant trends of higher WBC values during one cycle of chemotherapy in patients with ovarian cancer, which suggests a potential myeloprotective effect of acupuncture. A larger trial is warranted to more definitively determine the efficacy of acupuncture on clinically important outcomes of chemotherapy-induced neutropenia.”

59.

Journal: *web based only - Database of Abstracts of Reviews of Effects (DARE) Produced by the Centre for Reviews and Dissemination associated with the NHS (National Institute for Health Research) Copyright © 2011 University of York*

Title: [Acupuncture for chemotherapy-induced leukopenia: exploratory meta-analysis of randomized controlled trials](#)

Authors: Lu W, Hu D, Dean-Clower E, Doherty-Gilman A, Legedza A T, Lee H, Matulonis U, Rosenthal D S

Source: National Institute for Health Research

ABSTRACT:

Objective: “To evaluate the effectiveness and safety of acupuncture for chemotherapy-induced leukopenia and/or neutropenia in cancer patients.”

Methods: “The following databases were searched to June 2004: China Biological Medicine, Traditional Chinese Medical Literature Analysis and Retrieval System (TCMLARS), MEDLINE and EMBASE. In addition, the Cochrane Database of Systematic Reviews (Issue 4, 2004), the Cochrane Central Register of Controlled Trials, the internal database of non-MEDLINE journals housed in the New England School of Acupuncture Kelley Library and reference lists of retrieved articles were also searched. Publications in English and Chinese were eligible for inclusion.”

Results: “Eleven ($n=682$) trials were included in the review. All eleven trials scored only 1 point on the Jadad validity scale, which was awarded because of reported randomisation. None of the trials used blinding or sham acupuncture as controls. No trials reported participant withdrawals or drop-outs. Follow-up was reported as short in many trials and participants did not complete full chemotherapy treatments. None of the trials reported power calculations.

“The effective rates of leukopenia recovery with acupuncture varied between 57% and 90%.

“The combined results (seven trials) reported a weighted mean difference of 1.221 (95% confidence interval (CI): 0.636 to 1.807; $p < 0.0001$), indicating statistically significantly greater white blood cell $s/\mu\text{L}$ (1,221 white blood cells/ $s/\mu\text{L}$) in the acupuncture groups compared to control groups. Heterogeneity was high ($I^2=81\%$).

“Sensitivity analyses for the multiple arm trials reported similar results. Sensitivity analysis also reported that electroacupuncture was significantly associated with leukocyte increase (weighted mean difference 1.863, 95% CI: 1.095 to 2.629; $p=0.041$) compared to control. Preload acupuncture and leukopenia present at baseline were not statistically significant predictors.

“No adverse events were reported in any of the trials.”

Conclusions: “The results showed that acupuncture use was associated with an increase in leukocytes. However, due to the poor quality of the trials and the likelihood of publication bias, the results of this review should be treated as a hypothesis-generating exercise only.”

LOW BACK PAIN

60.

Journal: N Engl J Med 2010; 363:454-461 July 29, 2010

Title: [Acupuncture for Chronic Low Back Pain](#)

Authors: B.M. Berman, H.M. Langevin, C.M. Witt, and R. Dubner

Source: From the Center for Integrative Medicine, University of Maryland School of Medicine (B.M.B.), and the University of Maryland Dental School (R.D.) — both in Baltimore; the Department of Neurology and the Program in Integrative Health, University of Vermont College of Medicine, Burlington (H.M.L.); and the Institute for Social Medicine, Epidemiology, and Health Economics, Charité University Medical Center, Berlin (C.M.W.). Address reprint requests to Dr. Berman at the University of Maryland School of Medicine, 2200 Kernan Dr., Baltimore, MD 21207, or at bberman@compmed.umm.edu.

ABSTRACT:

Conclusions: “Clinical trials of acupuncture for chronic low back pain have shown higher rates of symptom improvement with either acupuncture or sham acupuncture than with usual care.”

61.

Journal: Scand J Caring Sci. 2010 Mar;24(1):175-82. Epub 2010 Jan 20.

Title: [Acupuncture treatment of pregnant women with low back and pelvic pain--an](#)

[intervention study.](#)

Authors: Ekdahl L, Petersson K.

Source: Department of Obstetrics and Gynecology, Centrallasarettet, Växjö, Sweden.
lena_m_ekdahl@yahoo.se

ABSTRACT:

Objective: To describe patients' experience of acupuncture treatment in low back and pelvic pain during pregnancy.

Methods: "DESIGN: An intervention study carried out between September 2000 and December 2001, involving 40 pregnant women. PARTICIPANTS: The study population consisted of healthy pregnant women presenting with low back and pelvic pain at maternity health care centres within a defined area in southern Sweden. INTERVENTION: Two groups of women received acupuncture treatment from gestational week 20 (group 1) or week 26 (group 2) respectively, for a period of 6 weeks divided into eight sessions of 30 minutes each. MEASUREMENTS: Pain assessment was carried out using Pain-O-Meter and visual analogue scale (POM-VAS), Short-Form McGill Questionnaire (SF-MPQ), Short-Form-36: Health Survey Questionnaire (SF-36), followed by telephone interviews 2-3 months after delivery."

Results: "The results of POM-VAS, SF-MPQ and SF-36 showed a relief of pain in both groups. In group 2, an improvement in several SF-36 variables was noted in spite of increased physical restrictions. Telephone interviews confirmed that expectations of treatment were fulfilled. Using content analysis the main category, limitations in daily life, was identified, with subcategories pain, and psychological well-being."

Conclusions: "It may be advantageous to begin acupuncture therapy later in pregnancy to maximise pain relief."

62.

Journal: *Arch Intern Med.* 2009 May 11;169(9):858-66.

Title: [A randomized trial comparing acupuncture, simulated acupuncture, and usual care for chronic low back pain.](#)

Authors: Cherkin DC, Sherman KJ, Avins AL, Erro JH, Ichikawa L, Barlow WE, Delaney K, Hawkes R, Hamilton L, Pressman A, Khalsa PS, Deyo RA.

Source: Center for Health Studies, 1730 Minor Avenue, Seattle, WA 98101, USA.
cherkin.d@ghc.org

ABSTRACT:

Objective: "Acupuncture is a popular complementary and alternative treatment for chronic back pain. Recent European trials suggest similar short-term benefits from real and sham acupuncture needling. This trial addresses the importance of needle placement and skin penetration in eliciting acupuncture effects for patients with chronic low back pain."

Methods: "A total of 638 adults with chronic mechanical low back pain were randomized to individualized acupuncture, standardized acupuncture, simulated acupuncture, or usual care. Ten treatments were provided over 7 weeks by experienced

acupuncturists. The primary outcomes were back-related dysfunction (Roland-Morris Disability Questionnaire score; range, 0-23) and symptom bothersomeness (0-10 scale). Outcomes were assessed at baseline and after 8, 26, and 52 weeks.”

Results: “At 8 weeks, mean dysfunction scores for the individualized, standardized, and simulated acupuncture groups improved by 4.4, 4.5, and 4.4 points, respectively, compared with 2.1 points for those receiving usual care ($P < .001$). Participants receiving real or simulated acupuncture were more likely than those receiving usual care to experience clinically meaningful improvements on the dysfunction scale (60% vs. 39%; $P < .001$). Symptoms improved by 1.6 to 1.9 points in the treatment groups compared with 0.7 points in the usual care group ($P < .001$). After 1 year, participants in the treatment groups were more likely than those receiving usual care to experience clinically meaningful improvements in dysfunction (59% to 65% vs. 50%, respectively; $P = .02$) but not in symptoms ($P > .05$).”

Conclusions: “Although acupuncture was found effective for chronic low back pain, tailoring needling sites to each patient and penetration of the skin appear to be unimportant in eliciting therapeutic benefits. These findings raise questions about acupuncture's purported mechanisms of action. It remains unclear whether acupuncture or our simulated method of acupuncture provide physiologically important stimulation or represent placebo or nonspecific effects.”

63.

Journal: *Arch Intern Med.* 2007 Sep 24;167(17):1892-8.

Title: [German Acupuncture Trials \(GERAC\) for chronic low back pain: randomized, multicenter, blinded, parallel-group trial with 3 groups.](#)

Authors: Haake M, Müller HH, Schade-Brittinger C, Basler HD, Schäfer H, Maier C, Endres HG, Trampisch HJ, Molsberger A.

Source: Orthopaedic Department, University of Regensburg, Bad Abbach, Germany.

ABSTRACT:

Objective: “To our knowledge, verum acupuncture has never been directly compared with sham acupuncture and guideline-based conventional therapy in patients with chronic low back pain.”

Methods: “A patient- and observer-blinded randomized controlled trial conducted in Germany involving 340 outpatient practices, including 1162 patients aged 18 to 86 years (mean \pm SD age, 50 \pm 15 years) with a history of chronic low back pain for a mean of 8 years. Patients underwent ten 30-minute sessions, generally 2 sessions per week, of verum acupuncture ($n = 387$) according to principles of traditional Chinese medicine; sham acupuncture ($n = 387$) consisting of superficial needling at nonacupuncture points; or conventional therapy, a combination of drugs, physical therapy, and exercise ($n = 388$). Five additional sessions were offered to patients who had a partial response to treatment (10%-50% reduction in pain intensity). Primary outcome was response after 6 months,

defined as 33% improvement or better on 3 pain-related items on the Von Korff Chronic Pain Grade Scale questionnaire or 12% improvement or better on the back-specific Hanover Functional Ability Questionnaire. Patients who were unblinded or had recourse to other than permitted concomitant therapies during follow-up were classified as nonresponders regardless of symptom improvement.”

Results: “At 6 months, response rate was 47.6% in the verum acupuncture group, 44.2% in the sham acupuncture group, and 27.4% in the conventional therapy group. Differences among groups were as follows: verum vs. sham, 3.4% (95% confidence interval, -3.7% to 10.3%; $P = .39$); verum vs. conventional therapy, 20.2% (95% confidence interval, 13.4% to 26.7%; $P < .001$); and sham vs. conventional therapy, 16.8% (95% confidence interval, 10.1% to 23.4%; $P < .001$.”

Conclusions: “Low back pain improved after acupuncture treatment for at least 6 months. Effectiveness of acupuncture, either verum or sham, was almost twice that of conventional therapy.”

64.

Journal: *Acta Obstet Gynecol Scand.* 2004 Mar;83(3):246-50.

Title: [Acupuncture relieves pelvic and low-back pain in late pregnancy.](#)

Authors: Kvorning N, Holmberg C, Grennert L, Aberg A, Akesson J.

Source: Department of Anesthesia and Intensive Care, Hospital of Helsingborg, Sweden. nina.kvorning-ternov@helsingborgslasarett.se

ABSTRACT:

Objective: “The study was designed to evaluate the analgesic effect and possible adverse effects of acupuncture for pelvic and low-back pain during the last trimester of pregnancy.”

Methods: “Following individual informed consent, 72 pregnant women reporting pelvic or low-back pain were randomized during pregnancy weeks 24-37 to an acupuncture group ($n = 37$) or to a control group ($n = 35$) at three maternity wards in southern Sweden. Traditional acupuncture points and local tender points (TP) were chosen according to individual pain patterns and stimulated once or twice a week until delivery or complete recovery in acupuncture patients. Control patients were given no sham stimulation. Throughout the study period each patient made weekly visual analog scale (VAS) evaluations of maximal and minimal pain intensity as well as three-point assessments of pain intensity during various activities.”

Results: “During the study period, VAS scorings of pain intensity decreased over time in 60% of patients in the acupuncture group and in 14% of those in the control group ($p < 0.01$). At the end of the study period, 43% of the acupuncture patients were less bothered than initially by pain during activity compared with 9% of control patients ($p < 0.01$). No serious adverse effects of acupuncture were found in the patients, and there were no adverse effects at all in the infants.”

Conclusions: “Acupuncture relieves low-back and pelvic pain without serious adverse effects

in late pregnancy.”

65.

Journal: *Annals of Internal Medicine*

Title: [Meta-Analysis: Acupuncture for Low Back Pain](#)

Authors: Manheimer, E., White, A., Berman, B. Forsys, K., Ernst, E.

Source: University of Maryland School of Medicine, Center for Integrative Medicine, Baltimore, Maryland, and Peninsula Medical School, Plymouth, United Kingdom.

ABSTRACT:

Objective: “Background: Low back pain limits activity and is the second most frequent reason for physician visits. Previous research shows widespread use of acupuncture for low back pain. Purpose: To assess acupuncture's effectiveness for treating low back pain.”

Methods: “Data Sources: Randomized, controlled trials were identified through searches of MEDLINE, Cochrane Central, EMBASE, AMED, CINAHL, CISCOP, and GERA databases through August 2004. Additional data sources included previous reviews and personal contacts with colleagues.”

“Study Selection: Randomized, controlled trials comparing needle acupuncture with sham acupuncture, other sham treatments, no additional treatment, or another active treatment for patients with low back pain.”

“Data Extraction: Data were dually extracted for the outcomes of pain, functional status, overall improvement, return to work, and analgesic consumption. In addition, study quality was assessed.”

“Data Synthesis: The 33 randomized, controlled trials that met inclusion criteria were subgrouped according to acute or chronic pain, style of acupuncture, and type of control group used. The principal measure of effect size was the standardized mean difference, since the trials assessed the same outcome but measured it in various ways.”

Results: “For the primary outcome of short-term relief of chronic pain, the meta-analyses showed that acupuncture is significantly more effective than sham treatment (standardized mean difference, 0.54 [95% CI, 0.35 to 0.73]; 7 trials) and no additional treatment (standardized mean difference, 0.69 [CI, 0.40 to 0.98]; 8 trials). For patients with acute low back pain, data are sparse and inconclusive. Data are also insufficient for drawing conclusions about acupuncture's short-term effectiveness compared with most other therapies. Limitations: The quantity and quality of the included trials varied.”

Conclusions: “Acupuncture effectively relieves chronic low back pain. No evidence suggests that acupuncture is more effective than other active therapies.”

66.

Journal: *Spine [2008, 33(23):E887-900]*

Title: [Effectiveness of Acupuncture for Low Back Pain: A Systematic Review](#)

Authors: Jing Yuan, PhD; Nithima Purepong, MSc; Daniel Paul Kerr, PhD; Jongbae Park, KMD, PhD; Ian Bradbury, PhD; Suzanne McDonough, PhD

Source: School of Health Sciences, University of Ulster, Co Antrim, Northern Ireland.

ABSTRACT:

Objective: “To explore the evidence for the effectiveness of acupuncture for nonspecific low back pain (LBP).”

Methods: “Searches were completed for RCTs on all types of acupuncture for patients with nonspecific LBP published in English. Methodologic quality was scored using the Van Tulder scale. Trials were deemed to be high quality if they scored more than 6/11 on the Van Tulder scale, carried out appropriate statistical analysis, with at least 40 patients per group, and did not exceed 20% and 30% dropouts at short/intermediate and long-term follow-up, respectively. High quality trials were given more weight when conducting the best evidence synthesis. Studies were grouped according to the control interventions, i.e., no treatment, sham intervention, conventional therapy, acupuncture in addition to conventional therapy. Treatment effect size and clinical significance were also determined. The adequacy of acupuncture treatment was judged by comparison of recommendations made in textbooks, surveys, and reviews.”

Results: “Twenty-three trials (n = 6359) were included and classified into 5 types of comparisons, 6 of which were of high quality. There is moderate evidence that acupuncture is more effective than no treatment, and strong evidence of no significant difference between acupuncture and sham acupuncture, for short-term pain relief. There is strong evidence that acupuncture can be a useful supplement to other forms of conventional therapy for nonspecific LBP, but the effectiveness of acupuncture compared with other forms of conventional therapies still requires further investigation.”

Conclusions: “Acupuncture versus no treatment, and as an adjunct to conventional care, should be advocated in the European Guidelines for the treatment of chronic LBP.”

67.

Journal: *BMJ. 2006 Sep 23;333(7569):626. Epub 2006 Sep 15.*

Title: [A randomised controlled trial of acupuncture care for persistent low back pain: cost effectiveness analysis.](#)

Authors: Ratcliffe J, Thomas KJ, MacPherson H, Brazier J.

Source: School of Health and Related Research, University of Sheffield. j.ratcliffe@sheffield.ac.uk

ABSTRACT:

Objective: “To evaluate the cost effectiveness of acupuncture in the management of persistent non-specific low back pain.”

Methods: “DESIGN: Cost effectiveness analysis of a randomised controlled trial. SETTING: Three private acupuncture clinics and 18 general practices in York, England. PARTICIPANTS: 241 adults aged 18-65 with non-specific low back pain of 4-52

weeks' duration. INTERVENTIONS: Ten individualised acupuncture treatments over three months from acupuncturists trained in traditional Chinese medicine (n = 160) or usual care only (n = 81). MAIN OUTCOME MEASURES: Incremental cost per quality adjusted life year (QALY) gained over two years.”

Results: “Total costs to the United Kingdom's health service during the two year study period were higher on average for the acupuncture group (460 pounds sterling; 673 euros; 859 dollars) than for the usual care group (345 pounds sterling) because of the costs associated with initial treatment. The mean incremental health gain from acupuncture at 12 months was 0.012 QALYs (95% confidence interval -0.033 to 0.058) and at 24 months was 0.027 QALYs (-0.056 to 0.110), leading to a base case estimate of 4241 pounds sterling per QALY gained. This result was robust to sensitivity analysis. The probabilistic sensitivity analysis showed acupuncture to have a more than 90% chance of being cost effective at a pound20 000 cost per QALY threshold.”

Conclusions: “A short course of traditional acupuncture for persistent non-specific low back pain in primary care confers a modest health benefit for minor extra cost to the NHS compared with usual care. Acupuncture care for low back pain seems to be cost effective in the longer term.”

68.

Journal: *The American Journal of Chinese Medicine (AJCM), Volume: 8, Issues: 1-2(1980) pp. 181-189 DOI: 10.1142/S0192415X80000141*

Title: [The Acupuncture Treatment of Low Back Pain: A Randomized Controlled Study](#)

Authors: Ralph M. Coan, Grace Wong, Su Liang Ku, Yick Chong Chan, Lucy Wang, Faruk T. Ozer, Patricia L. Coan

Source: Acupuncture Center of Washington, 4400 East-West Highway, Bethesda, Maryland 20014, USA; Acupuncture Clinic of Maryland, 11125 Rockville Pike, Rockville, Maryland 20852, USA

ABSTRACT:

Objective: To determine if acupuncture was beneficial to patients with low back pain

Methods: Acupuncture was performed on an unspecified number of patients and results were compared/contrasted with “the use of the short-term controls and long-term controls, although the later were not intended in the study design.”

Results: “After acupuncture, there was a 51% pain reduction in the average pain score in the Immediate Treatment Group. This short-term controls, the Delayed Treatment Group, had no reduction whatsoever in their pain scores at the comparable followup period. Later, the Delayed Treatment Group were also treated by acupuncturists, and reported 62% less pain. When these two treatment groups were compared at 40 weeks with long-term controls (Inadequate Treatment Group), the Inadequate Treatment Group still had the same pain scores, on the average, as when they were enrolled in the study. Both treatment groups, on the average, had 30% lower pain scores. Furthermore, 58% of the treatment groups felt that they were definitely improved at 40 weeks, while only 11% of the Inadequate Treatment Group felt definitely improved at 40

weeks.”

Conclusions: “The acupuncture treatment situation was beneficial to the majority of people with low back pain.”

69.

Journal: *Arch Intern Med.* 2006 Feb 27;166(4):450-7.

Title: [Acupuncture in patients with chronic low back pain: a randomized controlled trial.](#)

Authors: Brinkhaus B, Witt CM, Jena S, Linde K, Streng A, Wagenpfeil S, Irnich D, Walther HU, Melchart D, Willich SN.

Source: Institute of Social Medicine, Epidemiology, and Health Economics, Charité, University Medical Center, Berlin, Germany. benno.brinkhaus@charite.de

ABSTRACT:

Objective: “Acupuncture is widely used by patients with low back pain, although its effectiveness is unclear. We investigated the efficacy of acupuncture compared with minimal acupuncture and with no acupuncture in patients with chronic low back pain.”

Methods: “Patients were randomized to treatment with acupuncture, minimal acupuncture (superficial needling at nonacupuncture points), or a waiting list control. Acupuncture and minimal acupuncture were administered by specialized acupuncture physicians in 30 outpatient centers, and consisted of 12 sessions per patient over 8 weeks. Patients completed standardized questionnaires at baseline and at 8, 26, and 52 weeks after randomization. The primary outcome variable was the change in low back pain intensity from baseline to the end of week 8, as determined on a visual analog scale (range, 0-100 mm).”

Results: “A total of 298 patients (67.8% female; mean +/- SD age, 59 +/- 9 years) were included. Between baseline and week 8, pain intensity decreased by a mean +/- SD of 28.7 +/- 30.3 mm in the acupuncture group, 23.6 +/- 31.0 mm in the minimal acupuncture group, and 6.9 +/- 22.0 mm in the waiting list group. The difference for the acupuncture vs. minimal acupuncture group was 5.1 mm (95% confidence interval, -3.7 to 13.9 mm; P = .26), and the difference for the acupuncture vs. waiting list group was 21.7 mm (95% confidence interval, 13.9-30.0 mm; P<.001). Also, at 26 (P=.96) and 52 (P=.61) weeks, pain did not differ significantly between the acupuncture and the minimal acupuncture groups.”

Conclusions: “Acupuncture was more effective in improving pain than no acupuncture treatment in patients with chronic low back pain, whereas there were no significant differences between acupuncture and minimal acupuncture.”

70.

Journal: *Am J Epidemiol.* 2006 Sep 1;164(5):487-96. Epub 2006 Jun 23.

Title: [Pragmatic randomized trial evaluating the clinical and economic effectiveness of acupuncture for chronic low back pain.](#)

Authors: Witt CM, Jena S, Selim D, Brinkhaus B, Reinhold T, Wruck K, Liecker B, Linde K,

Wegscheider K, Willich SN.

Source: Institute for Social Medicine, Epidemiology, and Health Economics, Charité University Medical Center, Berlin, Germany. claudia.witt@charite.de

ABSTRACT:

Objective: To investigate “the effectiveness and costs of acupuncture in addition to routine care in the treatment of chronic low back pain and” [assess] “whether the effects of acupuncture differed in randomized and nonrandomized patients.”

Methods: “In 2001, German patients with chronic low back pain were allocated to an acupuncture group or a no-acupuncture control group. Persons who did not consent to randomization were included in a nonrandomized acupuncture group. All patients were allowed to receive routine medical care in addition to study treatment. Back function (Hannover Functional Ability Questionnaire), pain, and quality of life were assessed at baseline and after 3 and 6 months, and cost-effectiveness was analyzed. Of 11,630 patients (mean age=52.9 years (standard deviation, 13.7); 59% female), 1,549 were randomized to the acupuncture group and 1,544 to the control group; 8,537 were included in the nonrandomized acupuncture group.”

Results: “At 3 months, back function improved by 12.1 (standard error (SE), 0.4) to 74.5 (SE, 0.4) points in the acupuncture group and by 2.7 (SE, 0.4) to 65.1 (SE, 0.4) points among controls (difference=9.4 points (95% confidence interval 8.3, 10.5); $p < 0.001$). Nonrandomized patients had more severe symptoms at baseline and showed improvements in back function similar to those seen in randomized patients. The incremental cost-effectiveness ratio was euro 10,526 (euros) per quality-adjusted life year.”

Conclusions: “Acupuncture plus routine care was associated with marked clinical improvements in these patients and was relatively cost-effective.”

71.

Journal: *Archives of Internal Medicine, Volume 167 No. 17, Sept. 24, 2007*

Title: [German Acupuncture Trials \(GERAC\) for Chronic Low Back Pain: Randomized, Multicenter, Blinded, Parallel-Group Trial With 3 Groups](#)

Authors: Michael Haake, PhD, MD; Hans-Helge Müller, PhD; Carmen Schade-Brittinger; Heinz D. Basler, PhD; Helmut Schäfer, PhD; Christoph Maier, PhD, MD; Heinz G. Endres, MD; Hans J. Trampisch, PhD; Albrecht Molsberger, PhD, MD

Source: Orthopaedic Department, University of Regensburg, Bad Abbach, Germany.

ABSTRACT:

Objective: To compare verum acupuncture directly with sham acupuncture and guideline-based conventional therapy in patients with chronic low back pain.

Methods: “A patient- and observer-blinded randomized controlled trial conducted in Germany involving 340 outpatient practices, including 1162 patients aged 18 to 86 years (mean \pm SD age, 50 ± 15 years) with a history of chronic low back pain for a mean of 8 years. Patients underwent ten 30-minute sessions, generally 2 sessions per week, of verum acupuncture (n = 387) according to principles of traditional Chinese medicine; sham acupuncture (n = 387) consisting of

superficial needling at nonacupuncture points; or conventional therapy, a combination of drugs, physical therapy, and exercise (n = 388). Five additional sessions were offered to patients who had a partial response to treatment (10%-50% reduction in pain intensity). Primary outcome was response after 6 months, defined as 33% improvement or better on 3 pain-related items on the Von Korff Chronic Pain Grade Scale questionnaire or 12% improvement or better on the back-specific Hanover Functional Ability Questionnaire. Patients who were unblinded or had recourse to other than permitted concomitant therapies during follow-up were classified as nonresponders regardless of symptom improvement.”

Results: “At 6 months, response rate was 47.6% in the verum acupuncture group, 44.2% in the sham acupuncture group, and 27.4% in the conventional therapy group. Differences among groups were as follows: verum vs. sham, 3.4% (95% confidence interval, -3.7% to 10.3%; P = .39); verum vs. conventional therapy, 20.2% (95% confidence interval, 13.4% to 26.7%; P < .001); and sham vs. conventional therapy, 16.8% (95% confidence interval, 10.1% to 23.4%; P < .001.”

Conclusions: “Low back pain improved after acupuncture treatment for at least 6 months. Effectiveness of acupuncture, either verum or sham, was almost twice that of conventional therapy.”

72.

Journal: *Pain*. 2002 Oct;99(3):579-87.

Title: [Does acupuncture improve the orthopedic management of chronic low back pain--a randomized, blinded, controlled trial with 3 months follow up.](#)

Authors: Molsberger AF, Mau J, Pawelec DB, Winkler J.

Source: Orthopedic Surgery and Research, Kasernenstr 1b, 40213, Düsseldorf, Germany. molsberger@t-online.de

ABSTRACT:

Objective: “This prospective, randomised controlled trial, with three parallel groups, patient and observer blinded for verum and sham acupuncture and a follow up of 3 months raises the question: “Does a combination of acupuncture and conservative orthopedic treatment improve conservative orthopedic treatment in chronic low back pain (LBP). “

Methods: “186 in-patients of a LBP rehabilitation center with a history of LBP \geq 6 weeks, VAS \geq 50mm, and no pending compensation claims, were selected; for the three random group 4 weeks of treatment was applied. 174 patients met the protocol criteria and reported after treatment, 124 reported after 3 months follow up. Patients were assorted 4 strata: chronic LBP, \leq 0.5 years, 0.5-2 years, 2-5 years, \geq 5 years. Analysis was by intention to treat. Group 1 (Verum+COT) received 12 treatments of verum acupuncture and conservative orthopedic treatment (COT). Group 2 (Sham+COT) received 12 treatments of non-specific needling and COT. Group 3 (nil+COT) received COT alone. Verum- and Sham acupuncture were blinded against patient and examiner. The primary

endpoints were pain reduction $\geq 50\%$ on VAS 3 months after the end of the treatment protocol. Secondary endpoints were pain reduction $\geq 50\%$ on VAS and treatment efficacy on a four-point box scale directly after the end of the treatment protocol and treatment efficacy after 3 months.”

Results: “In the whole sample a pain relief of $\geq 50\%$ on VAS was reported directly after the end of treatment protocol: Verum+COT 65% (95%CI 51-77%), Sham+COT 34% (95%ci 22-49%), nil+COT 43% (95%ci 29-58%) - results are significant for Verum+COT over Sham+COT ($P < 0.02$). The results after 3 months are: Verum+COT 77% (95%ci 62-88%), Sham+COT 29% (95%ci 16-46%), nil+Cot 14% (95%ci 4-30%) - effects are significant for Verum+COT over Sham+COT ($P < 0.001$) and for Verum+COT over nil+COT ($P < 0.001$). No difference was found in the mobility of the patients or in the intake of NSAID diclofenac.”

Conclusions: “Our conclusion is that acupuncture can be an important supplement of conservative orthopedic treatment in the management of chronic LBP.”

73.

Journal: *Ann Intern Med.* 2005 Apr 19;142(8):651-63.

Title: [Meta-analysis: acupuncture for low back pain.](#)

Authors: Manheimer E, White A, Berman B, Forys K, Ernst E.

Source: University of Maryland School of Medicine, Center for Integrative Medicine, Baltimore, Maryland 21207, USA.

ABSTRACT:

Objective: “Low back pain limits activity and is the second most frequent reason for physician visits. Previous research shows widespread use of acupuncture for low back pain. PURPOSE: To assess acupuncture's effectiveness for treating low back pain.”

Methods: DATA SOURCES: Randomized, controlled trials were identified through searches of MEDLINE, Cochrane Central, EMBASE, AMED, CINAHL, CISCOP, and GERA databases through August 2004. Additional data sources included previous reviews and personal contacts with colleagues. STUDY SELECTION: Randomized, controlled trials comparing needle acupuncture with sham acupuncture, other sham treatments, no additional treatment, or another active treatment for patients with low back pain. DATA SOURCES: Randomized, controlled trials were identified through searches of MEDLINE, Cochrane Central, EMBASE, AMED, CINAHL, CISCOP, and GERA databases through August 2004. Additional data sources included previous reviews and personal contacts with colleagues.

Results: The 33 randomized, controlled trials that met inclusion criteria were subgrouped according to acute or chronic pain, style of acupuncture, and type of control group used. The principal [correction] measure of effect size was the standardized mean difference, since the trials assessed the same outcome but measured it in various ways. For the primary outcome of short-term relief of chronic pain, the meta-analyses showed that acupuncture is significantly more effective than sham treatment (standardized mean difference, 0.54 [95% CI, 0.35 to 0.73]; 7 trials) and no additional treatment (standardized mean difference,

0.69 [CI, 0.40 to 0.98]; 8 trials). For patients with acute low back pain, data are sparse and inconclusive. Data are also insufficient for drawing conclusions about acupuncture's short-term effectiveness compared with most other therapies.

Conclusions: Acupuncture effectively relieves chronic low back pain. No evidence suggests that acupuncture is more effective than other active therapies.

74.

Journal: *Spine (Phila Pa 1976)*. 2005 Apr 15;30(8):944-63

Title: [Acupuncture and dry-needling for low back pain: an updated systematic review within the framework of the Cochrane collaboration](#)

Authors: Furlan AD, van Tulder M, Cherkin D, Tsukayama H, Lao L, Koes B, Berman B.

Source: Institute for Work & Health, Toronto, Ontario, Canada. afurlan@iwh.on.ca

ABSTRACT:

Objective: "To assess the effects of acupuncture and dry-needling for the treatment of nonspecific low back pain."

Methods: "SEARCH STRATEGY: We updated the searches from 1996 to February 2003 in CENTRAL, MEDLINE, and EMBASE. We also searched the Chinese Cochrane Centre database of clinical trials and Japanese databases to February 2003. SELECTION CRITERIA: Randomized controlled trials of acupuncture (that involved needling) or dry-needling for adults with nonspecific acute/subacute or chronic low back pain. DATA COLLECTION AND ANALYSIS: Two reviewers independently assessed methodologic quality (using the criteria recommended by the Cochrane Back Review Group) and extracted data. The trials were combined using meta-analysis methods or levels of evidence when the data reported did not allow statistical pooling."

Results: "Thirty-five randomized clinical trials were included: 20 were published in English, 7 in Japanese, 5 in Chinese, and 1 each in Norwegian, Polish, and German. There were only 3 trials of acupuncture for acute low back pain. These studies did not justify firm conclusions because of their small sample sizes and low methodologic quality. For chronic low back pain, there is evidence of pain relief and functional improvement for acupuncture compared to no treatment or sham therapy. These effects were only observed immediately after the end of the sessions and in short-term follow-up. There is also evidence that acupuncture, added to other conventional therapies, relieves pain and improves function better than the conventional therapies alone. However, the effects are only small. Dry-needling appears to be a useful adjunct to other therapies for chronic low back pain. No clear recommendations could be made about the most effective acupuncture technique."

Conclusions: "The data do not allow firm conclusions regarding the effectiveness of acupuncture for acute low back pain. For chronic low back pain, acupuncture is more effective for pain relief and functional improvement than no treatment or sham treatment immediately after treatment and in the short-term only. Acupuncture is not more effective than other conventional and "alternative" treatments. The data suggest that acupuncture and dry-needling may be useful

adjuncts to other therapies for chronic low back pain. Because most of the studies were of lower methodologic quality, there is a clear need for higher quality trials in this area.”

75.

Journal: *Press Release from the National Health Service [UK] National Institute for Health and Excellence, www.nice.org.uk , Ref: 2009/031*

Title: [New NICE guidelines to help millions of people with low back pain](#)

Authors: National Institute for Health and Clinical Excellence (NICE)

Source: National Health Service [UK] National Institute for Health and Excellence

ABSTRACT:

Conclusions: “Millions of people with low back pain will benefit from new guidance issued to the NHS on the most effective ways to treat this often painful and distressing condition.

“The National Institute for Health and Clinical Excellence (NICE) and the National Clinical Guideline Centre today (Wednesday 27 May) publish a guideline to improve the early management of persistent non-specific low back pain. This covers people who have been in pain longer than six weeks but less than one year, where the pain may be linked to structures in the back such as the joints, muscles and ligaments. Setting out a range of effective mainstream and complementary treatments, the guideline recommends what care and advice the NHS should offer to people affected by low back pain.

“Affecting around 1 in 3 adults in the UK each year, low back pain is a very common disorder, with an estimated 2.5 million people seeking help from their GP about their condition. For many people the pain goes away in days or weeks. However for some, the pain can be distressing and persist for a long time. It is difficult to ‘cure’ low back pain, but the treatments recommended in this guideline can reduce its effect on people’s lives.

“Professor Peter Littlejohns, NICE Clinical and Public Health Director, said:

“Most people will be affected by low back pain at some stage in their lives, so it’s good news that the NHS now has evidence-based guidance on how to treat the condition effectively. There is variation in current clinical practice, so this new NICE guideline means that for the first time we now have the means for a consistent national approach to managing low back pain. Importantly patients whose pain is not improving should have access to a choice of different therapies including acupuncture, structured exercise and manual therapy. The recommendations will enable health professionals to provide the best care and advice for people seeking help for low back pain, which should reduce the impact of the condition on patients’ day-to-day lives.”

“Recommendations from the guideline for health professionals include:

- “Advise people with low back pain that staying physically active as much as possible is likely to help and provide people with advice and information to help them manage their low back pain
- “Offer one of the following treatment options, taking into account the patient’s preference: an exercise programme, a course of manual therapy including manipulation, or a course of acupuncture (more details on each below). Consider offering another of these options if the chosen treatment does not result in satisfactory improvement
- “Consider offering a structured exercise programme tailored to the individual that may include exercises to strengthen muscles, improve posture and stretching
- “Consider offering a course of manual therapy, including spinal manipulation, spinal mobilisation and massage. Treatment may be provided by a range of health professionals including chiropractors, osteopaths, manipulative physiotherapists or doctors who have had specialist training
- “Consider offering a course of acupuncture needling, up to a maximum of 10 sessions over a period of up to 12 weeks
- “Injections of therapeutic substances into the back for non-specific low back pain are not recommended
- “Offer a combined intensive exercise and psychological treatment programme for people who have had at least one less intensive treatment already, but who still have disabling pain which causes significant distress or seriously impacts on daily life
- “Do not offer X-ray of the lumbar spine for the management of non-specific low back pain, and only offer an MRI scan within the context of a referral for an opinion on spinal fusion.”

LUPUS

76.

Journal: *Lupus, December 2008 vol. 17 no. 12 1108-1116*

Title: [Acupuncture for systemic lupus erythematosus: a pilot RCT feasibility and safety study](#)

Authors: CM Greco, AH Kao, et al.

Source: University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania

ABSTRACT:

Objective: “The objective of this study was to determine the feasibility of studying acupuncture in patients with systemic lupus erythematosus (SLE), and to pilot test the safety and explore benefits of a standardized acupuncture protocol designed to reduce pain and fatigue.”

Method: “Twenty-four patients with SLE were randomly assigned to receive 10 sessions of either acupuncture, minimal needling or usual care. Pain, fatigue and SLE disease activity were assessed at baseline and following the last sessions. Safety was assessed at each session. Fifty-two patients were screened to enroll 24 eligible

and interested persons. Although transient side effects, such as brief needling pain and lightheadedness, were reported, no serious adverse events were associated with either the acupuncture or minimal needling procedures. Twenty-two participants completed the study, and the majority (85%) of acupuncture and minimal needling participants were able to complete their sessions within the specified time period of 5–6 weeks.”

Results: “40% of patients who received acupuncture or minimal needling had $\geq 30\%$ improvement on standard measures of pain, but no usual care patients showed improvement in pain.”

Conclusions: “A ten-session course of acupuncture appears feasible and safe for patients with SLE. Benefits were similar for acupuncture and minimal needling.”

MIGRAINE

77.

Journal: *Statistical Brief #115. February 2006. Agency for Healthcare Research and Quality, Rockville, Md.*

Title: [Statistical Brief #115: Health Service Use and Expense for Migraines and Other Headaches, 2002-03 \(Average Annual Estimates\)](#)

Authors: Machlin, S. R. and Miller, G. E.

Source: Agency for Healthcare Research and Quality, Rockville, Md.

ABSTRACT:

Objective: To provide an overview of national costs for the treatment of headaches and migraine

Conclusions: “In 2003 the average cost of treating headaches (doctor visits and prescription medications) was \$566. An estimated 3.5% of the population, or 7.5 million people, experience chronic tension and/or migraine headaches, which equates to roughly \$4.25 billion dollars spent per year. This figure does not include over-the-counter medications for headache relief.”

78.

Journal: *Cochrane Database Syst Rev. 2009 Jan 21;(1):CD001218.*

Title: [Acupuncture for migraine prophylaxis.](#)

Authors: Linde K, Allais G, Brinkhaus B, Manheimer E, Vickers A, White AR.

Source: Centre for Complementary Medicine Research, Department of Internal Medicine II, Technische Universitaet Muenchen, Wolfgangstr. 8, Munich, Germany, 81667. Klaus.Linde@lrz.tu-muenchen.de

ABSTRACT:

Objective: To investigate whether acupuncture is a) more effective than no prophylactic treatment/routine care only; b) more effective than 'sham' (placebo) acupuncture; and c) as effective as other interventions in reducing headache frequency in patients with migraine.

Methods: “SEARCH STRATEGY: The Cochrane Pain, Palliative & Supportive Care Trials Register, CENTRAL, MEDLINE, EMBASE and the Cochrane Complementary

Medicine Field Trials Register were searched to January 2008. SELECTION CRITERIA: We included randomized trials with a post-randomization observation period of at least 8 weeks that compared the clinical effects of an acupuncture intervention with a control (no prophylactic treatment or routine care only), a sham acupuncture intervention or another intervention in patients with migraine. DATA COLLECTION AND ANALYSIS: Two reviewers checked eligibility; extracted information on patients, interventions, methods and results; and assessed risk of bias and quality of the acupuncture intervention. Outcomes extracted included response (outcome of primary interest), migraine attacks, migraine days, headache days and analgesic use. Pooled effect size estimates were calculated using a random-effects model.”

Results: “Twenty-two trials with 4419 participants (mean 201, median 42, range 27 to 1715) met the inclusion criteria. Six trials (including two large trials with 401 and 1715 patients) compared acupuncture to no prophylactic treatment or routine care only. After 3 to 4 months patients receiving acupuncture had higher response rates and fewer headaches. The only study with long-term follow up saw no evidence that effects dissipated up to 9 months after cessation of treatment. Fourteen trials compared a 'true' acupuncture intervention with a variety of sham interventions. Pooled analyses did not show a statistically significant superiority for true acupuncture for any outcome in any of the time windows, but the results of single trials varied considerably. Four trials compared acupuncture to proven prophylactic drug treatment. Overall in these trials acupuncture was associated with slightly better outcomes and fewer adverse effects than prophylactic drug treatment. Two small low-quality trials comparing acupuncture with relaxation (alone or in combination with massage) could not be interpreted reliably.”

Conclusions: “In the previous version of this review, evidence in support of acupuncture for migraine prophylaxis was considered promising but insufficient. Now, with 12 additional trials, there is consistent evidence that acupuncture provides additional benefit to treatment of acute migraine attacks only or to routine care. There is no evidence for an effect of 'true' acupuncture over sham interventions, though this is difficult to interpret, as exact point location could be of limited importance. Available studies suggest that acupuncture is at least as effective as, or possibly more effective than, prophylactic drug treatment, and has fewer adverse effects. Acupuncture should be considered a treatment option for patients willing to undergo this treatment.”

79.

Journal: *J Tradit Chin Med. 2000 Sep;20(3):231-40*

Title: [Comparison of pharmacological treatment versus acupuncture treatment for migraine without aura--analysis of socio-medical parameters](#)

Authors: Liguori A, Petti F, Bangrazi A, Camaioni D, Guccione G, Pitari GM, Bianchi A, Nicoletti WE

Source: Istituto Paracelso, Italian Center for Non Conventional Medicines, Rome, Italy

ABSTRACT:

- Objective:** To assess the cost-efficacy of treatment of migraine with acupuncture
- Methods:** “This study was carried out in 120 patients affected by migraine without aura, treated in 4 public health centers and randomly divided into acupuncture group (AG) and conventional drug therapy group (CDTG). The evaluation of clinical results was made 6 and 12 months after the beginning of treatment and was worked out as well according to socio-medical parameters. Acupuncture was applied to the following points: Touwei (ST 8), Xuanlu (GB 5), Fengchi (GB 20), Dazhui (GV 14), Lieque (LU 7), treated with the reducing method.”
- Results:** “In AG, the figure scoring the entity and frequency of migraine attacks drops from 9,823 before treatment to 1,990 6 months after and 1,590 12 months after; while in CDTG, it drops from 8,405 before treatment to 3,927 6 months after and 3,084 12 months after. In AG, the total absence from work amounted to 1,120 working days/year, with a total cost (private + social costs) of 186,677,000 Italian liras. In CDTG, the absence from work amounted to 1,404 working days/year, with a total cost of 266,614,000 Italian liras.”
- Conclusions:** “If we consider that in Italy the patients affected by migraine without aura are around 800,000, and that acupuncture therapy is able to save 1,332,000 Italian liras on the total average cost supported for every single patient, the application of acupuncture in the treatment of migraine without aura would allow a saving of the health expenses in Italy of over 1,000 billion liras.”

80.

- Journal:** *JAMA. 2005;293(17):2118-2125. doi: 10.1001/jama.293.17.2118*
- Title:** [Acupuncture for patients with migraine: a randomized controlled trial](#)
- Authors:** Linde K, Streng A, Jürgens S, Hoppe A, Brinkhaus B, Witt C, Wagenpfeil S, Pfaffenrath V, Hammes MG, Weidenhammer W, Willich SN, Melchart D
- Source:** Centre for Complementary Medicine Research, Department of Internal Medicine II, Technische Universität München, Munich, Germany. Klaus.Linde@lrz.tu-muenchen.de

ABSTRACT:

- Objective:** “To investigate the effectiveness of acupuncture compared with sham acupuncture and with no acupuncture in patients with migraine.”
- Methods:** “DESIGN, SETTING, AND PATIENTS: Three-group, randomized, controlled trial (April 2002-January 2003) involving 302 patients (88% women), mean (SD) age of 43 (11) years, with migraine headaches, based on International Headache Society criteria. Patients were treated at 18 outpatient centers in Germany. INTERVENTIONS: Acupuncture, sham acupuncture, or waiting list control. Acupuncture and sham acupuncture were administered by specialized physicians and consisted of 12 sessions per patient over 8 weeks. Patients completed headache diaries from 4 weeks before to 12 weeks after randomization and from week 21 to 24 after randomization. MAIN OUTCOME MEASURES: Difference in headache days of moderate or severe intensity between the 4 weeks before and weeks 9 to 12 after randomization.”

Results: “Between baseline and weeks 9 to 12, the mean (SD) number of days with headache of moderate or severe intensity decreased by 2.2 (2.7) days from a baseline of 5.2 (2.5) days in the acupuncture group compared with a decrease to 2.2 (2.7) days from a baseline of 5.0 (2.4) days in the sham acupuncture group, and by 0.8 (2.0) days from a baseline of 5.4 (3.0) days in the waiting list group. No difference was detected between the acupuncture and the sham acupuncture groups (0.0 days, 95% confidence interval, -0.7 to 0.7 days; $P = .96$) while there was a difference between the acupuncture group compared with the waiting list group (1.4 days; 95% confidence interval; 0.8-2.1 days; $P < .001$). The proportion of responders (reduction in headache days by at least 50%) was 51% in the acupuncture group, 53% in the sham acupuncture group, and 15% in the waiting list group.”

Conclusions: “Acupuncture was no more effective than sham acupuncture in reducing migraine headaches although both interventions were more effective than a waiting list control.”

81.

Journal: *Lancet Neurol.* 2006 Apr;5(4):310-6.

Title: [Efficacy of acupuncture for the prophylaxis of migraine: a multicentre randomised controlled clinical trial.](#)

Authors: Diener HC, Kronfeld K, Boewing G, Lungenhausen M, Maier C, Molsberger A, Tegenthoff M, Trampisch HJ, Zenz M, Meinert R; GERAC Migraine Study Group.

Source: Department of Neurology, University Essen, Essen, Germany. h.diener@uni-essen.de

ABSTRACT:

Objective: “Our aim was to assess the efficacy of a part-standardised verum acupuncture procedure, in accordance with the rules of traditional Chinese medicine, compared with that of part-standardised sham acupuncture and standard migraine prophylaxis with beta blockers, calcium-channel blockers, or antiepileptic drugs in the reduction of migraine days 26 weeks after the start of treatment.”

Methods: “This study was a prospective, randomised, multicentre, double-blind, parallel-group, controlled, clinical trial, undertaken between April 2002 and July 2005. Patients who had two to six migraine attacks per month were randomly assigned verum acupuncture ($n=313$), sham acupuncture ($n=339$), or standard therapy ($n=308$). Patients received ten sessions of acupuncture treatment in 6 weeks or continuous prophylaxis with drugs. Primary outcome was the difference in migraine days between 4 weeks before randomisation and weeks 23-26 after randomisation. This study is registered as an International Standard Randomised Controlled Trial, number ISRCTN52683557.”

Results: “Of 1295 patients screened, 960 were randomly assigned to a treatment group. Immediately after randomisation, 125 patients (106 from the standard group) withdrew their consent to study participation. 794 patients were analysed in the intention-to-treat population and 443 in the per-protocol population. The

primary outcome showed a mean reduction of 2.3 days (95% CI 1.9-2.7) in the verum acupuncture group, 1.5 days (1.1-2.0) in the sham acupuncture group, and 2.1 days (1.5-2.7) in the standard therapy group. These differences were statistically significant compared with baseline ($p < 0.0001$), but not across the treatment groups ($p = 0.09$). The proportion of responders, defined as patients with a reduction of migraine days by at least 50%, 26 weeks after randomisation, was 47% in the verum group, 39% in the sham acupuncture group, and 40% in the standard group ($p = 0.133$)."

Conclusions: "Treatment outcomes for migraine do not differ between patients treated with sham acupuncture, verum acupuncture, or standard therapy."

82.

Journal: *Cochrane Database Syst Rev. 2009 Jan 21;(1):CD001218.*

Title: [Acupuncture for migraine prophylaxis](#). [Revisited]

Authors: Linde K, Allais G, Brinkhaus B, Manheimer E, Vickers A, White AR.

Source: Centre for Complementary Medicine Research, Department of Internal Medicine II, Technische Universität München, Wolfgangstr. 8, Munich, Germany, 81667. Klaus.Linde@lrz.tu-muenchen.de

ABSTRACT:

Objective: "Acupuncture is often used for migraine prophylaxis but its effectiveness is still controversial. This review (along with a companion review on 'Acupuncture for tension-type headache') represents an updated version of a Cochrane review originally published in Issue 1, 2001, of The Cochrane Library. To investigate whether acupuncture is a) more effective than no prophylactic treatment/routine care only; b) more effective than 'sham' (placebo) acupuncture; and c) as effective as other interventions in reducing headache frequency in patients with migraine."

Methods: "SEARCH STRATEGY: The Cochrane Pain, Palliative & Supportive Care Trials Register, CENTRAL, MEDLINE, EMBASE and the Cochrane Complementary Medicine Field Trials Register were searched to January 2008. SELECTION CRITERIA: We included randomized trials with a post-randomization observation period of at least 8 weeks that compared the clinical effects of an acupuncture intervention with a control (no prophylactic treatment or routine care only), a sham acupuncture intervention or another intervention in patients with migraine. DATA COLLECTION AND ANALYSIS: Two reviewers checked eligibility; extracted information on patients, interventions, methods and results; and assessed risk of bias and quality of the acupuncture intervention. Outcomes extracted included response (outcome of primary interest), migraine attacks, migraine days, headache days and analgesic use. Pooled effect size estimates were calculated using a random-effects model."

Results: "Twenty-two trials with 4419 participants (mean 201, median 42, range 27 to 1715) met the inclusion criteria. Six trials (including two large trials with 401 and 1715 patients) compared acupuncture to no prophylactic treatment or routine care only. After 3 to 4 months patients receiving acupuncture had higher

response rates and fewer headaches. The only study with long-term follow up saw no evidence that effects dissipated up to 9 months after cessation of treatment. Fourteen trials compared a 'true' acupuncture intervention with a variety of sham interventions. Pooled analyses did not show a statistically significant superiority for true acupuncture for any outcome in any of the time windows, but the results of single trials varied considerably. Four trials compared acupuncture to proven prophylactic drug treatment. Overall in these trials acupuncture was associated with slightly better outcomes and fewer adverse effects than prophylactic drug treatment. Two small low-quality trials comparing acupuncture with relaxation (alone or in combination with massage) could not be interpreted reliably.”

Conclusions: “In the previous version of this review, evidence in support of acupuncture for migraine prophylaxis was considered promising but insufficient. Now, with 12 additional trials, there is consistent evidence that acupuncture provides additional benefit to treatment of acute migraine attacks only or to routine care. There is no evidence for an effect of 'true' acupuncture over sham interventions, though this is difficult to interpret, as exact point location could be of limited importance. Available studies suggest that acupuncture is at least as effective as, or possibly more effective than, prophylactic drug treatment, and has fewer adverse effects. Acupuncture should be considered a treatment option for patients willing to undergo this treatment.”

MILITARY USE

83.

Journal: *Mil Med.* 2008 Jul;173(7):629-34.

Title: [Acupuncture: a useful tool for health care in an operational medicine environment.](#)

Authors: Spira A.

Source: Naval Mobile Construction Battalion Eighteen, Fort Lewis, WA 98433

ABSTRACT:

Results: “Acupuncture is a form of medical care that originated in China; it has evolved and progressed over thousands of years to become one of the most commonly used forms of health care throughout the world. Allopathic (Western) medicine has begun to seriously investigate and to use this system only in the past three decades. Although acupuncture's mechanisms for healing are not fully understood, it helps many conditions. Using acupuncture reduces or eliminates the need for expensive medications and the potential risk of adverse events resulting from medications, with cost savings and health benefits to patients.”

“During a deployment of naval combat engineers to Iraq in support of Operation Iraqi Freedom, acupuncture was used in the health care of sailors, Marines, and soldiers. It objectively and subjectively improved the health of troops in the field. Troops were able to function while being treated, reducing or avoiding sick in

quarters or light limited duty status and saving operational man-days.

Conclusions: “Acupuncture in the right hands can serve as a health force multiplier (amplifying a provider's clinical impact) and can be integrated into routine health care, whether in garrison or in the field.”

84.

Journal: *Acupunct Med.* 2006 Jun;24(2):80-6.

Title: [An audit of self-acupuncture for chronic musculoskeletal pain.](#)

Authors: Teig S, Peacock S, Stevens L, Tordoff K, Maguire E, Watson P.

Source: Leicester Medical School, University of Leicester, UK.

ABSTRACT:

Objective: Acupuncture is increasingly offered as a treatment for chronic pain, but continued treatment is expensive. Self-acupuncture might offer a cost effective alternative. The aim of this project was to investigate the effectiveness and safety of self-acupuncture in a pain clinic.

Methods: A retrospective audit was conducted by postal questionnaire of all patients with chronic pain who were taught self-acupuncture as a home pain management strategy in the previous three years. The study was conducted by a researcher not involved in the patient's treatment. The patients selected for self-acupuncture were those who had responded to acupuncture previously, met certain criteria, and had been taught self-acupuncture successfully. Patients were taught self-acupuncture using three acupuncture points (LI4, ST44, LR3).

Results: Of 52 eligible patients (70% female) who were approached, 38 valid questionnaires were returned, giving a response rate of 73.1% . Of these, 76.3% were female; 86.8% (33) still used self-acupuncture and 13.3% (5) had stopped; 86.8% of the patients continued to experience pain reduction with self-acupuncture. The reported pain relief gained was 5.7 (SD 2.6) measured on a visual analogue scale, improvement in quality of life was reported by 73.7% and no serious adverse effects were reported.

Conclusions: This audit suggests that self-acupuncture is effective for pain relief and improves quality of life in this selected group of patients. Safety can be maintained provided that pre-selection is done with care, and appropriate training is carried out. Self-acupuncture has considerable potential to reduce clinic waiting lists and appointment times for patients. Further research is required to determine the cost effectiveness of this approach.

MUSCULO-SKELETAL DISORDERS

85.

Journal: *European Journal of Integrative Medicine, Volume 1, Supplement 1, Page 10 (November 2008)*

Title: [Cost-effectiveness of acupuncture in the treatment of selected musculoskeletal system disorders](#)

Authors: T. Reinhold, C.M. Witt, S. Willich

Source: Institute for Social Medicine, Epidemiology and Health Economics, Charité University Medical Center, Berlin, Germany

ABSTRACT:

Objective: “Although acupuncture is frequently used in patients suffering from chronic pain disorders, there is a lack of information regarding the economic impact of this therapy in the German health-care system. The primary objective of publications, summarized in this dissertation, was to determine the cost-effectiveness of acupuncture treatment in addition to routine care compared to routine care on its own. As underlying medical conditions, chronic pain due to osteoarthritis, chronic pain of the neck and chronic pain of the lower back were considered.”

Methods: “Three randomized controlled trials were performed. During the 3-month study duration, patients in the acupuncture group received between 10 and 15 acupuncture treatments. The control group was designed as a waiting list control, which also received acupuncture after 3 months. All patients were allowed to receive usual care treatments. The resource use was measured using statutory health insurance data, and the health-related quality of life was assessed using patient questionnaires (SF-36). The primary economic outcome measure was the incremental cost-effectiveness ratio (ICER) of additional acupuncture. For the secondary we performed cost comparison analyses. Further sensitivity analyses were conducted to test the results for robustness.”

Results: “In the investigated conditions, acupuncture treatment was associated with additional costs. The increase in costs was primarily due to the costs of the acupuncture sessions (overall group cost differences after 3 months: osteoarthritis pain 470 EUR [95%CI 136–803 EUR], chronic pain of the neck 277 EUR [95%CI 176–379 EUR] and chronic pain of the lower back 280 EUR [95% CI 148–412 EUR]). A significant increase was observed in patients quality of life in the acupuncture group compared to control group patients (QALY-difference after 3 months: osteoarthritis pain 0.024±0.019, chronic pain of the neck 0.024±0.004, and chronic pain of the lower back 0.027±0.004). As a result, the ICER for additional acupuncture was within a cost-effective range (overall ICER: all diagnoses: 11,945 EUR, osteoarthritis pain 17,845 EUR, chronic pain of the neck 12,469 EUR, chronic pain of the lower back 10,526 EUR). The variation of selected predictive factors (e.g. charge of an acupuncture session, acupuncture effect duration, etc.) confirmed previous findings.”

Conclusions: “As a main result of our study, acupuncture in addition to routine care is a useful add-on therapy, which was associated with additional costs as well as improved quality of life outcomes. Regarding international cost-utility benchmarks of about 50,000 EUR per QALY gained, acupuncture seems to be a cost-effective treatment for all investigated diagnoses.”

NAUSEA AND VOMITING

86.

Take the Test

89

Journal: *J Altern Complement Med. 2008 Nov 25.*
Title: [Does Auricular Acupuncture Reduce Postoperative Vomiting After Cholecystectomy?](#)
Authors: Fazelzadeh A, Sahmeddini MA.
Source: Department of Anesthesiology, Shiraz University of Medical Sciences, Shiraz, Iran.
ABSTRACT:
Objective: "To find the efficacy of auricular acupuncture for the prevention of postoperative nausea and vomiting after cholecystectomy."
Methods: "One hundred (100) female patients undergoing transabdominal cholecystectomy were randomly allocated to two groups of 50 (auricular acupuncture treatment group and nontreatment group) in order to test the effectiveness of auricular acupuncture. Statistical significance ($p < 0.05$) was determined using an unpaired t-test for age, weight, height, and duration of anesthesia; a chi-square test was used to analyze the incidence of vomiting."
Results: "There was no significant difference in age, weight, height, or duration of anesthesia among the two groups of patients. There was a significant difference between the control and auricular acupuncture treatment groups in the incidence of vomiting 24 hours after surgery (66% and 0%, respectively, $p < 0.01$). No noteworthy side effects from treatment were observed."
Conclusions: "Auricular acupuncture is effective in reducing vomiting following transabdominal cholecystectomy in female patients."

87.

Journal: *Klin Padiatr. 2008 Nov-Dec;220(6):365-70. Epub 2008 Oct 23.*
Title: [Acupuncture to alleviate chemotherapy-induced nausea and vomiting in pediatric oncology - a randomized multicenter crossover pilot trial.](#)
Authors: Gottschling S, Reindl TK, Meyer S, Berrang J, Henze G, Graeber S, Ong MF, Graf N.
Source: Department of Pediatric Hematology and Oncology, Saarland University, Homburg, Germany. ksigot@uniklinikum-saarland.de
ABSTRACT:
Objective: "We investigated whether acupuncture as a supportive antiemetic approach reduces the need for antiemetic rescue medication during highly emetogenic chemotherapy in pediatric oncology. We report on a multicenter crossover study at 5 tertiary hospitals in Germany."
Methods: "Twenty-three children (13.6 y,+/- 2.9) receiving highly emetogenic chemotherapy for treatment of solid malignant tumors were included. Patients were randomly allocated to receive acupuncture treatment during either the second or third identical chemotherapy course together with standard antiemetic medication. The main outcome measure was the amount of additional antiemetic medication during chemotherapy. Secondary outcome measure was the number of episodes of vomiting per course."
Results: "Forty-six chemotherapy courses with or without acupuncture were compared.

The need for rescue antiemetic medication was significantly lower in acupuncture courses compared to control courses ($p=0.001$) Episodes of vomiting per course were also significantly lower in courses with acupuncture ($p=0.01$). Except for pain from needling (4/23) no side effects occurred. Patients acceptance of acupuncture was high.”

Conclusions: “Acupuncture as applied here seems to be effective in preventing nausea and vomiting in pediatric cancer patients.”

88.

Journal: *J Natl Compr Canc Netw* 2009;7:606-612

Title: [Use of Acupuncture in the Control of Chemotherapy-Induced Nausea and Vomiting](#)

Authors: Ting Bao, MD

Source: From Johns Hopkins Sidney Kimmel Comprehensive Cancer Center, Baltimore, Maryland, 1650 Orleans Street, CRB-186, Baltimore, MD 21231. E-mail: tbao1@jhmi.edu

ABSTRACT:

Objective: To determine the efficacy of acupuncture in treating chemotherapy-induced nausea and vomiting (CINV)

Methods: meta-analysis

Results: “Chemotherapy-induced nausea and vomiting (CINV) is one of the most common and feared side effects of chemotherapy. Despite recent advances in pharmacologic antiemetic therapy, additional treatment for breakthrough CINV is needed. Acupuncture is a safe medical procedure with minimal side effects; several randomized controlled clinical trials have suggested its efficacy in controlling this side effect. A recent meta-analysis of those trials demonstrated that acupuncture significantly reduced the proportion of patients experiencing acute chemotherapy-induced vomiting. Those trials, however, did not show that acupuncture significantly alleviated acute chemotherapy-induced nausea or delayed CINV. The clinical relevance of these results were limited by the fact that they predated the use of aprepitant and that only 1 or 2 acupuncture points were stimulated during acupuncture treatment.”

Conclusions: “More clinical trials to study the effect of acupuncture with additional antiemetic acupuncture points in adjunct to modern pharmacologic antiemetic therapy are needed.”

89.

Journal: *Cochrane Database Syst Rev.* 2006 Apr 19;(2):CD002285.

Title: [Acupuncture-point stimulation for chemotherapy-induced nausea or vomiting.](#)

Authors: Ezzo JM, Richardson MA, Vickers A, Allen C, Dibble SL, Issell BF, Lao L, Pearl M, Ramirez G, Roscoe J, Shen J, Shivnan JC, Streitberger K, Treish I, Zhang G.

Source: James P. Swyers Enterprises, 1905 West Rogers Ave, Baltimore, Maryland 21209, USA. jeanetteezzo@prodigy.net

ABSTRACT:

- Objective:** “The objective was to assess the effectiveness of acupuncture-point stimulation on acute and delayed chemotherapy-induced nausea and vomiting in cancer patients.”
- Methods:** “SEARCH STRATEGY: We searched MEDLINE, EMBASE, PsycLIT, MANTIS, Science Citation Index, CCTR (Cochrane Controlled Trials Registry), Cochrane Complementary Medicine Field Trials Register, Cochrane Pain, Palliative Care and Supportive Care Specialized Register, Cochrane Cancer Specialized Register, and conference abstracts. SELECTION CRITERIA: Randomized trials of acupuncture-point stimulation by any method (needles, electrical stimulation, magnets, or acupressure) and assessing chemotherapy-induced nausea or vomiting, or both. DATA COLLECTION AND ANALYSIS: Data were provided by investigators of the original trials and pooled using a fixed effect model. Relative risks were calculated on dichotomous data. Standardized mean differences were calculated for nausea severity. Weighted mean differences were calculated for number of emetic episodes.”
- Results:** “Eleven trials (N = 1247) were pooled. Overall, acupuncture-point stimulation of all methods combined reduced the incidence of acute vomiting (RR = 0.82; 95% confidence interval 0.69 to 0.99; P = 0.04), but not acute or delayed nausea severity compared to control. By modality, stimulation with needles reduced proportion of acute vomiting (RR = 0.74; 95% confidence interval 0.58 to 0.94; P = 0.01), but not acute nausea severity. Electroacupuncture reduced the proportion of acute vomiting (RR = 0.76; 95% confidence interval 0.60 to 0.97; P = 0.02), but manual acupuncture did not; delayed symptoms for acupuncture were not reported. Acupressure reduced mean acute nausea severity (SMD = -0.19; 95% confidence interval -0.37 to -0.01; P = 0.04) but not acute vomiting or delayed symptoms. Noninvasive electrostimulation showed no benefit for any outcome. All trials used concomitant pharmacologic antiemetics, and all, except electroacupuncture trials, used state-of-the-art antiemetics.”
- Conclusions:** “This review complements data on post-operative nausea and vomiting suggesting a biologic effect of acupuncture-point stimulation. Electroacupuncture has demonstrated benefit for chemotherapy-induced acute vomiting, but studies combining electroacupuncture with state-of-the-art antiemetics and in patients with refractory symptoms are needed to determine clinical relevance. Self-administered acupressure appears to have a protective effect for acute nausea and can readily be taught to patients though studies did not involve placebo control. Noninvasive electrostimulation appears unlikely to have a clinically relevant impact when patients are given state-of-the-art pharmacologic antiemetic therapy.”

90.

Journal: *Integr Cancer Ther.* 2005 Jun;4(2):131-43.

Title: [Acupuncture: role in comprehensive cancer care--a primer for the oncologist and review of the literature.](#)

Authors: Cohen AJ, Menter A, Hale L.

Source: Division of Pulmonary Sciences and Critical Care Medicine, Division of Medical Oncology, University of Colorado Health Sciences Center, University of Colorado Cancer Center, Denver, CO 80262, USA. andrea.cohen@uchsc.edu

ABSTRACT:

Objective: To “provide current cancer treatment providers with information on acupuncture as well as the research conducted on cancer symptoms and side effects of cancer treatments.”

Methods: review of the literature

Results: “Antiemetic studies are the most prevalent and contain the most promising results. Several studies have found that acupuncture significantly reduces the number of emesis (vomiting) episodes for patients receiving chemotherapy. While studies on pain control vary due to the heterogeneity of pain, there are few studies investigating pain caused from cancer and the removal of cancerous tumors. These studies, while promising, provide basic results that need further investigation for more definitive results. Although relatively few studies have been done on anxiety and depression, several researchers have found acupuncture to be just as effective as or more effective than antidepressants for patients without cancer. Studies on breathlessness, while small, have shown acupuncture to have a significant positive effect on chronic obstructive pulmonary disease, breathlessness associated with end-stage cancer, and asthma. Researchers studying xerostomic individuals who have received salivary gland irradiation found significant positive results in salivary flow rates compared to baseline. Patients with hot flashes due to hormonal imbalance may benefit from the use of acupuncture. A recent pilot study showed improvement of chronic post chemotherapy fatigue following acupuncture treatments. Many individuals with cancer have turned to acupuncture because their symptoms persisted with conventional treatments or as an alternative or complement to their ongoing treatments.”

Conclusions: “Despite the immense popularity in the community, few large randomized trials have been conducted to determine the effects acupuncture has on cancer symptoms and side effects of treatments. A majority of the current studies have shown beneficial effects that warrant further investigation with large trial sizes.”

91.

Journal: *JAMA. 2000 Dec 6;284(21):2755-61.*

Title: [Electroacupuncture for control of myeloablative chemotherapy-induced emesis: A randomized controlled trial.](#)

Authors: Shen J, Wenger N, Glaspy J, Hays RD, Albert PS, Choi C, Shekelle PG.

Source: National Institutes of Health, Laboratory of Clinical Studies/NIAAA, Room 6 S-240, Mail Stop 1610, 10 Center Dr, Bldg 10, Bethesda, MD 20892-1610, USA.

ABSTRACT:

Objective: “To compare the effectiveness of electroacupuncture vs. minimal needling and mock electrical stimulation or antiemetic medications alone in controlling emesis among patients undergoing a highly emetogenic chemotherapy regimen.”

Methods: “DESIGN: “Three-arm, parallel-group, randomized controlled trial conducted from March 1996 to December 1997, with a 5-day study period and a 9-day follow-up. SETTING: Oncology center at a university medical center. PATIENTS: One hundred four women (mean age, 46 years) with high-risk breast cancer. INTERVENTIONS: Patients were randomly assigned to receive low-frequency electroacupuncture at classic antiemetic acupuncture points once daily for 5 days (n = 37); minimal needling at control points with mock electrostimulation on the same schedule (n = 33); or no adjunct needling (n = 34). All patients received concurrent triple antiemetic pharmacotherapy and high-dose chemotherapy (cyclophosphamide, cisplatin, and carmustine).

MAIN OUTCOME MEASURES: Total number of emesis episodes occurring during the 5-day study period and the proportion of emesis-free days, compared among the 3 groups.”

Results: “The number of emesis episodes occurring during the 5 days was lower for patients receiving electroacupuncture compared with those receiving minimal needling or pharmacotherapy alone (median number of episodes, 5, 10, and 15, respectively; $P < .001$). The electroacupuncture group had fewer episodes of emesis than the minimal needling group ($P < .001$), whereas the minimal needling group had fewer episodes of emesis than the antiemetic pharmacotherapy alone group ($P = .01$). The differences among groups were not significant during the 9-day follow-up period ($P = .18$).”

Conclusions: “In this study of patients with breast cancer receiving high-dose chemotherapy, adjunct electroacupuncture was more effective in controlling emesis than minimal needling or antiemetic pharmacotherapy alone, although the observed effect had limited duration. JAMA. 2000;284:2755-2761.”

92.

Journal: *Wien Med Wochenschr.* 1998;148(19):454-6.

Title: [Acupuncture in prevention of postoperative nausea and vomiting](#)

Authors: Schlager A.

Source: Abteilung für Anästhesie, Universitätsklinik für Anästhesie und Allgemeine Intensivmedizin, Innsbruck. andreas.schlager@uibk.ac.at

ABSTRACT:

Objective: To assess “the effectiveness of the acupuncture point Pericard 6 (P 6) on postoperative nausea and vomiting (PONV)”

Conclusions: “In this review the effectiveness of the acupuncture point Pericard 6 (P 6) on postoperative nausea and vomiting (PONV) is described. Use of the acupuncture, acupressure as well as the laser stimulation of P 6 proved as efficient prophylaxis of PONV in numerous studies. These methods are free of side effects and represent therefore a good alternative to the pharmacological prophylaxis and treatment of PONV.”

93.

Journal: *Anesthesiology*. 2005 May;102(5):1031-49; quiz 1077-8.
Title: [Perioperative acupuncture and related techniques.](#)
Authors: Chernyak GV, Sessler DI.
Source: Outcomes Research Institute and Department of Anesthesiology, University of Louisville, Kentucky 40202, USA.

ABSTRACT:

Conclusions: “Acupuncture and related techniques are increasingly practiced in conventional medical settings, and the number of patients willing to use these techniques is increasing. Despite more than 30 yr of research, the exact mechanism of action and efficacy of acupuncture have not been established. Furthermore, most aspects of acupuncture have yet to be adequately tested. Therefore, considerable controversy remains about the role of acupuncture in clinical medicine. Acupuncture apparently does not reduce volatile anesthetic requirement by a clinically important amount. However, preoperative sedation seems to be a promising application of acupuncture in perioperative settings. Acupuncture may be effective for postoperative pain relief but requires a high level of expertise by the acupuncture practitioner. Acupuncture and related techniques can be used for treatment and prophylaxis of postoperative nausea and vomiting in routine clinical practice in combination with or as an alternative to conventional antiemetics when administered before induction of general anesthesia.”

94.

Journal: *J Altern Complement Med*. 2006 Jun;12(5):489-95.
Title: [Cochrane systematic reviews examine P6 acupuncture-point stimulation for nausea and vomiting.](#)
Authors: Ezzo J, Streitberger K, Schneider A.
Source: JPS Enterprises, Baltimore, MD, USA. jeanetteezzo@prodigy.net

ABSTRACT:

Objective: To summarize Cochrane systematic reviews assessing P6 stimulation for nausea and vomiting.

Methods: Reviews of literature

Results: “Reviews were found on postoperative sickness, chemotherapy-induced nausea and vomiting, and pregnancy-related nausea and vomiting. Results for postoperative nausea and vomiting show the most consistent results with 26 trials and more than 3000 patients showing the superiority of real P6 stimulation over sham for both adults and children and for both nausea and vomiting. Pooled data of trials including different antiemetics showed that P6 stimulation seems to be superior to antiemetic medication for nausea and equivalent for vomiting. P6 stimulation was similarly effective across the different methods of stimulation, both invasive and noninvasive. Results for chemotherapy-induced nausea and vomiting showed 11 trials and over 1200 patients. Electroacupuncture, but not manual acupuncture, was beneficial for first-day vomiting. Acupressure was effective for first-day nausea but not vomiting.

Wristwatch-like electrical devices were not effective for any outcome. Results for pregnancy-related nausea and vomiting comprised six trials and approximately 1150 patients. Results were mixed with some trials showing positive and other trials equivocal results with no favor to a certain kind of method.”

Conclusions: “P6 stimulation may be beneficial for various conditions involving nausea and vomiting. The added value to modern antiemetics remains unclear. In patients on chemotherapy, future research should focus on patients for whom the problems are refractory. The next steps in research should include investigating whether acupuncture points added to P6 or individualizing treatment based on a Traditional Chinese Medicine diagnosis increases treatment effectiveness. It would also be worthwhile to identify predictors of response across the different conditions so that the individual patients can optimize acupuncture point therapy.”

NECK PAIN AND WHIPLASH

95.

Journal: *Spine (Phila Pa 1976)*. 2011 Apr 7.

Title: [A Randomized Trial Comparing Acupuncture and Simulated Acupuncture, for Sub-acute and Chronic Whiplash](#)

Authors: Cameron ID, Wang E, et al

Source: Rehabilitation Studies Unit, Sydney Medical School, University of Sydney, Sydney, Australia

ABSTRACT:

Objective: “To compare the effectiveness of acupuncture with simulated acupuncture in patients with sub-acute and chronic whiplash-associated disorders.”

Methods: “124 patients between 18 and 65 years with chronic (85%) or sub-acute WAD (grade I or II) were randomly allocated to real or simulated electro-acupuncture treatment for 12 sessions during a six week period. Both treatments involved skin penetration with acupuncture needles and were provided by a single university trained acupuncturist in a University Clinic in Sydney, Australia. Primary outcome measures were pain intensity (10cm Visual Analogue Scale), disability (Neck Disability Index), and health related quality of life (SF36). Secondary outcomes were patient specific activity scales, and the McGill Pain Rating Index.”

Results: “Mean initial pain intensity for all participants was 5.6 cm. Participants receiving the real electro-acupuncture treatment had significantly greater reduction in pain intensity at 3 and 6 months, 0.9 cm ($p = 0.05$) and 1.3 cm ($p = 0.007$) respectively in comparison to the sham electro-acupuncture group. After adjustment for baseline status there was no significant reduction in disability, or improvement in health related quality of life. There was an improvement in the activity scales of a similar size to the reduction in pain, but no difference in the McGill Index.”

Conclusions: “Real electro-acupuncture was associated with a significant reduction in pain

intensity over at least 6 months. This reduction was probably not clinically significant. There was no improvement in disability or quality of life.”

96.

Journal: *Complement Ther Med.* 2011 Jan;19 Suppl 1:S26-32. Epub 2010 Dec 23.

Title: [Assessment of a traditional acupuncture therapy for chronic neck pain: a pilot randomised controlled study.](#)

Authors: Liang Z, Zhu X, Yang X, Fu W, Lu A.

Source: Guangdong Provincial Hospital of Chinese Medicine, Guangzhou 510120, China; Guangdong Academy of Chinese Medical Sciences, Guangzhou 510120, China. liang_zhao_hui@163.com

ABSTRACT:

Objective: “This study is aimed to assess the efficacy of traditional acupuncture for chronic neck pain in patients by comparing the differences in symptoms, dysfunctions and quality of life.”

Methods: “The study used a two-arm, single-blinded, randomised controlled design. The patients were randomised to the study group and control group, who respectively received traditional acupuncture and placebo treatment. The Northwick Park Neck Pain Questionnaire (NPQ), visual analogue scale (VAS), Short Form (36) Health Survey (SF-36) and doctor's judgement were applied for measuring effectiveness. The patients' effectiveness outcome was assessed, respectively, before the intervention, immediately after the intervention, at the end of the first month of follow-up and at the end of the third month of follow-up. The statistical analysis was done on Statistical Package for Social Sciences (SPSS) v13, which included comparison of demographic and clinical homogeneity, the repeated measures approach based on the general linear model (GLM) for effectiveness assessment and the sum rank test for doctors' subjective efficacy judgement.”

Results: “Totally, 190 patients were recruited and 178 patients (88 in the study group and 90 in the control group) completed the intervention and follow-up assessment. The scores of NPQ, VAS and SF-36 were improved after the intervention and during follow-up ($P < 0.01$ vs. before the intervention). The patients in the study group had better effectiveness outcome in NPQ, VAS and in the VT, SF and MH domains of SF-36 ($P < 0.05$).”

Conclusions: “Traditional acupuncture can relieve pain intensity and improve the quality of daily life with a relative long-term clinical efficacy in patients with chronic neck pain.”

97.

Journal: *Clin J Pain.* 2009 May;25(4):320-6.

Title: [Electrical acustimulation of the wrist for chronic neck pain: a randomized, sham-controlled trial using a wrist-ankle acustimulation device.](#)

Authors: Chan DK, Johnson MI, Sun KO, Doble SJ, Jenkins S.

Source: Hong Kong Acupuncture and Physiotherapy Pain Center, Hong Kong SAR, Hong

Kong Special Administrative Region, China. dann99y@netvigator.com

ABSTRACT:

- Objective:** Chronic neck pain is a common problem and is treated using a variety of conservative treatments. This single-blind, randomized, sham-controlled trial investigated the value of adding electrical stimulation of acupuncture points on the wrist to a standardized program of neck exercises for chronic neck pain.
- Methods:** At initial recruitment 60 patients were randomly assigned to receive either active or sham electrical stimulation of acupuncture points on the wrist in addition to standardized neck exercise. Active or sham wrist acustimulation was given for 30 minutes 2 times/wk over a period of 4 weeks. A 30 minutes program of standardized neck exercises was also performed simultaneously.
- Results:** Forty-nine patients completed the study (22 active, 27 sham). Statistically significant improvements were found for acustimulation when compared with sham at immediate post treatment and 1-month post treatment for Numerical Rating Scale, Northwick Park Neck Pain Questionnaire and Pain Self-Efficacy Questionnaire. In active and sham electrical stimulation group 38.9% and 8.3% of patients reported a reduction of Numerical Rating Scale > 50% at 1-month post treatment follow-up, respectively. All patients tolerated acustimulation and no adverse effects were reported.
- Conclusions:** Electrical acustimulation of the wrist administered as two, 30 minutes sessions/wk added value to standardized neck exercise for chronic neck pain. A 4-week course of treatment produced effects lasting 1-month post-treatment.

98.

Journal: *Complement Ther Med.* 2008 Oct;16(5):268-77.

Title: [Tension neck syndrome treated by acupuncture combined with physiotherapy: a comparative clinical trial \(pilot study\).](#)

Authors: França DL, Senna-Fernandes V, Cortez CM, Jackson MN, Bernardo-Filho M, Guimarães MA.

Source: Universidade do Estado do Rio de Janeiro, Faculdade de Ciências Médicas, Programa de Pós-Graduação em Ciências Médicas, Brazil. dfranca.8@oi.com.br
Acupuncture and Rehabilitation Department.

ABSTRACT:

- Objective:** "To evaluate the effect of acupuncture combined with physiotherapy in comparison with acupuncture and physiotherapy performed alone in different parameters; pain intensity, muscle tension, functional disability and muscle strength in the treatment of tension neck syndrome (TNS)."
- Methods:** "A prospective, comparative clinical trial. Forty-six patients with TNS. Interventions: Patients were allocated into three groups: Group-1 received physiotherapy (therapeutic exercises) combined with acupuncture; Group-2, acupuncture alone, and Group-3, physiotherapy alone; over a period of 10 weeks, with one or two sessions weekly. OUTCOME ASSESSMENT: All patients had completed the protocols and were assessed using a visual analogue scale for pain intensity (VASpain) and muscle tension (VASmt),

the Neck Disability Index: Brazilian Portuguese version for functional disability, and the cranio-cervical Flexion Test for isometric neck muscle strength (INMS); in the periods before treatment (baseline), after 10 weeks of treatment, and after 6 months of follow-up.”

Results: “All groups showed significant improvement ($p < 0.001$) in these parameters after 10 weeks of treatment and after 6 months of follow-up. Group-1 was superior to Group-3 in pain and functional disability improvements ($p < 0.05$); and Group-1 was superior to both Group-2 ($p < 0.01$) and Group-3 ($p < 0.05$) in INMS. After 6 months of follow-up, the improvements of all groups were maintained ($p < 0.05$).”

Conclusions: “The data suggested that acupuncture effect may facilitate and/or enhance physiotherapy performance in musculoskeletal rehabilitation for tension neck syndrome.”

99.

Journal: *Ann Intern Med.* 2004;141:911-919. www.annals.org

Title: [Acupuncture versus Placebo for the Treatment of Chronic Mechanical Neck Pain, A Randomized, Controlled Trial](#)

Authors: Peter White, PhD, BSc; George Lewith, DM, FRCP; Phil Prescott, PhD, DIC, ARCS, BSc; and Joy Conway, PhD

Source: Drs. White and Lewith: Complementary Medicine Research Unit, Mail Primary Medical Care, University of Southampton, Aldermoor Health Centre, Aldermoor Close, Southampton SO16 5ST, United Kingdom.

ABSTRACT:

Objective: “To compare acupuncture and placebo for neck pain.”

Methods: “A randomized, single-blind, placebo-controlled, parallel arm trial with 1-year follow-up. Setting: The outpatient departments of 2 major hospitals in the United Kingdom, 1999 to 2001. Patients: 135 patients 18 to 80 years of age who had chronic mechanical neck pain. Eleven patients withdrew from treatment, and 124 completed the primary end point. Measurements: The primary outcome was pain 1 week after treatment, according to a visual analogue scale. Secondary outcomes were pain at other time points, score on the Neck Disability Index and the Short Form-36, and use of analgesic medications. Interventions: Patients were randomly assigned to receive, over 4 weeks, 8 treatments with acupuncture or with mock transcutaneous electrical stimulation of acupuncture points using a decommissioned electroacupuncture stimulation unit.”

Results: “Results: Both groups improved statistically from baseline, and acupuncture and placebo had similar credibility. For the primary outcome (weeks 1 to 5), a statistically significant difference in visual analogue scale score in favor of acupuncture (6.3 mm [95% CI, 1.4 to 11.3 mm]; $P = 0.01$) was observed between the 2 study groups, after adjustment for baseline pain and other covariates. However, this difference was not clinically significant because it demonstrated only a 12% (CI, 3% to 21%) difference between acupuncture and placebo. Secondary outcomes showed a similar pattern. Limitations: All treatments were

provided by 1 practitioner. Although the control was credible, it did not mimic the process of needling. A nonintervention group was not present to control for regression to the mean.”

Conclusions: “Acupuncture reduced neck pain and produced a statistically, but not clinically, significant effect compared with placebo. The beneficial effects of acupuncture for pain may be due to both nonspecific and specific effects.”

100.

Journal: *Spine (Phila Pa 1976)*. 2007 Jan 15;32(2):236-43.

Title: [Acupuncture for neck disorders.](#)

Authors: Trinh K, Graham N, Gross A, Goldsmith C, Wang E, Cameron I, Kay T

Source: DeGroot School of Medicine, Office of MD Admissions, McMaster University, Hamilton, Ontario, Canada. trink@mcmaster.ca.

ABSTRACT:

Objective: “To determine the effects of acupuncture for individuals with neck pain.”

Methods: “We searched CENTRAL (2006, issue 1) and MEDLINE, EMBASE, MANTIS, Cumulative Index to Nursing and Allied Health Literature from their beginning to February 2006. We searched reference lists and the acupuncture database TCMLARS in China. Any published trials using randomized (RCT) or quasi-randomized (quasi-RCT) assignment to the intervention groups, either in full text or abstract form, were included.”

Results: “We found 10 trials that examined acupuncture treatments for chronic neck pain. Overall, methodologic quality had a mean of 2.3 of 5 on the Jadad scale. For chronic mechanical neck disorders, there was moderate evidence that acupuncture was more effective for pain relief than some types of sham controls, measured immediately post treatment. There was moderate evidence that acupuncture was more effective than inactive, sham treatments measured immediately post treatment, and at short-term follow-up (pooled standardized mean difference, -0.37; 95% confidence interval, -0.61 to -0.12). There was limited evidence that acupuncture was more effective than massage at short-term follow-up. For chronic neck disorders with radicular symptoms, there was moderate evidence that acupuncture was more effective than a wait-list control at short-term follow-up.”

Conclusions: “There is moderate evidence that acupuncture relieves pain better than some sham treatments, measured at the end of the treatment. There is moderate evidence that those who received acupuncture reported less pain at short-term follow-up than those on a waiting list. There is also moderate evidence that acupuncture is more effective than inactive treatments for relieving pain post treatment, and this is maintained at short-term follow-up.”

101.

Journal: *Pain*. 2006 Nov;125(1-2):107-13. Epub 2006 Jul 13.

Title: [Cost-effectiveness of acupuncture treatment in patients with chronic neck pain.](#)

Authors: Willich SN, Reinhold T, Selim D, Jena S, Brinkhaus B, Witt CM.

Source: Institute of Social Medicine, Epidemiology, and Health Economics, Charité University Medical Center, Berlin, Germany. stefan.willich@charite.de

ABSTRACT:

Objective: Acupuncture is increasingly used in patients with chronic pain, but there is a lack of evidence on the cost-benefit relationship of this treatment strategy. The objective of this study was to assess costs and cost-effectiveness of additional acupuncture treatment in patients with chronic neck pain compared to patients receiving routine care alone.

Methods: "A randomized controlled trial including patients (18 years of age) with chronic neck pain (>6 months) was carried out. We assessed the resource use and health related quality of life (SF-36) at baseline and after 3 months using complete social health insurance funds and standardized questionnaires, respectively. The main outcome parameters were direct and indirect cost differences during the 3 months study period and the incremental cost-effectiveness ratio (ICER) of acupuncture treatment."

Results: "A total of 3,451 patients (1,753 acupuncture-group, 1,698 control-group) were randomized (31% men, age 53.5+/-12.9 years; 69% women, 49.2+/-12.7 years). Acupuncture treatment was associated with significantly higher costs over the 3 months study duration compared to routine care (925.53+/-1,551.06 euros vs. 648.06+/-1,459.13 euros; mean difference: 277.47 euros [95% CI: 175.71 euros-379.23 euros]). This cost increase was mainly due to costs of acupuncture (361.76+/-90.16 euros). The ICER was 12,469 euros per QALY gained and proved robust in additional sensitivity analyses. Since health insurance databases were used, private medical expenses such as over the counter medication were not included. Beyond the 3 months study duration, acupuncture might be associated with further health economic effects."

Conclusions: "According to international cost-effectiveness threshold values, acupuncture is a cost-effective treatment strategy in patients with chronic neck pain."

102.

Journal: *BMJ. 2001 Jun 30;322(7302):1574-8.*

Title: [Randomised trial of acupuncture compared with conventional massage and "sham" laser acupuncture for treatment of chronic neck pain.](#)

Authors: Irnich D, Behrens N, Molzen H, König A, Gleditsch J, Krauss M, Natalis M, Senn E, Beyer A, Schöps P.

Source: Department of Anaesthesiology, Ludwig-Maximilians University, 81377 Munich, Germany. Dominik.Irnich@lrz.uni-muenchen.de

ABSTRACT:

Objective: "To compare the efficacy of acupuncture and conventional massage for the treatment of chronic neck pain."

Methods: "Prospective, randomised, placebo controlled trial. Setting: Three outpatient departments in Germany. PARTICIPANTS: 177 patients aged 18-85 years with chronic neck pain. Interventions: Patients were randomly allocated to five treatments over three weeks with acupuncture (56), massage (60), or "sham"

laser acupuncture (61). MAIN OUTCOME MEASURES: Primary outcome measure: maximum pain related to motion (visual analogue scale) irrespective of direction of movement one week after treatment. Secondary outcome measures: range of motion (3D ultrasound real time motion analyser), pain related to movement in six directions (visual analogue scale), pressure pain threshold (pressure algometer), changes of spontaneous pain, motion related pain, global complaints (seven point scale), and quality of life (SF-36). Assessments were performed before, during, and one week and three months after treatment. Patients' beliefs in treatment were assessed."

Results: "One week after five treatments the acupuncture group showed a significantly greater improvement in motion related pain compared with massage (difference 24.22 (95% confidence interval 16.5 to 31.9), P=0.0052) but not compared with sham laser (17.28 (10.0 to 24.6), P=0.327). Differences between acupuncture and massage or sham laser were greater in the subgroup who had had pain for longer than five years (n=75) and in patients with myofascial pain syndrome (n=129). The acupuncture group had the best results in most secondary outcome measures. There were no differences in patients' beliefs in treatment."

Conclusions: "Acupuncture is an effective short term treatment for patients with chronic neck pain, but there is only limited evidence for long term effects after five treatments."

103.

Journal: *Acupunct Med.* 2004 Sep;22(3):146-51

Title: [Acupuncture for chronic neck pain--a cohort study in an NHS pain clinic.](#)

Authors: Blossfeldt P.

Source: James Paget Healthcare, NHS Trust, Great Yarmouth, UK
Patrick.Blossfeldt@jpaget.nhs.uk

ABSTRACT:

Objective: To investigate "the outcome of acupuncture for chronic neck pain in a cohort of patients referred to an NHS chronic pain clinic."

Methods: One hundred and seventy two patients were selected for acupuncture over a period of 6.5 years. Treatment was given by a single acupuncturist and consisted of a course of needle acupuncture for an average of seven sessions per patient. Treatment outcome was measured by an oral rating scale of improvement at the end of treatment and at follow up six months and one year after treatment. Nineteen patients were withdrawn from treatment for various reasons, two for adverse events.

Results: One hundred and fifty three patients were evaluated, of whom 68% had a successful outcome from acupuncture, reporting an improvement in pain of at least 50%. The success rate was higher in patients with a short duration of pain: 85% in patients with pain for up to three months and 78% with pain for up to six months. Long-term follow up showed that 49% of the patients who completed treatment had maintained the benefit after six months, and 40% at one year.

Conclusions: The results indicate that acupuncture can be an effective treatment for selected

patients with chronic neck pain.

NIH CONSENSUS STATEMENT – VARIOUS DISORDERS

104.

Journal: *JAMA.1998;280(17):1518-1524. doi:10.1001/jama.280.17.1518*

Title: [“NIH Consensus Conference, Acupuncture, NIN Consensus Development Panel on Acupuncture”](#)

Authors: A nonfederal, nonadvocate, 12-member panel plus 25 experts

Source: Office of Alternative Medicine and the Office of Medical Applications of Research, National Institutes of Health, Bethesda, Md.

ABSTRACT:

Objective: “To provide clinicians, patients, and the general public with a responsible assessment of the use and effectiveness of acupuncture to treat a variety of conditions.”

Methods: “Participants.— A nonfederal, 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 representatives of the public. In addition, 25 experts from these same fields presented data to the panel and a conference audience of 1200. Presentations and discussions were divided into 3 phases over 2 days: (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 were part of the public session; and (3) closed deliberations by the panel during the remainder of the second day and morning of the third. The conference was organized and supported by the Office of Alternative Medicine and the Office of Medical Applications of Research, National Institutes of Health, Bethesda, Md.

“Evidence. — The literature, produced from January 1970 to October 1997, was searched through MEDLINE, Allied and Alternative Medicine, EMBASE, and MANTIS, as well as through a hand search of 9 journals that were not indexed by the National Library of Medicine. An extensive bibliography of 2302 references was provided to the panel and the conference audience. Expert speakers prepared abstracts of their own conference presentations 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 the open forum and 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.”

Results: “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 within a few weeks of the conference. The statement is available at...”
www.healthy.net/Health/Article/Acupuncture_NIH_Consensus_Statement/2492

Conclusions: “Acupuncture as a therapeutic intervention is widely practiced in the United States. Although 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.”

OSTEOARTHRITIS OF THE HIP

105.

Journal: *Clinical Journal of Pain: May/June 2004 - Volume 20 - Issue 3 - pp 179-185*

Title: [Comparison Between Electro-Acupuncture and Hydrotherapy, Both in Combination With Patient Education and Patient Education Alone, on the Symptomatic Treatment of Osteoarthritis of the Hip](#)

Authors: Stener-Victorin, Elisabet RPT, PhD; Kruse-Smidje, Carina RPT; Jung, Kerstin RPT

Source: unavailable

ABSTRACT:

Objective: “The aim of the study was to evaluate the therapeutic effect of electro-acupuncture (EA) and hydrotherapy, both in combination with patient education or with patient education alone, in the treatment of osteoarthritis in the hip.”

Methods: “Forty-five patients, aged 42-86 years, with radiographic changes consistent with osteoarthritis in the hip, pain related to motion, pain on load, and ache were chosen. They were randomly allocated to EA, hydrotherapy, both in combination with patient education, or patient education alone. Outcome measures were the disability rating index (DRI), global self-rating index (GSI), and visual analogue scale (VAS). Assessments were done before the intervention and immediately after the last treatment and 1, 3, and 6 months after the last treatment.”

Results: “Pain related to motion and pain on load was reduced up to 3 months after last the treatment in the hydrotherapy group and up to 6 months in the EA group. Ache during the day was significantly improved in both the EA and hydrotherapy

group up to 3 months after the last treatment. Ache during the night was reduced in the hydrotherapy group up to 3 months after the last treatment and in the EA group up to 6 months after. Disability in functional activities was improved in EA and hydrotherapy groups up to 6 months after the last treatment. Quality of life was also improved in EA and hydrotherapy groups up to 3 months after the last treatment. There were no changes in the education group alone.”

Conclusions: “EA and hydrotherapy, both in combination with patient education, induce long-lasting effects, shown by reduced pain and ache and by increased functional activity and quality of life, as demonstrated by differences in the pre- and post-treatment assessments.”

OSTEOARTHRITIS OF THE KNEE

106.

Journal: *Ann Intern Med.* 2004 Dec 21;141(12):901-10.

Title: [Effectiveness of acupuncture as adjunctive therapy in osteoarthritis of the knee: a randomized, controlled trial.](#)

Authors: Berman BM, Lao L, Langenberg P, Lee WL, Gilpin AM, Hochberg MC.

Source: University of Maryland School of Medicine, Baltimore, Maryland 21207

ABSTRACT:

Objective: To determine whether acupuncture provides greater pain relief and improved function compared with sham acupuncture or education in patients with osteoarthritis of the knee.

Methods: DESIGN: Randomized, controlled trial. SETTING: Two outpatient clinics (an integrative medicine facility and a rheumatology facility) located in academic teaching hospitals and 1 clinical trials facility. PATIENTS: 570 patients with osteoarthritis of the knee (mean age [+/-SD], 65.5 +/- 8.4 years). INTERVENTION: 23 true acupuncture sessions over 26 weeks. Controls received 6 two-hour sessions over 12 weeks or 23 sham acupuncture sessions over 26 weeks. MEASUREMENTS: Primary outcomes were changes in the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) pain and function scores at 8 and 26 weeks. Secondary outcomes were patient global assessment, 6-minute walk distance, and physical health scores of the 36-Item Short-Form Health Survey (SF-36).

Results: Participants in the true acupuncture group experienced greater improvement in WOMAC function scores than the sham acupuncture group at 8 weeks (mean difference, -2.9 [95% CI, -5.0 to -0.8]; P = 0.01) but not in WOMAC pain score (mean difference, -0.5 [CI, -1.2 to 0.2]; P = 0.18) or the patient global assessment (mean difference, 0.16 [CI, -0.02 to 0.34]; P > 0.2). At 26 weeks, the true acupuncture group experienced significantly greater improvement than the sham group in the WOMAC function score (mean difference, -2.5 [CI, -4.7 to -0.4]; P = 0.01), WOMAC pain score (mean difference, -0.87 [CI, -1.58 to -0.16]; P = 0.003), and patient global assessment (mean difference, 0.26 [CI, 0.07 to 0.45]; P

= 0.02). LIMITATIONS: At 26 weeks, 43% of the participants in the education group and 25% in each of the true and sham acupuncture groups were not available for analysis.”

Conclusions: “Acupuncture seems to provide improvement in function and pain relief as an adjunctive therapy for osteoarthritis of the knee when compared with credible sham acupuncture and education control groups.”

107.

Journal: *BMJ 335 : 436 (Published 15 August 2007) doi: 10.1136/bmj.39280.509803.BE*

Title: [Acupuncture as an adjunct to exercise based physiotherapy for osteoarthritis of the knee: randomised controlled trial](#)

Authors: Foster, N., Thomas, E., Barlas, P., Hill, J., Yung, J., Mason, E., Hay, E.

Source: Primary Care Musculoskeletal Research Centre, Keele University, Stafford ST5 5BG UK, Correspondence to: N E Foster n.foster@keele.ac.uk

ABSTRACT:

Objective: “To investigate the benefit of adding acupuncture to a course of advice and exercise delivered by physiotherapists for pain reduction in patients with osteoarthritis of the knee.

Methods: “Design: Multicentre, randomised controlled trial. Setting: 37 physiotherapy centres accepting primary care patients referred from general practitioners in the Midlands, United Kingdom. Participants: 352 adults aged 50 or more with a clinical diagnosis of knee osteoarthritis. Interventions: Advice and exercise (n=116), advice and exercise plus true acupuncture (n=117), and advice and exercise plus non-penetrating acupuncture (n=119). Main outcome measures: The primary outcome was change in scores on the Western Ontario and McMaster Universities osteoarthritis index pain subscale at six months. Secondary outcomes included function, pain intensity, and unpleasantness of pain at two weeks, six weeks, six months, and 12 months.”

Results: “Follow-up rate at six months was 94%. The mean (SD) baseline pain score was 9.2 (3.8). At six months mean reductions in pain were 2.28 (3.8) for advice and exercise, 2.32 (3.6) for advice and exercise plus true acupuncture, and 2.53 (4.2) for advice and exercise plus non-penetrating acupuncture. Mean differences in change scores between advice and exercise alone and each acupuncture group were 0.08 (95% confidence interval -1.0 to 0.9) for advice and exercise plus true acupuncture and 0.25 (-0.8 to 1.3) for advice and exercise plus non-penetrating acupuncture. Similar non-significant differences were seen at other follow-up points. Compared with advice and exercise alone there were small, statistically significant improvements in pain intensity and unpleasantness at two and six weeks for true acupuncture and at all follow-up points for non-penetrating acupuncture.”

Conclusions: “The addition of acupuncture to a course of advice and exercise for osteoarthritis of the knee delivered by physiotherapists provided no additional improvement in pain scores. Small benefits in pain intensity and unpleasantness were observed in both acupuncture groups, making it unlikely that this was due

to acupuncture needling effects.”

108.

Journal: *BMJ 329 : 1216 doi: 10.1136/bmj.38238.601447.3A (Published 19 October 2004)*

Title: [Acupuncture as a complementary therapy to the pharmacological treatment of osteoarthritis of the knee: randomised controlled trial](#)

Authors: Vas, J., Mendez, C., Perea-Milla, E., et al.

Source: Pain Treatment Unit, Centro de Salud “Dos Hermanas A” (Distrito Sanitario Sevilla-Sur), 41700 Dos Hermanas, Spain

ABSTRACT:

Objective: To analyse the efficacy of acupuncture as a complementary therapy to the pharmacological treatment of osteoarthritis of the knee, with respect to pain relief, reduction of stiffness, and increased physical function during treatment; modifications in the consumption of diclofenac during treatment; and changes in the patient's quality of life.

Methods: “Design: Randomised, controlled, single blind trial, with blinded evaluation and statistical analysis of results. Setting: Pain management unit in a public primary care centre in southern Spain, over a period of two years. Participants: 97 outpatients presenting with osteoarthritis of the knee. Interventions: Patients were randomly separated into two groups, one receiving acupuncture plus diclofenac (n = 48) and the other placebo acupuncture plus diclofenac (n = 49). Main outcome measures: The clinical variables examined included intensity of pain as measured by a visual analogue scale; pain, stiffness, and physical function subscales of the Western Ontario and McMaster Universities (WOMAC) osteoarthritis index; dosage of diclofenac taken during treatment; and the profile of quality of life in the chronically ill (PQLC) instrument, evaluated before and after the treatment programme.”

Results: “88 patients completed the trial. In the intention to treat analysis, the WOMAC index presented a greater reduction in the intervention group than in the control group (mean difference 23.9, 95% confidence interval 15.0 to 32.8) The reduction was greater in the subscale of functional activity. The same result was observed in the pain visual analogue scale, with a reduction of 26.6 (18.5 to 34.8). The PQLC results indicate that acupuncture treatment produces significant changes in physical capability (P = 0.021) and psychological functioning (P = 0.046). Three patients reported bruising after the acupuncture sessions.”

Conclusions: “Acupuncture plus diclofenac is more effective than placebo acupuncture plus diclofenac for the symptomatic treatment of osteoarthritis of the knee.”

109.

Journal: Oxford Journals, Volume46, Issue 9, Pp. 1445-1449.

Title: [Severe knee osteoarthritis: a randomized controlled trial of acupuncture, physiotherapy \(supervised exercise\) and standard management for patients awaiting knee replacement](#)

Authors: Williamson, L., Wyatt, M.R., Yein, K., Melton, J.T.K.

Source: The Great Western Hospital, Swindon, Wiltshire, UK

ABSTRACT:

Objective: “To evaluate the effects of standardized western acupuncture and physiotherapy on pain and functional ability in patients with severe osteoarthritic knee pain awaiting knee arthroplasty.”

Methods: “Three-arm, assessor-blind, randomized controlled trial. Participants: 181 patients awaiting knee arthroplasty. Interventions: acupuncture for 6 weeks; physiotherapy for 6 weeks; standardized advice. Main outcome measures: Oxford Knee Score questionnaire (OKS) (primary); 50 m timed walk, and duration of hospital stay following knee arthroplasty.”

Results: “There was no baseline difference between groups. At 7 weeks, there was a 10% reduction in OKS in the acupuncture group which was a significant difference between the acupuncture and the control group: Mean (S.D.) acupuncture 36.8 (7.20); physiotherapy 39.2 (8.22); control 40.3 (8.48) ($P = 0.0497$). These effects were no longer present at 12 weeks. There was a trend ($P = 0.0984$) towards a shorter in-patient stay of 1 day for the physiotherapy group [mean 6.50 days (S.D. 2.0)] compared with the acupuncture group [mean 7.77 days (S.D. 3.96)].

Conclusions: “We have demonstrated that patients with severe knee osteoarthritis can achieve a short-term reduction in OKS when treated with acupuncture. However, we failed to demonstrate any other clinically or statically significant effects between the groups. Both interventions can be delivered effectively in an out-patient group setting at a district general hospital. Further study is needed to evaluate the combined effects of these treatments.”

110.

Journal: *Acupunct Med* 2009;27:3-8 doi:10.1136/aim.2008.000067

Title: [Comparison of the effectiveness of six and two acupuncture point regimens in osteoarthritis of the knee: a randomised trial](#)

Authors: Wirat Taechaarpornkul, Daranee Suvapan, Chaniya Theppanom, Chantima Chanthipwaree, Aroon Chirawatkul

Source: Wirat Taechaarpornkul, Sirindhorn National Medical Rehabilitation Center, 88/26 Soi Bamrasnaradura, Tiwanon Road, Nonthaburi 11000, Thailand; wiratt@health.moph.go.th

ABSTRACT:

Objective: The objective of this study was to compare the effectiveness of six and two acupuncture points in the treatment of knee OA.

Methods: A randomized trial of knee OA patients was conducted. Patients were randomly allocated into two groups of 35. The “six point group” received treatment at six acupuncture points, ST35, EX-LE4 (Neixiyan), ST36, SP9, SP10 and ST34, while the “two point group” received treatment at just the first pair of points, ST35 and EX-LE4. Both groups received twice weekly electroacupuncture on 10 occasions. Electrical stimulation was carried out at low-frequency of 3 Hz to all points, with the intensity as high as tolerable. Both groups were allowed to take a 200 mg celecoxib capsule per day for intolerable pain. Patients were assessed at

baseline, week 5, week 9 and week 13, using a Thai language version of the Western Ontario and McMaster Osteoarthritis Index (WOMAC). Global assessment of change after 10 treatments was also recorded.

Results: Acupuncture at both six and two acupuncture points was associated with significant improvement. Mean total WOMAC score at weeks 5 and 13 of patients in both groups showed no significant difference statistically ($p=0.75$ and $p=0.51$). Moreover, the number of celecoxib capsules taken, global assessment of global change and body weight change of both groups also showed no statistical difference.

Conclusions: This evidence suggests that electroacupuncture to two local points may be sufficient to treat knee OA, but in view of some limitations to this study further research is necessary before this can be stated conclusively.

111.

Journal: *Ann Intern Med.* 2006 Jul 4;145(1):12-20.

Title: [Acupuncture and knee osteoarthritis: a three-armed randomized trial.](#)

Authors: Scharf HP, Mansmann U, Streitberger K, Witte S, Krämer J, Maier C, Trampisch HJ, Victor N.

Source: University of Heidelberg, Heidelberg, Germany.

ABSTRACT:

Objective: To assess the efficacy and safety of traditional Chinese acupuncture (TCA) compared with sham acupuncture (needling at defined nonacupuncture points) and conservative therapy in patients with chronic pain due to osteoarthritis of the knee.

Methods: Randomized, controlled trial. **PATIENTS:** 1007 patients who had had chronic pain for at least 6 months due to osteoarthritis of the knee (American College of Rheumatology [ACR] criteria and Kellgren-Lawrence score of 2 or 3). **Interventions:** Up to 6 physiotherapy sessions and as-needed anti-inflammatory drugs plus 10 sessions of TCA, 10 sessions of sham acupuncture, or 10 physician visits within 6 weeks. Patients could request up to 5 additional sessions or visits if the initial treatment was viewed as being partially successful. **MEASUREMENTS:** Success rate, as defined by at least 36% improvement in Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score at 26 weeks. Additional end points were WOMAC score and global patient assessment.

Results: Success rates were 53.1% for TCA, 51.0% for sham acupuncture, and 29.1% for conservative therapy. Acupuncture groups had higher success rates than conservative therapy groups (relative risk for TCA compared with conservative therapy, 1.75 [95% CI, 1.43 to 2.13]; relative risk for sham acupuncture compared with conservative therapy, 1.73 [CI, 1.42 to 2.11]). There was no difference between TCA and sham acupuncture (relative risk, 1.01 [CI, 0.87 to 1.17]). **LIMITATIONS:** There was no blinding between acupuncture and traditional therapy and no monitoring of acupuncture compliance with study protocol. In general, practitioner-patient contacts were less intense in the

conservative therapy group than in the TCA and sham acupuncture groups.

Conclusions: Compared with physiotherapy and as-needed anti-inflammatory drugs, addition of either TCA or sham acupuncture led to greater improvement in WOMAC score at 26 weeks. No statistically significant difference was observed between TCA and sham acupuncture, suggesting that the observed differences could be due to placebo effects, differences in intensity of provider contact, or a physiologic effect of needling regardless of whether it is done according to TCA principles.

112.

Journal: *Ann Intern Med.* 2004 Dec 21;141(12):901-10.

Title: [Effectiveness of acupuncture as adjunctive therapy in osteoarthritis of the knee: a randomized, controlled trial.](#)

Authors: Berman BM, Lao L, Langenberg P, Lee WL, Gilpin AM, Hochberg MC.

Source: University of Maryland School of Medicine, Baltimore, Maryland 21207

ABSTRACT:

Objective: To determine whether acupuncture provides greater pain relief and improved function compared with sham acupuncture or education in patients with osteoarthritis of the knee.

Methods: “Randomized, controlled trial. SETTING: Two outpatient clinics (an integrative medicine facility and a rheumatology facility) located in academic teaching hospitals and 1 clinical trials facility. PATIENTS: 570 patients with osteoarthritis of the knee (mean age [±SD], 65.5 ± 8.4 years). INTERVENTION: 23 true acupuncture sessions over 26 weeks. Controls received 6 two-hour sessions over 12 weeks or 23 sham acupuncture sessions over 26 weeks. MEASUREMENTS: Primary outcomes were changes in the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) pain and function scores at 8 and 26 weeks. Secondary outcomes were patient global assessment, 6-minute walk distance, and physical health scores of the 36-Item Short-Form Health Survey (SF-36).”

Results: “Participants in the true acupuncture group experienced greater improvement in WOMAC function scores than the sham acupuncture group at 8 weeks (mean difference, -2.9 [95% CI, -5.0 to -0.8]; P = 0.01) but not in WOMAC pain score (mean difference, -0.5 [CI, -1.2 to 0.2]; P = 0.18) or the patient global assessment (mean difference, 0.16 [CI, -0.02 to 0.34]; P > 0.2). At 26 weeks, the true acupuncture group experienced significantly greater improvement than the sham group in the WOMAC function score (mean difference, -2.5 [CI, -4.7 to -0.4]; P = 0.01), WOMAC pain score (mean difference, -0.87 [CI, -1.58 to -0.16]; P = 0.003), and patient global assessment (mean difference, 0.26 [CI, 0.07 to 0.45]; P = 0.02). LIMITATIONS: At 26 weeks, 43% of the participants in the education group and 25% in each of the true and sham acupuncture groups were not available for analysis.”

Conclusions: “Acupuncture seems to provide improvement in function and pain relief as an adjunctive therapy for osteoarthritis of the knee when compared with credible sham acupuncture and education control groups.”

113.

Journal: *Ann Intern Med.* 2006 Jul 4;145(1):12-20.

Title: [Acupuncture and knee osteoarthritis: a three-armed randomized trial.](#)

Authors: Scharf HP, Mansmann U, Streitberger K, Witte S, Krämer J, Maier C, Trampisch HJ, Victor N.

Source: University of Heidelberg, Heidelberg, Germany.

ABSTRACT:

Objective: “To assess the efficacy and safety of traditional Chinese acupuncture (TCA) compared with sham acupuncture (needling at defined nonacupuncture points) and conservative therapy in patients with chronic pain due to osteoarthritis of the knee.”

Methods: “DESIGN: Randomized, controlled trial. SETTING: 315 primary care practices staffed by 320 practitioners with at least 2 years' experience in acupuncture. PATIENTS: 1007 patients who had had chronic pain for at least 6 months due to osteoarthritis of the knee (American College of Rheumatology [ACR] criteria and Kellgren-Lawrence score of 2 or 3). Interventions: Up to 6 physiotherapy sessions and as-needed anti-inflammatory drugs plus 10 sessions of TCA, 10 sessions of sham acupuncture, or 10 physician visits within 6 weeks. Patients could request up to 5 additional sessions or visits if the initial treatment was viewed as being partially successful. MEASUREMENTS: Success rate, as defined by at least 36% improvement in Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score at 26 weeks. Additional end points were WOMAC score and global patient assessment.”

Results: “Success rates were 53.1% for TCA, 51.0% for sham acupuncture, and 29.1% for conservative therapy. Acupuncture groups had higher success rates than conservative therapy groups (relative risk for TCA compared with conservative therapy, 1.75 [95% CI, 1.43 to 2.13]; relative risk for sham acupuncture compared with conservative therapy, 1.73 [CI, 1.42 to 2.11]). There was no difference between TCA and sham acupuncture (relative risk, 1.01 [CI, 0.87 to 1.17]). LIMITATIONS: There was no blinding between acupuncture and traditional therapy and no monitoring of acupuncture compliance with study protocol. In general, practitioner-patient contacts were less intense in the conservative therapy group than in the TCA and sham acupuncture groups.”

Conclusions: “Compared with physiotherapy and as-needed anti-inflammatory drugs, addition of either TCA or sham acupuncture led to greater improvement in WOMAC score at 26 weeks. No statistically significant difference was observed between TCA and sham acupuncture, suggesting that the observed differences could be due to placebo effects, differences in intensity of provider contact, or a physiologic effect of needling regardless of whether it is done according to TCA principles.”

114.

Journal: *Lancet.* 2005 Jul 9-15;366(9480):136-43

Title: [Acupuncture in patients with osteoarthritis of the knee: a randomised trial.](#)

- Authors:** Witt C, Brinkhaus B, Jena S, Linde K, Streng A, Wagenpfeil S, Hummelsberger J, Walther HU, Melchart D, Willich SN.
- Source:** Institute of Social Medicine, Epidemiology, and Health Economics, Charité University Medical Centre, Berlin, Germany. claudia.witt@charite.de
- ABSTRACT:**
- Objective:** “Acupuncture is widely used by patients with chronic pain although there is little evidence of its effectiveness. We investigated the efficacy of acupuncture compared with minimal acupuncture and with no acupuncture in patients with osteoarthritis of the knee.”
- Methods:** “Patients with chronic osteoarthritis of the knee (Kellgren grade < or =2) were randomly assigned to acupuncture (n=150), minimal acupuncture (superficial needling at non-acupuncture points; n=76), or a waiting list control (n=74). Specialised physicians, in 28 outpatient centres, administered acupuncture and minimal acupuncture in 12 sessions over 8 weeks. Patients completed standard questionnaires at baseline and after 8 weeks, 26 weeks, and 52 weeks. The primary outcome was the Western Ontario and McMaster Universities Osteoarthritis (WOMAC) index at the end of week 8 (adjusted for baseline score). All main analyses were by intention to treat.”
- Results:** “294 patients were enrolled from March 6, 2002, to January 17, 2003; eight patients were lost to follow-up after randomisation, but were included in the final analysis. The mean baseline-adjusted WOMAC index at week 8 was 26.9 (SE 1.4) in the acupuncture group, 35.8 (1.9) in the minimal acupuncture group, and 49.6 (2.0) in the waiting list group (treatment difference acupuncture vs. minimal acupuncture -8.8, [95% CI -13.5 to -4.2], p=0.0002; acupuncture vs. waiting list -22.7 [-27.5 to -17.9], p<0.0001). After 52 weeks the difference between the acupuncture and minimal acupuncture groups was no longer significant (p=0.08).”
- Conclusions:** “After 8 weeks of treatment, pain and joint function are improved more with acupuncture than with minimal acupuncture or no acupuncture in patients with osteoarthritis of the knee. However, this benefit decreases over time.”

OSTEOARTHRITIS PAIN

115.

Journal: *Eur J Health Econ.* 2008 Aug;9(3):209-19. Epub 2007 Jul 19.

Title: [Quality of life and cost-effectiveness of acupuncture treatment in patients with osteoarthritis pain.](#)

Authors: Reinhold T, Witt CM, Jena S, Brinkhaus B, Willich SN.

Source: Institute for Social Medicine, Epidemiology, and Health Economics, Charité University Medical Center, Berlin, Germany. thomas.reinhold@charite.de

ABSTRACT:

Objective: “To assess quality of life (QoL), costs, and cost-effectiveness of acupuncture treatment plus routine care versus routine care alone in osteoarthritis patients”

Methods: “a randomised, controlled trial was conducted in 255 general practices in

Germany. Four hundred and eighty-nine patients with chronic pain due to osteoarthritis of the knee or hip were included to evaluate QoL and costs at baseline and after 3 months using health insurance funds data and standardized questionnaires.”

Results: “Patients receiving acupuncture had an improved QoL associated with significantly higher costs over the 3 months treatment period compared to routine care alone (mean cost-difference: 469.50 euros [95%CI 135.80-803.19 euros]). This increase in costs was primarily due to the costs of acupuncture. The overall ICER was 17,845 euros per QALY gained. The degree of cost-effectiveness was influenced by gender, with female patients achieving a better cost-effectiveness ratio than men.”

Conclusions: In conclusion, acupuncture was a cost-effective treatment strategy in patients with chronic osteoarthritis pain.

PERIPHERAL JOINT OSTEOARTHRITIS

116.

Journal: *Oxford Journals >Medicine>Rheumatology Volume 45, Issue 11 Pp. 1331-1337*

Title: [Acupuncture for peripheral joint osteoarthritis: A systematic review and meta-analysis](#)

Authors: Y. D. Kwon, M. H. Pittler¹ and E. Ernst

Source: Complementary Medicine, Peninsula Medical School, Universities of Exeter and Plymouth, 25 Victoria Park Road, Exeter EX2 4NT, UK. E-mail: max.pittler@pms.ac.uk

ABSTRACT:

Objective: “To evaluate the evidence for the effectiveness of acupuncture in peripheral joint osteoarthritis (OA).”

Methods: “Systematic searches were conducted on Medline, Embase, AMED, Cochrane Library, CINAHL, British Nursing Index, PsychINFO and CAMPAIN until July 2005. Hand-searches included conference proceedings and our own files. There were no restrictions regarding the language of publication. All randomized controlled trials (RCTs) of acupuncture for patients with peripheral joint OA were considered for inclusion. Trials assessing needle acupuncture with or without electrical stimulation were considered if sham- or placebo-controlled or controlled against a comparator intervention. Trials testing other forms of acupuncture were excluded. Methodological quality was assessed and, where possible, meta-analyses were performed.”

Results: “Thirty-one possibly relevant studies were identified and 18 RCTs were included. Ten trials tested manual acupuncture and eight trials tested electroacupuncture. Overall, ten studies demonstrated greater pain reduction in acupuncture groups compared with controls. The meta-analysis of homogeneous data showed a significant effect of manual acupuncture compared with sham acupuncture (standardized mean difference 0.24, 95% confidence interval 0.01–0.47, P = 0.04, n = 329), which is supported by data for knee OA. The extent of

heterogeneity in trials of electro-acupuncture prevented a meaningful meta-analysis.”

Conclusions: “Sham-controlled RCTs suggest specific effects of acupuncture for pain control in patients with peripheral joint OA. Considering its favourable safety profile acupuncture seems an option worthy of consideration particularly for knee OA. Further studies are required particularly for manual or electro-acupuncture in hip OA.”

PAIN

117.

Journal: *Anaesthesia Volume 63, Issue 12, pages 1343–1348, December 2008*

Title: [Auricular acupuncture for postoperative pain control: a systematic review of randomised clinical trials](#)

Authors: Usichenko, T., Lehmann, C., Ernst, E.

Source: Department of Anaesthesiology and Intensive Care Medicine, University of Greifswald, Germany

ABSTRACT:

Objective: “The aim was to evaluate clinical evidence on the efficacy of auricular acupuncture for postoperative pain control.”

Methods: “Electronic databases: Medline, MedPilot, DARE, Clinical Resource, Scopus and Biological Abstracts were searched from their inception to September 2007. All randomised clinical trials on the treatment of postoperative pain with auricular acupuncture were considered and their quality was evaluated using the Jadad scale. Pain intensity and analgesic requirements were defined as the primary outcome measures. Of 23 articles, nine fulfilled the inclusion criteria. Meta-analytic approach was not possible because of the heterogeneity of the primary studies.”

Results: “In eight of the trials, auricular acupuncture was superior to control conditions. Seven randomised clinical trials scored three or more points on the Jadad scale but none of them reached the maximum of 5 points.”

Conclusions: “The evidence that auricular acupuncture reduces postoperative pain is promising but not compelling.”

118.

Journal: *Arch Otolaryngol Head Neck Surg. 1999;125:567-572*

Title: [Evaluation of Acupuncture for Pain Control after Oral Surgery, A Placebo-Controlled Trial](#)

Authors: Lixing Lao, PhD, LAc; Stewart Bergman, DDS; Gayle R. Hamilton, PhD; Patricia Langenberg, PhD; Brian Berman, MD

Source: Dental School Outpatient Clinic, University of Maryland at Baltimore

ABSTRACT:

Objective: “To evaluate the (1) efficacy of Chinese acupuncture in treating postoperative oral surgery pain, (2) validity of a placebo-controlled procedure, and (3) effects

- of psychological factors on outcomes.”
- Methods:** “Design: Randomized, double-blind, placebo controlled trial. Setting: Dental School Outpatient Clinic, University of Maryland at Baltimore. Participants: Thirty-nine healthy subjects, aged 18 to 40 years, assigned to treatment (n = 19) and control (n = 20) groups. Main Outcome Measures: Patients’ self-reports of time until moderate pain, time until medication use, total pain relief, pain half gone, and total pain medication” consumption.
- Results:** “Mean pain-free postoperative time was significantly longer in the acupuncture group (172.9 minutes) than in the placebo group (93.8 minutes) (P = .01), as was time until moderate pain (P = .008). Mean number of minutes before requesting pain rescue medication was significantly longer in the treatment group (242.1 minutes) than in the placebo group (166.2 minutes) (P = .01), as was time until medication use (P = .01). Average pain medication consumption was significantly less in the treatment group (1.1 tablets) than in the placebo group (1.65 tablets) (P = .05). There were no significant between-groups differences on total-pain-relief scores or pain-halfgone scores (P..05). Nearly half or more of all patients were uncertain of or incorrect about their group assignment. Outcomes were not associated with psychological factors in multivariate models.”
- Conclusions:** Acupuncture is superior to the placebo in preventing postoperative dental pain; noninsertion placebo procedure is valid as a control.

119.

Journal: *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 1995 Apr;79(4):423-8.

Title: [Efficacy of Chinese acupuncture on postoperative oral surgery pain.](#)

Authors: Lao L, Bergman S, Langenberg P, Wong RH, Berman B.

Source: University of Maryland at Baltimore, Department of Family Medicine

ABSTRACT:

Objective: To provide a model for an acupuncture control that could examine the placebo effect in clinical acupuncture research

Methods: To address this problem, after surgical third molar extractions 19 patients were randomly assigned to an acupuncture group (n = 11) or a placebo acupuncture group (n = 8). The length of time for reaching moderate pain and pain intensity after oral surgery were recorded by standard patient self-report.

Results: The results indicated that subjects treated with acupuncture reported longer pain-free duration times (mean, 181 versus 71 minutes; p < or = 0.046) and experienced less pain intensity than those who received placebo acupuncture.

Conclusions: This study provides a model for an acupuncture control that could examine the placebo effect in clinical acupuncture research.

120.

Journal: *Arch Otolaryngol Head Neck Surg.* 1999 May;125(5):567-72.

Title: [Evaluation of acupuncture for pain control after oral surgery: a placebo-controlled trial.](#)

Authors: Lao L, Bergman S, Hamilton GR, Langenberg P, Berman B.

Source: Department of Family Medicine, School of Medicine, University of Maryland at Baltimore, 21207-6697, USA. Llao@compmed.ummc.ab.umd.edu

ABSTRACT:

Objective: “To evaluate the (1) efficacy of Chinese acupuncture in treating postoperative oral surgery pain, (2) validity of a placebo-controlled procedure, and (3) effects of psychological factors on outcomes.”

Method: “DESIGN: Randomized, double-blind, placebo-controlled trial.
SETTING: Dental School Outpatient Clinic, University of Maryland at Baltimore.
PATIENTS: Thirty-nine healthy subjects, aged 18 to 40 years, assigned to treatment (n=19) and control (n=20) groups. MAIN OUTCOME MEASURES: Patients' self-reports of time until moderate pain, time until medication use, total pain relief, pain half gone, and total pain medication consumption.”

Result: “Mean pain-free postoperative time was significantly longer in the acupuncture group (172.9 minutes) than in the placebo group (93.8 minutes) (P=.01), as was time until moderate pain (P=.008). Mean number of minutes before requesting pain rescue medication was significantly longer in the treatment group (242.1 minutes) than in the placebo group (166.2 minutes) (P=.01), as was time until medication use (P=.01). Average pain medication consumption was significantly less in the treatment group (1.1 tablets) than in the placebo group (1.65 tablets) (P=.05). There were no significant between-groups differences on total-pain-relief scores or pain-half-gone scores (P>.05). Nearly half or more of all patients were uncertain of or incorrect about their group assignment. Outcomes were not associated with psychological factors in multivariate models.”

Conclusions: “Acupuncture is superior to the placebo in preventing postoperative dental pain; noninsertion placebo procedure is valid as a control.”

121.

Journal: *Am Fam Physician. 2009 Sep 1;80(5):481-484.*

Title: [Acupuncture for Pain](#)

Author: Robert B. Kelly, MD, MS

Source: Fairview Hospital/Cleveland Clinic Family Medicine Residency, Cleveland, Ohio

ABSTRACT:

Objective: “Enough data are available for some conditions to allow systematic evaluations or meta-analyses.”

Result: “Acupuncture is increasingly used as an alternative or complementary therapy for the treatment of pain. It is well tolerated, with a low risk of serious adverse effects. Traditional and modern acupuncture techniques may result in reported improvement in pain patterns. Research on acupuncture has had a number of limitations, including: incomplete understanding of the physiologic effects of acupuncture; ineffective blinding of participants; unclear adequacy of acupuncture “dose;” difficulty in identification of suitable sham or placebo treatments; and the use of standardized treatment regimens rather than the individualized approach that characterizes most acupuncture practice. Controlled trials have been published regarding acupuncture for lumbar,

shoulder, and neck pain; headache; arthritis; fibromyalgia; temporomandibular joint pain; and other pain syndromes.”

“In 1997, a National Institutes of Health consensus panel concluded that acupuncture was an effective treatment for postoperative dental pain, but drew no conclusions about other types of pain. Over the past decade, interest in and use of acupuncture in the United States has grown tremendously. Many studies of the effectiveness of acupuncture have also been conducted.”

“In Eastern tradition, pain is thought to result from blockage or stagnation of the normal movement of energy (qi) in the area that hurts. Acupuncture is thought to restore the normal flow of qi. In modern scientific study, acupuncture has been shown to have multiple effects on the central and peripheral nervous systems. These effects and other physiologic mechanisms are presumed to change pain perception, although the exact mechanism is unknown.”

Conclusions: “Enough data are available for some conditions to allow systematic evaluations or meta-analyses. Based on published evidence, acupuncture is most likely to benefit patients with low back pain, neck pain, chronic idiopathic or tension headache, migraine, and knee osteoarthritis. Promising but less definitive data exist for shoulder pain, fibromyalgia, temporomandibular joint pain, and postoperative pain. Acupuncture has not been proven to improve pain from rheumatoid arthritis. For other pain conditions, there is not enough evidence to draw conclusions.”

“Acupuncture should be considered as a treatment option in the following conditions:	Evidence Rating
Low back pain	A
Shoulder pain	B
Neck pain	A
Headache (chronic idiopathic)	A
Headache (migraine)	A
Knee osteoarthritis	B
Fibromyalgia	B
Postoperative pain	B
Temporomandibular joint pain	B”

122.

Journal: *Science Daily (Nov. 30, 2010) reporting on a presentation given November 30 at the annual meeting of the Radiological Society of North America*

Title: [Acupuncture changes brain's perception and processing of pain](#)

Authors: Nina Theysohn, M.D., Kyung-Eun Choi, M.Sc., Elke Gizewski, M.D., Ph.D., Thomas Rampp, M.D., Gustav Dobos, M.D., Ph.D., Michael Forsting, M.D., Ph.D., and Frauke Musial, Ph.D.

Source: Department of Diagnostic and Interventional Radiology and Neuroradiology at University Hospital in Essen, Germany.

ABSTRACT:

Objective: "...to directly observe areas of the brain that are activated during pain perception and see the variances that occur with acupuncture."

Method: "18 healthy volunteers underwent fMRI while an electrical pain stimulus was attached to the left ankle. Acupuncture needles were then placed at three places on the right side, including between the toes, below the knee, and near the thumb. With the needles in place, fMRI was repeated while electrical currents were again directed at the left ankle. The researchers then compared the images and data obtained from the fMRI sessions with no acupuncture to those of the fMRI sessions with acupuncture."

Result: "Activation of brain areas involved in pain perception was significantly reduced or modulated under acupuncture," Dr. Theysohn said.

Conclusions: "Acupuncture is supposed to act through at least two mechanisms -- nonspecific expectancy-based effects and specific modulation of the incoming pain signal," Dr. Theysohn said. "Our findings support that both these nonspecific and specific mechanisms exist, suggesting that acupuncture can help relieve pain."

123.

Journal: *Reprod Biomed Online*. 2006 Jul;13(1):120-5.

Title: [Pain relief during oocyte retrieval--exploring the role of different frequencies of electro-acupuncture.](#)

Authors: Humaidan P, Brock K, Bungum L, Stener-Victorin E.

Source: The Fertility Clinic, Viborg Hospital, Skive, DK-7800 Skive, Denmark. peter.humaidan@sygehusviborg.dk

ABSTRACT:

Objective: "Electro-acupuncture has previously proven its analgesic effect in oocyte retrieval for IVF. The aim of the present prospective randomized study was to explore the optimal frequency for analgesia when electro-acupuncture was applied a few minutes prior to oocyte retrieval."

Methods: "A total of 152 patients were prospectively randomized to receive either a combination of high (80 Hz) and low frequency (2 Hz), 3 s each, a so-called mixed frequency, or a fixed frequency of 20 Hz during oocyte retrieval. In addition to electro-acupuncture, both groups had a paracervical block and manual acupuncture."

Result: "No differences in pain before, during or after oocyte retrieval between the two groups were seen. In the fixed frequency group, however, a higher level of anxiety ($P < 0.05$) before oocyte retrieval was seen, and a higher level of nausea after aspiration of one ovary ($P < 0.01$) was seen in the mixed frequency group. No differences were seen regarding clinical outcome parameters."

Conclusions: "Contrary to previous reports on acute and chronic pain, the analgesic effect of the mixed frequency and the fixed frequency was similar when used for short duration electro-acupuncture."

124.

Journal: *Hum Reprod.* 2004 Jun;19(6):1367-72. Epub 2004 Apr 22.

Title: [Pain relief during oocyte retrieval with a new short duration electro-acupuncture technique--an alternative to conventional analgesic methods.](#)

Authors: Humaidan P, Stener-Victorin E.

Source: The Fertility Clinic, Skive Sygehus, DK 7800 Skive, Denmark.

ABSTRACT:

Objective: "Acupuncture previously has proved its pain-relieving effect for ovum pick-up (OPU). The analgesic effect of electro-acupuncture (EA) was evaluated when EA was applied for only a few minutes prior to OPU in an attempt to make EA more attractive for clinical use."

Methods: "Two hundred patients undergoing OPU were randomized prospectively using sealed, unlabelled envelopes, to receive pain relief with either EA in combination with a paracervical block (PCB) (n = 100) or conventional medical analgesia (CMA) in combination with a PCB (n = 100). A visual analogue scale (VAS) was used to evaluate pain and anxiety before, during and after OPU. The primary outcome measure was pain relief; secondary end-points were costs, time to discharge and clinical outcome parameters."

Result: "There were no differences in any VAS ratings before the procedure. Directly after OPU, the EA group reported significantly higher mean and maximum pain, and 'pain now' than the CMA group. At 30 min after OPU and thereafter, no significant differences were found between the groups regarding abdominal pain. Time to discharge and costs were significantly lower in the EA group compared with the CMA group. No differences in clinical outcome parameters were seen."

Conclusions: "A significant difference was found between the EA and the CMA groups regarding pain during the OPU, probably due to the fact that the CMA group was pre-medicated as part of the study design. Despite a per-operative difference in pain rating, EA, given a few minutes prior to OPU, is a good alternative to CMA. The procedure is well tolerated by the patients, with a shorter hospitalization time and lower costs."

125.

Journal: *BMJ.* 2006 Feb 18;332(7538):391-7. Epub 2006 Feb 1.

Title: [Sham device v. inert pill: randomised controlled trial of two placebo treatments.](#)

Authors: Kaptchuk TJ, Stason WB, Davis RB, Legedza AR, Schnyer RN, Kerr CE, Stone DA, Nam BH, Kirsch I, Goldman RH.

Source: Osher Institute, Harvard Medical School, Boston, MA, 02215 USA. ted_kaptchuk@hms.harvard.edu

ABSTRACT:

Objective: "To investigate whether a sham device (a validated sham acupuncture needle) has a greater placebo effect than an inert pill in patients with persistent arm pain."

Methods: “DESIGN: A single blind randomised controlled trial created from the two week placebo run-in periods for two nested trials that compared acupuncture and amitriptyline with their respective placebo controls. Comparison of participants who remained on placebo continued beyond the run-in period to the end of the study. SETTING: Academic medical centre. PARTICIPANTS: 270 adults with arm pain due to repetitive use that had lasted at least three months despite treatment and who scored ≥ 3 on a 10 point pain scale. MAIN OUTCOME MEASURES: Arm pain measured on a 10 point pain scale. Secondary outcomes were symptoms measured by the Levine symptom severity scale, function measured by Pransky's upper extremity function scale, and grip strength.”

Result: “Pain decreased during the two week placebo run-in period in both the sham device and placebo pill groups, but changes were not different between the groups (-0.14, 95% confidence interval -0.52 to 0.25, $P = 0.49$). Changes in severity scores for arm symptoms and grip strength were similar between groups, but arm function improved more in the placebo pill group (2.0, 0.06 to 3.92, $P = 0.04$). Longitudinal regression analyses that followed participants throughout the treatment period showed significantly greater downward slopes per week on the 10 point arm pain scale in the sham device group than in the placebo pill group (-0.33 (-0.40 to -0.26) v -0.15 (-0.21 to -0.09), $P = 0.0001$) and on the symptom severity scale (-0.07 (-0.09 to -0.05) v -0.05 (-0.06 to -0.03), $P = 0.02$). Differences were not significant, however, on the function scale or for grip strength. Reported adverse effects were different in the two groups.”

Conclusions: “The sham device had greater effects than the placebo pill on self reported pain and severity of symptoms over the entire course of treatment but not during the two week placebo run in. Placebo effects seem to be malleable and depend on the behaviours embedded in medical rituals.”

126.

Journal: Acupunct Electrother Res. 2000;25(3-4):155-63.

Title: [Tolosa Hunt Syndrome--intractable pain treatment with acupuncture?](#)

Authors: Nepp J, Grdser S, Flarrer S, Spacek A, Mudrich C, Stockenhuber D, Wedrich A.

Source: Dept of Ophthalmology, University of Vienna, Austria. johannes.nepp@akh-wien.ac.at

ABSTRACT:

Objective: “The Tolosa Hunt Syndrome (THS) is a painful granular inflammation of the cerebral vessels followed by pain and disorders of the extrabulbar muscles. The therapy consists of corticosteroids and analgetics. There was a 70 year old woman who suffered from painful paresis of the abducent and oculomotor nerves following an infection with *Borrelia Burgdorferi*--but without ocular symptoms. The treatment with corticosteroids reduced the palsy but she complained of excessively painful attacks in the region of the first branch of the trigeminal nerve. Opioid analgetic therapy did not bring about any relief. Acupuncture is an irritative method with a physical effect on the nervous system: its pain-reducing effect is caused by the activation of transmitters like

endorphins in thalamus and brain stem. Knowing this effect, the THS patient, after informed consent, was treated with acupuncture.” This study was performed to assess the impact of acupuncture on THS related pain.

Methods: Case study. “To measure the extent of pain, a visual analog scale (0: no pain - 10: maximum pain) was used. Acupuncture was performed according to the empirical rules of the Traditional Chinese Medicine (TCM), during a period of 10 weeks and 12 weeks.”

Results: “There was a significant pain relief after acupuncture from VAS 10 to VAS 5. The effect vanished during the next four months. After a second series of 12 sessions pain reduction was reported from VAS 10 to 4. One year after the last Tolosa Hunt Syndrome - intractable pain strength ranged between VAS 4-6.”

Conclusions: “Therefore acupuncture seems to be a good additional method for reduction of intractable pain.”

127.

Journal: *Pain*. 2000 Jun;86(3):217-25.

Title: [Is acupuncture effective for the treatment of chronic pain? A systematic review.](#)

Authors: Ezzo J, Berman B, Hadhazy VA, Jadad AR, Lao L, Singh BB.

Source: Complementary Medicine Program at the University of Maryland School of Medicine, Kernan Hospital Mansion, 2200 Kernan Drive, Baltimore, MD 21207-6697, USA.

ABSTRACT:

Objective: “Pain is the major complaint of the estimated one million U.S. consumers who use acupuncture each year. Although acupuncture is widely available in chronic pain clinics, the effectiveness of acupuncture for chronic pain remains in question. Our aim was to assess the effectiveness of acupuncture as a treatment for chronic pain within the context of the methodological quality of the studies.”

Methods: “MEDLINE (1966-99), two complementary medicine databases, 69 conference proceedings, and the bibliographies of other articles and reviews were searched. Trials were included if they were randomized, had populations with pain longer than three months, used needles rather than surface electrodes, and were in English. Data were extracted by two independent reviewers using a validated instrument. Inter-rater disagreements were resolved by discussion. Fifty one studies met inclusion criteria. Clinical heterogeneity precluded statistical pooling.”

Results: “Results were positive in 21 studies, negative in 3 and neutral in 27. Three fourths of the studies received a low-quality score and low-quality trials were significantly associated with positive results (P=0.05). High-quality studies clustered in designs using sham acupuncture as the control group, where the risk of false negative (type II) errors is high due to large sample size requirements. Six or more acupuncture treatments were significantly associated with positive outcomes (P=0.03) even after adjusting for study quality.”

Conclusions: “We conclude there is limited evidence that acupuncture is more effective than no treatment for chronic pain; and inconclusive evidence that acupuncture is

more effective than placebo, sham acupuncture or standard care. However, we have found an important relationship between the methodology of the studies and their results that should guide future research.”

128.

Journal: *Abstract #4180, 5006.0: Wednesday, November 15, 2000 - Board 1, Presentation to The 128th Annual Meeting of APHA (American Public Health Association)*

Title: [A Study of the Efficacy and Cost Effectiveness of a Complementary Medicine Modality: Acupuncture in the Treatment of Chronic Pain](#)

Authors: David L. Bearman, MD, Deputy Director, Health Policy and Grant Development, Santa Barbara Regional Health Authority, 110 Castilian Drive, Goleta, CA 93117-3028, (800)421-2560, davidb@sbrha.org and Roger Jahnke, DOM, Roger Jahnke, President, Health Action, Health Action, 243 Pebble Beach Drive, Goleta, CA 93117.

Source: The Santa Barbara Regional Health Authority (SBRHA)

ABSTRACT:

Objective: “To understand the efficacy of acupuncture in treating chronic pain in a Medicaid population, [to] discuss the value of offering acupuncture for the treatment of chronic pain, [and to] appreciate the value of expanding access to acupuncture in a managed care setting.”

Methods: “The Santa Barbara Regional Health Authority (SBRHA) a county organized health system (COHS) since 1983, serves 41,000 Medi-Cal recipients in Santa Barbara County . SBRHA researched efficacy and cost effectiveness of acupuncture in the treatment of chronic pain for patients who had had limited or no response to conventional pain treatment. For these patients pain relief often consisted of supplemental self-medication with alcohol or illicit drugs.”

“Conventional chronic pain treatment programs explored had a minimum cost of \$7,000 to \$15,000 per member. As a Medicaid program we couldn't justify expending funds studying options unlikely to be cost effective. We looked at the alternative therapies of acupuncture and Feldenkrais, in part because of the growing integration and acceptance of complementary and alternative medicine into managed care settings.

“Target population were Medicaid patients with chronic headaches and/or musculo-skeletal problems .45 members were notified of the program.15 started, 6 completed program and 3 completed half. Calculations compared Medicaid costs for each patient one year pre and post intervention.” ... “Function and perception of pain were measured using the National Pain Data Bank protocol from the American Academy Pain Management.”

Results: “Costs went down roughly 25% for outpatient and ER care. Cost of antidepressant treatment went up because of change in community practice standards from tricyclics to SSRIs. All other prescription costs went down.”

Conclusions: “Patients had more mobility and decreased perception of pain both immediately

after the program and one year later.”

POST-STROKE AND OTHER FORMS OF PARALYSIS - REHABILITATION

129.

Journal: *Stroke*. 2010;41:e171.

Title: [Acupuncture in Poststroke Rehabilitation, A Systematic Review and Meta-Analysis of Randomized Trials](#)

Authors: Ping Wu, MD, MSc; Edward Mills, MSc, PhD; David Moher, MSc, PhD; Dugald Seely, ND, MSc

Source: Dugald Seely, ND, MSc, Department of Research & Clinical Epidemiology, The Canadian College of Naturopathic Medicine, 1255 Sheppard Avenue East, Toronto, Ontario M2K 1E2, Canada. E-mail dseely@ccnm.edu

ABSTRACT:

Objective: “Acupuncture is a low-risk treatment with purported claims of effectiveness for poststroke rehabilitation. To comprehensively assess the efficacy of acupuncture in poststroke rehabilitation, we conducted a systematic review and meta-analysis of all randomized clinical trials of acupuncture for poststroke rehabilitation.”

Methods: “We searched 7 English and 2 Chinese databases from inception to September 2009. Eligible studies included randomized clinical trials that evaluated the clinical efficacy of acupuncture in adult patients with disability after stroke. We extracted data on trial quality, protocol, and outcomes assessed. A summary OR was calculated based on pooled dichotomous results. I² was used to infer heterogeneity and we conducted metaregression to determine if specific covariates explained heterogeneity.”

Results: “Thirty-five articles written in Chinese and 21 articles written in English were included. The overall quality of the studies was “fair” and most studies were small (median n=86; range, 16 to 241). The majority (80%) of the studies reported a significant benefit from acupuncture; however, there was some evidence of publication bias. In 38 trials, data were available for meta-analysis and metaregression, yielding an OR in favor of acupuncture compared with controls (OR=4.33, 95% CI: 3.09 to 6.08; I²=72.4%). Randomization, modes of delivery, method of control, study source country, and reporting of randomization may explain some of the heterogeneity observed between the studies.”

Conclusions: “Randomized clinical trials demonstrate that acupuncture may be effective in the treatment of poststroke rehabilitation. Poor study quality and the possibility of publication bias hinder the strength of this recommendation and argue for a large, transparent, well-conducted randomized clinical trial to support this claim and implement changes to clinical practice.”

130.

Journal: *J Neurol Sci*. 2009 Jan 15;276(1-2):143-7. Epub 2008 Oct 30.

Title: [Effect of acupuncture treatment on spastic states of stroke patients.](#)

Authors: Zhao JG, Cao CH, Liu CZ, Han BJ, Zhang J, Li ZG, Yu T, Wang XH, Zhao H, Xu ZH.

Source: The First Teaching Hospital of Tianjin University of Traditional Chinese Medicine, Tianjin, China.

ABSTRACT:

Objective: “The aim of this study was to evaluate the effect of acupuncture treatment on the spastic states of stroke patients.”

Methods: “SETTING: An outpatient Acupuncture Department in the First Teaching Hospital of Tianjin University of Traditional Chinese Medicine. PARTICIPANTS: One hundred and thirty-one patients, mean (SD) age of 59 (12) years, with spastic hemiplegia were included at mean (SD) month of 17 (7) months after stroke. INTERVENTION: Participants received two 30-day treatment regimens: combined stimulating surface projection zone of decussation of pyramid and traditional acupuncture treatment, and traditional acupuncture treatment only. MAIN OUTCOME MEASURES: Differences in the modified Ashworth scale (MAS), Fugl-Meyer Assessment (FMA), Barthel Index (BI), and the electromyographic activity of the affected extremity between arms.”

Results: “The average (+/-SD) upper extremity Ashworth score significantly decreased, from 3.08+/-0.77 before treatment to 1.82+/-0.65 after acupuncture intervention (wrist joint, P<0.05), and from 2.72+/-0.59 to 1.32+/-0.71 (elbow joint, P<0.05) for treatment group. There were significant differences noted between the treatment group and control group after administration. Lower extremity treatment responses were similar to upper extremity responses. However, both groups showed similar improvement in FMA (upper extremity) and FMA (lower extremity). However, the improvements of FMA (total), BI, and F/M ratio were better in treatment group than in control group.”

Conclusions: “These results suggested that acupuncturing surface projection zone of decussation of pyramid was effective in reducing spastically increased muscle tone and motor neuron excitability in spastic hemiplegia, and could improve spastic states of stroke patients, thus providing a safe and economical method for treating stroke patients.”

131.

Journal: *J Rehabil Res Dev.* 2008;45(4):587-95.

Title: [Electroacupuncture may help motor recovery in chronic stroke survivors: a pilot study.](#)

Authors: Liu W, Mukherjee M, Sun C, Liu H, McPeak LK.

Source: Department of Physical Therapy and Rehabilitation Sciences, University of Kansas Medical Center, Kansas City, KS 66160, USA. wliu@kumc.edu

ABSTRACT:

Objective: “Past studies have suggested that acupuncture may reduce spasticity in stroke survivors. We do not know, however, whether acupuncture may enhance the effect of strength training on motor function.”

Methods: “This study compared upper-limb motor functional improvement in chronic

stroke survivors who received a combination of acupuncture and strength training with that of subjects who received strength training alone. A total of 10 chronic stroke patients with moderate or severe wrist muscle spasticity were recruited for this study. The study used a crossover design with a random order of either combined electroacupuncture and strength training or strength training alone. Each subject received one of the two types of treatment twice a week for the first 6 weeks and switched to the other for another 6 weeks. Quantitative measurements of wrist spasticity, active wrist extension range of motion, isometric wrist strength, and clinical evaluation with Fugl-Meyer (FM) upper-limb motor scores were conducted before and after either treatment.”

Results: “After the combined treatment, the quantitative spasticity level, active wrist extension range of motion (increased by a mean of 16.3 degrees), and FM upper-limb motor score (increased by a mean of 4.9 points) changed significantly ($p < 0.01$) but no significant changes were noted in isometric wrist strength. The strength training alone resulted in no significant changes to any measured variable.

Conclusions: “The results of the current study indicate that the combined acupuncture and strength training treatment reduced muscle spasticity and may have improved motor function for chronic stroke survivors with moderate or severe muscle spasticity.”

132.

Journal: *The Journal of Alternative and Complementary Medicine, Volume 2, No. 1, 1996, pp. 211-248*

Title: [Acupuncture in the Treatment of Paralysis Due to Central nervous System Damage](#)

Authors: Margaret A. Naeser, Ph.D., L. Ac.

Source: Boston University

ABSTRACT:

Objective: “Today more than 2 million Americans suffer long-term disabilities from stroke; and stroke costs more than \$25 billion each year (NIH Report. NINDS. 1992)” This study looks to examine the cost-effectiveness of acupuncture at treating poststroke disabilities and several other forms of paralysis including head injury, pseudobulbar paralysis, cerebral palsy, spinal cord injury, and coma.

Methods: A comprehensive review if not the comprehensive review of the literature on paralysis due to central nervous system damage including analysis of CT scan studies

Results: “In most studies reviewed for this report, all patients had already received physical therapy or occupational therapy treatments for their current condition of paralysis. The results following acupuncture treatments were above and beyond what the current physiotherapies could offer.”

Conclusions: “In controlled studies. Significantly more patients who received acupuncture treatments for paralysis due to stroke had an outcome level of “Good Response/Markedly Effective,” than those patients who received no

acupuncture or sham acupuncture...Acupuncture was helpful in a greater percentage of stroke cases when treatments are initiated as soon as possible, poststroke....In the treatment of paralysis due to central nervous system damage, acupuncture should be included as a complementary, adjunctive treatment."

RAYNAUD'S PHENOMENON

133.

Journal: *Wien Klin Wochenschr. 2011 Feb;123(3-4):112-6. Epub 2011 Feb 17.*

Title: [Auricular electroacupuncture reduces frequency and severity of Raynaud attacks.](#)

Authors: Schlager O, Gschwandtner ME, Mlekusch I, Herberg K, Frohner T, Schillinger M, Koppensteiner R, Mlekusch W.

Source: Division of Angiology, Department of Internal Medicine II, Vienna Medical University, Vienna General Hospital, Vienna, Austria.

ABSTRACT:

Objective: "Acupuncture has been shown to influence skin perfusion and the subjective cold perception threshold. Therefore, we hypothesized that auricular electroacupuncture (EA) might reduce symptoms in primary Raynaud's phenomenon (PRP)."

Methods: "Twenty-six patients with PRP received 6 cycles of auricular EA. After 3, 6 and 24 weeks attack frequency and severity were reevaluated using standardized questionnaires and a visual analogue scale (VAS). Skin temperature was assessed by infrared thermography and laser Doppler perfusion imaging was used to determine skin perfusion."

Results: "Compared to baseline we found a significant reduction of attack frequency after 3 ($p = 0.001$) and 6 weeks ($p < 0.001$) of auricular EA. This improvement sustained following cessation of EA, after 24 weeks ($p < 0.001$). Furthermore, attack associated pain was reduced after 3 ($p = 0.003$), 6 ($p = 0.003$) and 24 weeks ($p = 0.001$) of treatment, while skin temperature and skin perfusion did not change significantly throughout the study period."

Conclusions: "Auricular EA reduces symptoms by means of frequency and severity of attacks in PRP but has no influence on skin perfusion and skin temperature."

RESTLESS LEG SYNDROME

134.

Journal: *Cochrane Database Syst Rev. 2008 Oct 8;(4):CD006457.*

Title: [Acupuncture for restless legs syndrome.](#)

Authors: Cui Y, Wang Y, Liu Z.

Source: Department of Acupuncture and Moxibustion, Guang An Men Hospital - China Academy of Chinese Medicine Science, No 5 Bei Xian Ge Street, Xuan Wu District, Beijing, China, 100053. cybnu@yahoo.com

ABSTRACT:

- Objective:** To evaluate the efficacy and safety of acupuncture therapy in patients with RLS.
- Methods:** “SEARCH STRATEGY: We searched the Cochrane Central Register of Controlled Trials (CENTRAL, The Cochrane Library, Issue 1, 2007), MEDLINE (January 1950 to February 2007), EMBASE (January 1980 to 2007 Week 8), Chinese Biomedical Database (CBM) (1978 to February 2007), China National Knowledge Infrastructure (CNKI) (1979 to February 2007), VIP Database (1989 to February 2007), Japana Centra Revuo Medicina (1983 to 2007) and Korean Medical Database (1986 to 2007). Four Chinese journals, relevant academic conference proceedings and reference lists of articles were hand searched. SELECTION CRITERIA: Randomized controlled trials and quasi-randomized trials comparing acupuncture with no intervention, placebo acupuncture, sham acupuncture, pharmacological treatments, or other non-acupuncture interventions for primary RLS were included. Trials comparing acupuncture plus non-acupuncture treatment with the same non-acupuncture treatment were also included. Trials that only compared different forms of acupuncture or different acupoints were excluded. DATA COLLECTION AND ANALYSIS: Two authors independently identified potential articles, assessed methodological quality and extracted data. Relative risk (RR) was used for binary outcomes and weighted mean difference for continuous variables. Results were combined only in the absence of clinical heterogeneity.”
- Results:** “Fourteen potentially relevant trials were identified initially, but twelve of them did not meet the selection criteria and were excluded. Only two trials with 170 patients met the inclusion criteria. No data could be combined due to clinical heterogeneity between trials. Both trials had methodological and/or reporting shortcomings. No significant difference was detected in remission of overall symptoms between acupuncture and medications in one trial (RR 0.97, 95% CI 0.76 to 1.24). Another trial found that dermal needle therapy used in combination with medications and massage was more effective than medications and massage alone, in terms of remission of unpleasant sensations in the legs (RR 1.36, 95% CI 1.06 to 1.75; WMD -0.61, 95% CI -0.96 to -0.26) and reduction of RLS frequency (WMD -3.44, 95% CI -5.15 to -1.73). However, there was no significant difference for the reduction in either the longest or the shortest duration of RLS (WMD -2.58, 95% CI -5.92 to 0.76; WMD -0.38, 95% CI -1.08 to 0.32).”
- Conclusions:** “There is insufficient evidence to determine whether acupuncture is an efficacious and safe treatment for RLS. Further well-designed, large-scale clinical trials are needed.”

RHEUMATIC CONDITIONS

135.

Journal: *Rheumatology* 2010;49(10):1957-1961.

Title: [Acupuncture for Rheumatic Conditions: An Overview of Systematic Reviews](#)

Authors: Edzard Ernst; Myeong Soo Lee

- Source:** Complementary Medicine, Peninsula Medical School, Universities of Exeter and Plymouth, Exeter EX2 4NT, UK. edzard.ernst@pms.ac.uk
- ABSTRACT:**
- Objective:** “Several systematic reviews (SRs) have assessed the effectiveness of acupuncture for rheumatic conditions, often with contradictory conclusions. Our aim is to provide a critical evaluation and summary of these data.”
- Methods:** “Electronic searches were conducted in 15 databases to locate all SRs on acupuncture for rheumatic conditions published since 2000. Data were extracted by the authors according to pre-defined criteria.”
- Results:** “We found 30 SRs that met our inclusion criteria. They related to the following rheumatic conditions: FM, low back pain, lateral elbow pain, musculoskeletal pain, orthopaedic diseases, OA, RA, shoulder pain, frozen shoulder, neck disorder, AS and sciatica. Their conclusions were in several instances contradictory. Relatively clear evidence emerged to suggest that acupuncture is effective for OA, low back pain and lateral elbow pain and ineffective for FM and RA.”
- Conclusions:** “Many SRs have recently been done. Only for OA, low back pain and lateral elbow pain is the evidence sufficiently sound to warrant positive recommendations of this therapy in routine care of rheumatic patients.”

RHEUMATOID ARTHRITIS

136.

- Journal:** *Forsch Komplementmed.* 2008 Aug;15(4):187-93. Epub 2008 Jul 29.
- Title:** [Adjuvant auricular electroacupuncture and autogenic training in rheumatoid arthritis: a randomized controlled trial. Auricular acupuncture and autogenic training in rheumatoid arthritis.](#)
- Authors:** Bernateck M, Becker M, Schwake C, Hoy L, Passie T, Parlesak A, Fischer MJ, Fink M, Karst M.
- Source:** Department of Anesthesiology, Pain Clinic, Hannover, Germany. bernateck.michael@mh-hannover.de
- ABSTRACT:**
- Objective:** “The efficacy of auricular electroacupuncture (EA) was directly compared with autogenic training (AT).”
- Methods:** “Patients with RA (n = 44) were randomized into EA or AT groups. EA and lessons in AT were performed once weekly for 6 weeks. Primary outcome measures were the mean weekly pain intensity and the disease activity score 28 (DAS 28); secondary outcome measures were the use of pain medication, the pain disability index (PDI), the clinical global impression (CGI) and pro-inflammatory cytokine levels, which were assessed during the study period and 3 months after the end of treatment.”
- Results:** “At the end of the treatment and at 3-month follow-up a clinically meaningful and statistically significant improvement (p < 0.05) could be observed in all outcome parameters and both groups. In contrast to the AT group, the onset of

these effects in the EA group could already be observed after the 2nd treatment week. In the 4th treatment week the EA group reported significantly less pain than the AT group ($p = 0.040$). After the end of treatment (7th week) the EA group assessed their outcome as significantly more improved than the AT group ($p = 0.035$). The erythrocyte sedimentation rate in the EA group was significantly reduced ($p = 0.010$), and the serum concentration of tumor necrosis factor-alpha was significantly increased compared to the AT group ($p = 0.020$)."

Conclusions: "The adjuvant use of both EA and AT in the treatment of RA resulted in significant short- and long-term treatment effects. The treatment effects of auricular EA were more pronounced."

137.

Journal: *Phys Ther. 2004 Nov;84(11):1016-43.*

Title: [Ottawa Panel Evidence-Based Clinical Practice Guidelines for Electrotherapy and Thermotherapy Interventions in the Management of Rheumatoid Arthritis in Adults.](#)

Authors: Ottawa Panel. Brosseau et al.

ABSTRACT:

Objective: "The purpose of this project was to create guidelines for electrotherapy and thermotherapy interventions in the management of adult patients (>18 years of age) with a diagnosis of rheumatoid arthritis according to the criteria of the American Rheumatism Association (1987)."

Methods: "Using Cochrane Collaboration methods, the Ottawa Methods Group identified and synthesized evidence from comparative controlled trials. The group then formed an expert panel, which developed a set of criteria for grading the strength of the evidence and the recommendation. Patient-important outcomes were determined through consensus, provided that these outcomes were assessed with a validated and reliable scale."

Results: The Ottawa Panel developed 8 positive recommendations of clinical benefit. Lack of evidence meant that the panel could not gauge the efficacy of electrical stimulation.

Conclusions: "The Ottawa Panel recommends the use of low-level laser therapy, therapeutic ultrasound, thermotherapy, electrical stimulation, and transcutaneous electrical nerve stimulation for the management of rheumatoid arthritis."

SCHIZOPHRENIA

138.

Journal: *Cochrane Database Syst Rev. 2005 Oct 19;(4):CD005475.*

Title: [Acupuncture for schizophrenia.](#)

Authors: Rathbone J, Xia J.

Source: University of Leeds, University Department of Psychiatry and Behavioural Sciences, 15 Hyde Terrace, Leeds, West Yorkshire, UK LS2 9LT. jrathbone@cochrane-sz.org

ABSTRACT:

- Objective:** “To evaluate acupuncture for people with schizophrenia and related psychoses.”
- Methods:** “SEARCH STRATEGY: We (JR, JX) undertook electronic searches of the Cochrane Schizophrenia Group's register (April 2005). We inspected reference lists and contacted the first author of each included study. SELECTION CRITERIA: We included all relevant randomised controlled trials involving people with schizophrenia-like illnesses, allocated to acupuncture, electro-acupuncture, laser-acupuncture, placebo, no treatment, or antipsychotic drugs produced by pharmaceutical companies were included. DATA COLLETION AND ANALYSES: We independently extracted the data. For homogeneous dichotomous data, the fixed effects relative risk (RR), the 95% confidence intervals (CI) and, where appropriate, the number needed to treat (NNT) were calculated on an intention-to-treat basis. For continuous data, we calculated weighted mean differences with 95% CI.”
- Results:** “We included five trials. Two trials comparing acupuncture to antipsychotics were equivocal for global state and leaving the study early. Extrapyramidal adverse events were significantly lower in the acupuncture group (n=21, RR 0.05 CI 0.0 to 0.8, NNT 2 CI 2 to 8). Four out of the five trials also compared acupuncture combined with antipsychotics to antipsychotics alone. Global state outcomes and leaving the study early were equivocal. BPRS endpoint data (short term) favoured the combined acupuncture and antipsychotic group (n=109, RR - 4.31 CI -7.0 to -1.6), although dichotomised BPRS data 'not improved' confounded this outcome with equivocal data. Depression scores HAMD (n=42, WMD -10.41 CI -12.8 to -8.0), HAMD 'not improved' (n=42, RR 0.17 CI 0.1 to 0.5, NNT 2 CI 2 to 3) and ZDS (n=42, WMD -24.25 CI -28.0 to -20.5) significantly favoured the combined acupuncture/antipsychotic treatment group, although results were from single, small studies. Treatment emergent adverse events scores were significantly lower in the acupuncture/antipsychotic group (n=40, WMD -0.50 CI -0.9 to -0.1), again from a single, small study.”
- Conclusions:** “We found insufficient evidence to recommend the use of acupuncture for people with schizophrenia. The numbers of participants and the blinding of acupuncture were both inadequate, and more comprehensive and better designed studies are needed to determine the effects of acupuncture for schizophrenia.”

SHINGLES**139.****Journal:** *Medical Acupuncture, Volume 16, No. 2***Title:** [Acupuncture and Moxibustion for Pain Associated with Herpes Zoster Infection: A Series of 189 Cases](#)**Authors:** Maria del Carmen Andrés Martín, MD, Juan Antonio Guerra de Hoyos, MD, Elena Bassas y Baena de Leon, MD, Miguel Vigára Diaz, MD, Maria José González Moreno, RN, Francisco Antonio Verdugo Morilla, MD

ABSTRACT:

- Objective:** “To determine if acupuncture and moxibustion could be helpful in cases of herpes zoster infection.”
- Methods:** “DESIGN, SETTING and PATIENTS: Prospective case series (December 1998 to December 2003) of patients with pain associated with herpes zoster infection in a community general practice. A total of 189 patients were treated with acupuncture, moxibustion, auriculotherapy, cupping, bloodletting, and electroacupuncture. Data was collected over a 5-year period. INTERVENTION: Auriculotherapy involved ear points Shen Men, Subcortex, Occiput, Lungs, Gallbladder, Liver, and points corresponding to dermatome from the French and Chinese charts. Warming needle moxibustion was placed at classic acupuncture points. Acupuncture involved skin puncture with filiform needle. Cupping applied heat to the air in a glass, creating a partial vacuum over the skin at certain points. Electroacupuncture at 5-10 Hz was applied at an intensity suited to individual patient tolerance. The bloodletting method used was pricking with a triangular needle at hand or feet points to obtain 1 or 2 blood drops. The main points used were GV 14, GV 20, CV 17, GB 20, GB 31, GB 34, GB 35, GB 41, TE 5, TE 6, LI 4, LI 11, SP 6, SP 10, ST 40, ST 36, HT 7, PC 6, Huatuo-Jiaji, Sheyan, and Longyan points. MAIN OUTCOME MEASURES: The effect of acupuncture, moxibustion, and related therapies on herpes zoster pain (using a Likert 3-point outcome scale) showed resolution, some improvement, or no improvement.”
- Results:** “Five patients reported no improvement; 32, simple improvement; and 152, clinical resolution”
- Conclusions:** “Treatment of pain associated with herpes zoster infection with acupuncture and related therapies seemed to have good clinical results in diminishing pain, even in long-lasting disease (up to 5 years). Randomized clinical trials are needed to confirm the perceived efficacy of acupuncture from observational studies.”

STRENGTH PERFORMANCE

140.

Journal: *Eur J Appl Physiol.* 2010 Sep;110(2):353-8. Epub 2010 May 25.

Title: [Immediate effects of acupuncture on strength performance: a randomized, controlled crossover trial.](#)

Authors: Hübscher M, Vogt L, Ziebart T, Banzer W.

Source: Department of Sports Medicine, Goethe-University Frankfurt, Frankfurt, Germany. m.huebscher@sport.uni-frankfurt.de

ABSTRACT:

- Objective:** To investigate “the immediate efficacy of acupuncture compared to sham acupuncture and placebo laser acupuncture on strength performance.”
- Methods:** “A total of 33 recreational athletes (25.2 +/- 2.8 years; 13 women) were randomized to receive acupuncture, sham acupuncture (needling at non-acupuncture points) and placebo laser acupuncture (deactivated laser device) in a double-blind crossover fashion with 1 week between trials. Assessment

included bipedal drop jumps for maximum rebound height and quadriceps maximum isometric voluntary force (MIVF). Furthermore, surface electromyography (EMG) was used to measure the EMG activity of the rectus femoris muscle during a 30-s sustained MIVF of the knee extensors. Mean power frequency (MPF) analysis was applied to characterize muscular endurance. Measurements were performed at baseline and immediately after treatment by a blinded investigator. Repeated measures ANOVA and post hoc paired-sample t test with Bonferroni-Holm correction were used for statistical analysis.”

Results: The difference in the mean change in MIVF from baseline between acupuncture (46.6 N) and sham laser acupuncture (19.6 N) was statistically significant ($p < 0.05$), but no significant difference was found between acupuncture (46.6 N) and sham acupuncture (28.8 N). ANOVA did not show statistically significant treatment effects for drop jump height or MPF.

Conclusions: The present study shows that a single acupuncture treatment was efficacious for improving isometric quadriceps strength in recreational athletes. These results might have implications not only for athletic performance enhancement, but also for rehabilitation programs aimed at restoring neuromuscular function.

SUBSTANCE ABUSE AND ALCOHOLISM

141.

Journal: *Regulatory Peptides Vol. 54, Issue 1, 10 November 1994, Pp.115-116*

Title: [Heroin addicts treated with transcutaneous electrical nerve stimulation of identified frequencies](#)

Authors: JS Han, LZ Wu, and CL Cui

Source: Neuroscience Research Center, Beijing Medical University, Beijing 100083, China

ABSTRACT:

Objective: To assess the efficacy of transcutaneous electrical nerve stimulation of identified frequencies for the treatment of heroin addicts

Methods: A special type of TENS device, the Han's Acupoint Nerve Stimulator (HANS) was used to treat 212 heroin addicts (161 male, 51 female, aged 15–38) subjected to abrupt abstinence, 30 min per day for 10 days. Two pairs of skin electrodes were placed on one hand and on the other forearm, respectively. Frequency was set at 2Hz, 100Hz, or 2/100Hz (2Hz alternating with 100Hz, each lasting for 3s). The 2/100Hz mode is named dense-and-disperse (DD) mode.

Results: Comparison of the clinical effects induced by different frequencies revealed that DD was the best for ameliorating heroin withdrawal syndrome, including the suppressing of tachycardia, prevention of chilling sensations, induction of euphoric and hypnotic effects, etc. The frequency of 2Hz was found to be better than 100Hz in preventing chilling sensation. The 3 frequencies were equally effective in preventing body weight loss during acute withdrawal.

Conclusions: This is the first report showing the high effectiveness of DD mode body-acupoint electrical stimulation in treating heroin addicts.

142.

Journal: *Evid Based Complement Alternat Med.* 2008;5(3):257-266.

Title: [A Possible Mechanism Underlying the Effectiveness of Acupuncture in the Treatment of Drug Addiction](#)

Authors: Chae Ha Yang; Bong Hyo Lee; Sung Hoon Sohn

Source: Department of Physiology, College of Oriental Medicine, Daegu Haany University, 165 Sang-Dong, Suseong-Gu, Daegu, 706-828, South Korea.

ABSTRACT:

Objective: "Clinical trials are currently underway to determine the effectiveness of acupuncture in the treatment of drug addiction. While there are still many unanswered questions about the basic mechanisms of acupuncture, some evidence exists to suggest that acupuncture can play an important role in reducing reinforcing effects of abused drugs. The purpose of this article is to critically review these data."

Results: "The neurochemical and behavioral evidence showed that acupuncture's role in suppressing the reinforcing effects of abused drugs takes place by modulating mesolimbic dopamine neurons. Also, several brain neurotransmitter systems such as serotonin, opioid and amino acids including GABA have been implicated in the modulation of dopamine release by acupuncture. These results provided clear evidence for the biological effects of acupuncture that ultimately may help us to understand how acupuncture can be used to treat abused drugs."

Conclusions: "Additional research using animal models is of primary importance to understanding the basic mechanism underlying acupuncture's effectiveness in the treatment of drug addiction."

143.

Journal: *Journal of Substance Abuse Treatment* Volume:22 Issue:2 Dated:March 2002 Pages:71 to 77

Title: [Large Randomized Placebo Controlled Study of Auricular Acupuncture for Alcohol Dependence](#)

Authors: Milton L. Bullock M.D. ; Thomas J. Kiresuk Ph.D. ; Robert E. Sherman Ph.D. ; Scott K. Lenz M.S.H ; Patricia D. Culliton M.A. ; Tacey A. Boucher B.A. ; Christopher J. Nolan

Source: US Dept of Health and Human Services, National Institute on Alcohol Abuse and Alcoholism

ABSTRACT:

Objective: To assess "the potential impact of acupuncture treatment on alcohol abuse."

Methods: "The authors provide a general overview of the impact and costs of alcohol abuse and the research basis for acupuncture treatment of substance abuse, referencing early studies regarding the treatment of opium addiction."..." Research for the present study was gathered from 503 subjects participating in a single blind placebo trial. Research subjects received one of four possible treatment regimes: specific acupuncture, nonspecific acupuncture, symptom based acupuncture, or conventional treatment with no acupuncture."

Results: “Acupuncture resulted in a reported decreased desire for alcohol in 49 percent of the research subjects, however, the alcohol use reduction found in subjects treated with acupuncture was not significantly greater than the reduction produced by other treatment types.”

Conclusions: “Therefore, the authors found that the study did not provide support for recommending the addition of acupuncture to conventional alcohol abuse treatment regimes.” [However, the authors made no comment on the wisdom or cost-efficacy of substituting acupuncture for other treatment types.]

144.

Journal: *Acta Anaesthesiol Sin. 2002 Dec;40(4):173-7.*

Title: [The effect of acupuncture on the acute withdrawal symptoms from rapid opiate detoxification.](#)

Authors: Montazeri K, Farahnakian M, Saghaei M.

Source: Department of Anesthesia, Isfahan University of Medical Sciences, Isfahan, Iran.

ABSTRACT:

Objective: “Rapid Opiate Detoxification (ROD) is among the best treatments for substance abuse. Unfortunately this method is associated with severe withdrawal reaction. The effect of body acupuncture has not been clearly identified during ROD. This study was designed to evaluate the effect of acupuncture on the severity of withdrawal reaction during ROD.”

Methods: “Forty adult male subjects addicted to opioids and scheduled for ROD by naloxone were randomly divided into acupuncture and control groups. In the acupuncture group during three consecutive days immediately before induction of ROD, body acupuncture was performed while in the control group it was exempted. Severity of withdrawal reaction was assessed having recourse to Clinical Institute Narcotic Assessment (CINA) Score and compared between two groups.”

Results: “After induction of ROD, CINA score raised significantly during the consecutive days in both groups compared with baseline values but the rise was significantly lower in acupuncture group.”

Conclusions: “The result of this study shows that body acupuncture reduces the severity of withdrawal symptoms associated with rapid opiate detoxification and it is recommended that this nonpharmacologic method of treatment should be included in ROD program.”

145.

Journal: *Oxford Journals, Medicine, Alcohol and Alcoholism, Volume 34, Issue 4, Pp. 629-635*

Title: [ACUPUNCTURE IN ALCOHOLISM TREATMENT: A RANDOMIZED OUT-PATIENT STUDY](#)

Authors: Richardt Sapir-Weise, Mats Berglund, Arne Frank, and Hans Kristenson

Source: Department of Alcohol and Drug Diseases, Malmoe University Hospital, Lund University, S-205 02 Malmoe, Sweden

ABSTRACT:

- Objective:** To assess the effectiveness of acupuncture in alcoholism treatment
- Methods:** “Seventy-two alcoholics were treated with acupuncture to the ear in a randomized single-blind controlled design over 10 weeks. Orthodox points and incorrect points 3–5 mm from orthodox points were used. No initial differences were found regarding social characteristics, the responses to the Swedish version of the Alcohol Use Inventory and the Three-dimensional Personality Questionnaire, indicating a successful randomization.”
- Results:** “There were non-significant tendencies towards gender differential response after acupuncture treatment ($P = 0.07$). There was no difference in the number of drinking days or level of craving between treatment and control patients. Among females, those in the treatment group reported reduction of anxiety after 1 month, more often than those in the control group ($P < 0.05$). Response to acupuncture was not related to personality or drinking pattern. Patients' experience of needle placement was similar in the study and control groups.”
- Conclusions:** “The effects of acupuncture were less pronounced than those previously reported.”

146.

- Journal:** *The Lancet*, Volume 333, Issue 8652, Pages 1435 - 1439, 24 June 1989
- Title:** [CONTROLLED TRIAL OF ACUPUNCTURE FOR SEVERE RECIDIVIST ALCOHOLISM](#)
- Authors:** MiltonL. Bullock^a, PatriciaD. Culliton^a, RobertT. Olander^b
- Source:** **a** Department of Medicine, Hennepin County Medical Center, University of Minnesota Medical School;
b the Hennepin County Detoxification Center, Minneapolis, Minnesota, United States

ABSTRACT:

- Objective:** To assess the efficacy of acupuncture for severe recidivist alcoholism
- Methods:** “In a placebo-controlled study, 80 severe recidivist alcoholics received acupuncture either at points specific for the treatment of substance abuse (treatment group) or at nonspecific points (control group). 21 of 40 patients in the treatment group completed the programme compared with 1 of 40 controls.”
- Results:** “Significant treatment effects persisted at the end of the six-month follow-up: by comparison with treatment patients more control patients expressed a moderate to strong need for alcohol, and had more than twice the number of both drinking episodes and admissions to a detoxification centre.”
- Conclusions:** Acupuncture was significantly efficacious.

147.

- Journal:** *Alcoholism: Clinical and Experimental Research*, Volume 33, Issue 8, pages 1305–1313, August 2009
- Title:** [Acupuncture for Alcohol Dependence: A Systematic Review](#)
- Authors:** Seung-Hun Cho, Wei-Wan Whang

Source: Department of Neuropsychiatry, Hospital of Korean Medicine, Kyung Hee University Medical Center, Seoul, Korea.

ABSTRACT:

Objective: “Acupuncture has been used in the treatment of substance-related disorders for the past 30 years. However, a systematic review to assess the effect of various types of acupuncture for alcohol dependence has not yet been performed. The present systematic review assessed the results of randomized controlled trials (RCTs).”

Methods: “Nineteen electronic databases, including English, Korean, Japanese, and Chinese databases, were systematically searched for RCTs of acupuncture for alcohol dependence up to June 2008 with no language restrictions. The methodological qualities of eligible studies were assessed using the criteria described in the Cochrane Handbook.”

Results: “Eleven studies, which comprised a total of 1,110 individual cases, were systematically reviewed. Only 2 of 11 trials reported satisfactorily all quality criteria. Four trials comparing acupuncture treatment and sham treatments reported data for alcohol craving. Three studies reported that there were no significant differences. Among 4 trials comparing acupuncture and no acupuncture with conventional therapies, 3 reported significant reductions. No differences between acupuncture and sham treatments were found for completion rates (Risk Ratio = 1.07, 95% confidence interval, CI = 0.91 to 1.25) or acupuncture and no acupuncture (Risk Ratio = 1.15, 95% CI = 0.79 to 1.67). Only 3 RCTs reported acupuncture-related adverse events, which were mostly minimal.”

Conclusions: “The results of the included studies were equivocal, and the poor methodological quality and the limited number of the trials do not allow any conclusion about the efficacy of acupuncture for treatment of alcohol dependence. More research and well-designed, rigorous, and large clinical trials are necessary to address these issues.”

148.

Journal: *NATIONAL EVALUATION DATA AND TECHNICAL ASSISTANCE CENTER (1999)*

Title: [OVERVIEW OF ACUPUNCTURE AND SELECTED BIBLIOGRAPHIES OF NON-TRADITIONAL METHODS IN SUBSTANCE ABUSE TREATMENT, 1990-1998](#)

Authors: Ron Smith, Ph.D., Tracey Fenwick, Beth Archibald Tang, Tjinta May, Sharon Bishop

Source: Center for Substance Abuse Treatment, Department of Health and Human Services, Caliber/NEDTAC Contract No. 270-94-0001.

ABSTRACT:

Objective: To provide “an overview on the increasing use of acupuncture as an alternative method for substance abuse treatment.”

Methods: Authors provided an overview of various studies and a SELECTED ANNOTATED BIBLIOGRAPHY on NON-TRADITIONAL METHODS IN SUBSTANCE ABUSE TREATMENT of twenty studies and a SELECTED ANNOTATED BIBLIOGRAPHY on

NON-TRADITIONAL METHODS IN SUBSTANCE ABUSE TREATMENT of 44 studies.

Results: “Within the scientific community, there is a growing consensus that acupuncture is not an effective treatment for opiate or cocaine dependence. In a meta-analysis of 22 controlled clinical studies, more than half received fewer than 50 points (100 points maximum), and no study received more than 75 points (100 maximum) (Ter Riet et al., 1990). These studies included addictions to nicotine, heroin, and alcohol. Only Bullock et al. (1989) has offered any empirical evidence regarding the efficacy of acupuncture. Unfortunately, his findings significantly relating acupuncture to alcoholism reduction were not replicated by Worner, Zeller, Schwarz, Zwas, and Lyon (1992).”

Conclusions: “For the most part, studies in the treatment of addictions with acupuncture have been methodologically deficient (Ter Riet, Kleijnen, & Knipschild, 1990; McLellan et al., 1993). There is a lack of standardized terminology and outcome measures vary greatly between and even within programs. If in the future acupuncture is to be considered as a serious form of therapy for addictions, its advocates must support claims with a more valid and reliable pragmatic research agenda.”

A close reading of the studies cited in this 1999 report leads to the conclusions that patients stayed in therapy longer when receiving acupuncture and that the methodologies of treatment were important to successful outcomes.

TMJ DISORDER

149.

Journal: *J Dent.* 2007 Mar;35(3):259-67. Epub 2006 Nov 13.

Title: [The efficacy of acupuncture in the treatment of temporomandibular joint myofascial pain: a randomised controlled trial.](#)

Authors: Smith P, Mosscrop D, Davies S, Sloan P, Al-Ani Z.

Source: School of Dentistry, The University of Manchester, Higher Cambridge Street, Manchester M15 6FH, United Kingdom.

ABSTRACT:

Objective: “To compare the effect of real acupuncture and sham acupuncture in the treatment of temporomandibular joint myofascial pain, in order to establish the true efficacy of acupuncture.”

Methods: “A double blind randomised controlled trial conducted in the TMD Clinic, at the School of Dentistry, The University of Manchester. Twenty-seven patients were assigned to one of two treatment groups. Group 1 received real acupuncture treatment whilst Group 2 received a sham acupuncture intervention. Both the assessor and the patient were blinded regarding the group allocation. Baseline assessment of the outcome variables was made prior to the first treatment session, and was repeated following the last treatment.”

Results: “The results demonstrated that real acupuncture had a greater influence on clinical outcome measure of TMJ MP than those of sham acupuncture, and the majority of these reached a level of statistical significance.”

Conclusions: “Acupuncture had a positive influence on the signs and symptoms of TMJ MP. In addition, this study provides evidence that the Park Sham Device was a credible acupuncture control method for trials involving facial acupoints.”

TENDONITIS – LATERAL EPICONDYLITIS (TENNIS ELBOW)

150.

Journal: *Medical Acupuncture, Volume 13 / Number 1*

Title: [Acupuncture Treatment Of Lateral Epicondylitis In An Occupational Medicine Clinic](#)

Author: Christine C. Deignan, MD

Source: Work Fitness Center, 2535 Maplecrest Rd, Suite 27, Bettendorf, IA 52722

ABSTRACT:

Objective: “To measure the response to acupuncture in patients with lateral epicondylitis.”

Methods: “Design, Setting, and Patients: Case series of patients referred for treatment from the Iowa Workers' Compensation system to an occupational medicine clinic. Interventions: Initial treatment of LI 4 and LR 3; at later sessions, electroacupuncture was administered. A search for trigger point areas with referred pain to the elbow was performed. Main Outcome Measures: Improvement rated as resolved, improved, or no change based on pain and functionality.”

Results: “Of 22 patients, 19 (86%) had resolution or improvement of symptoms. There were no serious adverse events and response was not related to symptom duration.”

Conclusions: “Acupuncture produced resolution or improvement in the symptoms of lateral epicondylitis. Future studies should include randomized controlled trials and comparison trials with surgery....In our clinic, about 10% of lateral epicondylitis cases are treated with acupuncture. Acupuncture requires increased physician time, but in contrast to surgery, does not produce any lost work days for the patient. With education of employers and insurance carriers, acupuncture should become a more attractive therapeutic option because employees are able to continue work during treatment.”

UNDERSTANDING THE PLACEBO EFFECT

151.

Journal: *Perspect Biol Med. 2009 Autumn; 52(4): 518.*

Title: [The placebo effect: illness and interpersonal healing](#)

Authors: Franklin G. Miller, Ph.D.,* Luana Colloca, M.D., Ph.D., and Ted J. Kaptchuk

Source: Franklin G. Miller, Department of Bioethics National Institutes of Health

ABSTRACT:

Objective: “The placebo effect has been a source of fascination, irritation, and confusion within biomedicine over the past 60 years. Although scientific investigation has accelerated in the past decade, with particular attention to neurobiological mechanisms, there has been a dearth of attention to developing a

comprehensive theory of the placebo effect. In this article, we attempt to address this gap by reviewing evidence relating to the reality and clinical significance of the placebo effect. We suggest the hypothesis that the placebo effect operates predominantly by producing symptomatic relief of illness, such as pain, anxiety, and fatigue, rather than by modifying the pathophysiology of disease.”

Methods: Authors refer to an exhaustive list of studies to support their hypothesis.

Results: Many, among them:

“...While it may be premature to infer with absolute confidence that acupuncture is no better than a placebo intervention, the accumulated evidence strongly points in this direction. Does it follow that acupuncture produces clinical benefit by virtue of the placebo effect? It is possible that the repetitive physical stimulus common to real and sham acupuncture is responsible for observed analgesic effects by means of some physiological mechanism (Haake et al. 2007). However, there is evidence that expectation influences the clinical benefit associated with acupuncture in both verum and sham groups. In an analysis of four of the German acupuncture trials, Linde and colleagues (2007) found that the odds ratio for a clinical response to real or sham acupuncture was twice as high among those patients reporting a positive expectation of benefit. In general, sham devices may produce distinct or especially large placebo effects as compared with placebo pills (Kaptchuk et al 2000; Kaptchuk et al 2006). More research will be needed to clarify the placebo response to acupuncture, but these trials at least suggest that this type of invasive but safe intervention, characterized by an elaborate treatment ritual and frequent clinician-patient interaction, may be a potent method of interpersonal healing by means of the placebo effect (Kaptchuk 2002).”

“...Conditions studied included migraine, tension headaches, chronic low back pain, and osteoarthritis of the knee. Generally, across the various trials, no difference was detected between verum and sham acupuncture, but patients receiving either of these interventions experienced substantially greater symptom improvement than no-treatment and usual care control groups.”

“...Placebo effects were significantly larger for physical placebos as compared with pill placebos, for patient-reported outcomes as compared with observer-reported outcomes, when patients were not informed about the possibility of receiving a placebo intervention, and when the trials were explicitly designed to study placebo effects.”

“...In the last 30 years, as reviewed comprehensively and in depth by Benedetti (2009), laboratory studies have shown that placebo interventions can elicit quantifiable changes in neurotransmitters, hormones, and immune regulators. During the past decade, numerous studies have investigated the neurobiological mechanisms underlying placebo effects by means of brain imaging techniques

(Colloca et al. 2008; Faria et al. 2008).”

“...This experiment suggests that the simulation of treatment, as reflected in the sham acupuncture intervention administered in the limited arm, by itself contributes to therapeutic benefit. When enhanced by supportive communication, the ritual of treatment produces a dramatic placebo response over a 3-week period and continued in the 3-week follow-up in a difficult-to-treat patient population.”

Conclusions: “We suggest that, using the language of Kuhn (1970), scientific research on the placebo effect has taken the shape of “normal science” without guidance by any systematic theoretical paradigm. To begin to address this gap in theory development, we have sketched the contours of a theory of the placebo effect. Our aim has been to suggest a series of interconnected themes by locating the placebo effect within the concept of interpersonal healing and in connection with the key distinction between disease and illness. In addition to promoting conceptual clarity regarding the placebo effect, we have noted the limited rigorous evidence relating to its clinical significance and recommended experimental inquiry aimed at translating the scientific understanding of the placebo effect into improved patient care. This is the ultimate test of a theoretical paradigm for the placebo effect—its fruitfulness in guiding future patient-centered research. Finally, we have highlighted ethical issues that need to be addressed in optimizing placebo effects and minimizing nocebo effects within clinical practice and in conducting justifiable research on placebo effects.”

USING CHINESE LANGUAGE DATABASES IN RESEARCH

152.

Journal: *Acupunct Med* 2010;28:149-153 doi:10.1136/aim.2010.002444

Title: [Heterogeneity in search strategies among Cochrane acupuncture reviews: is there room for improvement?](#)

Authors: Steve Lui, Erica J Smith, Mishka Terplan

Source: Mr. Steve Lui, Department of Nursing and Health Studies, Centre for Health and Social Care, University of Huddersfield, Queensgate, Huddersfield, West Yorkshire HD1 3DH, UK; s.lui@hud.ac.uk

ABSTRACT:

Objective: Given the international focus and rigorous literature searches employed in Cochrane systematic reviews, this study was undertaken to evaluate strategies employed in Cochrane reviews and protocols assessing acupuncture as a primary or secondary intervention.

Methods: “The Cochrane Collaboration of systematic reviews was searched in February 2009 for all reviews and protocols including information on acupuncture. Information was abstracted from all retrieved articles on review status, type and number of English and Chinese language databases searched, participation of at least one Chinese speaking author and language restriction. Frequencies were

calculated and bivariate analyses were performed stratifying on interventions of interest to assess differences in search strategy techniques, language restrictions and results.”

Results: “The search retrieved 68 titles, including 48 completed reviews, 17 protocols and three previously withdrawn titles. Acupuncture was the primary intervention of interest in 44/65 (67.7%) of the retrieved reviews and protocols. While all articles searched at least one English language database, only 26/65 (40.0%) articles searched Chinese language databases. Significantly more articles where acupuncture was the primary intervention of interest searched Chinese language databases (53% vs. 9%, $p < 0.01$). Inconclusive findings as to the effectiveness of acupuncture were found in 28/48 (58.3%) of all completed reviews; this type of finding was more common in reviews which did not search any Chinese language databases.”

Conclusions: “It is important for reviews assessing the effectiveness of acupuncture to search Chinese language databases. The Cochrane Collaboration should develop specific criteria for Chinese language search strategies to ensure the continued publication of high-quality reviews.”

UTILIZING ACUPUNCTURE IN HEALTH CARE SYSTEMS – THE ECONOMIC IMPACT

153.

Journal: *Med Care. 2008 Jan;46(1):41-8.*

Title: [The effect of acupuncture utilization on healthcare utilization.](#)

Authors: Bonafede M, Dick A, Noyes K, Klein JD, Brown T.

Source: Department of Pharmacy Practice, Albany College of Pharmacy, Research Institute for Health Outcomes, Albany, New York 12208, USA. bonafedm@acp.edu

ABSTRACT:

Objective: “To determine whether acupuncture is a complement to or substitute for various medical services.”

Methods: “DATA SOURCE: This study used managed care claims data from a midsize metropolitan insurance company from 2002. Zip code level data from the 2000 US Census was also incorporated. The original dataset contained medical and drug claims data for every eligible acupuncture user ($n = 1688$) and every 18th eligible nonacupuncture user ($n = 16,282$) covered by the data provider... STUDY DESIGNS: Simultaneous equations models with an exclusion restriction were used in this cross-sectional study. The influence of acupuncture utilization was assessed independently on each conventional service of interest, controlling for numerous clinical and demographic characteristics. Bivariate probit models were estimated using distance to the nearest acupuncturist as the exclusion restriction.”

Results: “Acupuncture was a statistically significant ($P < 0.05$) substitute for primary care, all outpatient services, pathology services, all surgery, and gastrointestinal medications. Acupuncture seemed to complement numerous therapies, particularly chiropractic and physical therapy; however, acupuncture did not statistically significantly complement any therapies after controlling for unobservable characteristics that influence the use of acupuncture and/or conventional medicine.”

Conclusions: “Acupuncture is an economic substitute for some medical services and pharmaceuticals, a finding of some importance to insurers, healthcare practitioners, and policy makers. The fact that acupuncture has an effect on other medical services needs to be explored more fully with an emphasis on how this substitution impacts patient health.”

154.

Journal: *RAND Health*

Title: [Insurance Companies' Fears of Covering Acupuncture Appear Unfounded](#)

Author: RAND Health researcher Andrew Dick

Source: This fact sheet is based on: Bonafede M, Dick A, Noyes K, Klein JD, and Brown T, “The Effect of Acupuncture Utilization on Healthcare Utilization”, *Medical Care*, Vol 46, No. 1, January 2008, pp. 41-48.

ABSTRACT:

Objective: “to determine if individuals use acupuncture as a substitute for or as a complement to other medical services.”

Methods: “For their analyses, the team employed statistical models to examine medical and drug claims data for 17,970 people, including 1,688 acupuncture users, from a midsize metropolitan insurance company.”

Results: “The study found that acupuncture use does affect the utilization of other medical services and pharmaceuticals. Specifically, Acupuncture substituted for primary care, all outpatient services, pathology services, all surgery, and gastrointestinal medications. These relationships were documented at statistically significant levels. Acupuncture seemed to complement some therapies, particularly chiropractic and physical therapy and allergy services.”

Conclusions: “The researchers suggest that expenditures on acupuncture may be offset through reductions in other health care utilization, countering insurance companies' fears that covering acupuncture will raise costs. If acupuncture is being used largely in place of more expensive conventional medical services, then it has the potential to reduce total medical expenditures. However, additional studies are needed to clarify this picture, including analyses with larger data sets (involving more acupuncture users) to determine whether acupuncture truly has no effect on utilization of those medical services that, in the current study, showed no statistically significant relationships with acupuncture use an examination of how substituting acupuncture for conventional medical services, especially preventive services, such as cancer screening, affects patient health evaluation of expenditure data to quantify the

financial impact of acupuncture.”

155.

Journal: *Value Health. 2004 Sep-Oct;7(5):518-28.*

Title: [Use of cost-effectiveness analysis in health-care resource allocation decision-making: how are cost-effectiveness thresholds expected to emerge?](#)

Authors: Eichler HG, Kong SX, Gerth WC, Mavros P, Jönsson B.

Source: Vienna Center for Pharmaceutical Policy, Department of Clinical Pharmacology, Medical University of Vienna, Vienna, Austria. hans-georg.eichler@meduniwien.ac.at

ABSTRACT:

Objective: “An increasing number of health-care systems, both public and private, such as managed-care organizations, are adopting results from cost-effectiveness (CE) analysis as one of the measures to inform decisions on allocation of health-care resources. It is expected that thresholds for CE ratios may be established for the acceptance of reimbursement or formulary listing.” “...This paper provides an overview of the development of and debate on CE thresholds, reviews threshold figures (i.e., cost per unit of health gain) currently proposed for or applied to resource-allocation decisions, and explores how thresholds may emerge.

Results: At the time of this review, there is no evidence from the literature that any health-care system has yet implemented explicit CE ratio thresholds. [emphasis added] The fact that some government agencies have utilized results from CE analysis in pricing/reimbursement decisions allows for retrospective analysis of the consistency of these decisions. As CE analysis becomes more widely utilized in assisting health-care decision-making, this may cause decision-makers to become increasingly consistent.

Conclusions: When CE analysis is conducted, well-established methodology should be used and transparency should be ensured. CE thresholds are expected to emerge in many countries, driven by the need for transparent and consistent decision-making. Future thresholds will likely be higher in most high-income countries than currently cited rules of thumb.

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Journal: *Acupunct Med 2009;27:26-30 doi:10.1136/aim.2008.000281*

Title: [Modellvorhaben Akupunktur – a summary of the ART, ARC and GERAC trials](#)

Author: Mike Cummings

Source: Mike Cummings, BMAS, 60 Great Ormond Street, London WC1N 3HR, UK; BMASLondon@aol.com

ABSTRACT:

Objective: “In October 2000 the German Federal Committee of Physicians and Health Insurers recommended that special Model Projects on Acupuncture (“Modellvorhaben Akupunktur”) be developed in order to determine the evidence-based role of acupuncture in the treatment of certain illnesses. This paper presents a summary of the main randomised controlled trials performed

as part of these projects, and the associated economic analyses.”

Methods: a summary of the ART, ARC and GERAC trials

Results: “Overall the results show that acupuncture is effective in practice for a range of chronic conditions, and it seems likely to have acceptable cost utility (at least at a rate of €35 per session). Sham acupuncture, in the form of minimal off-point needling in a therapeutic context, also appears to be effective, being no different to prophylactic medication in migraine, and superior to guideline-based standard care in chronic low back pain.”

“In patients recruited to acupuncture trials, the response to treatment does not differ between those that agree to be randomised and those that do not. This suggests that the results of the pragmatic Acupuncture in Routine Care studies are applicable to patients from the general population who express a preference for acupuncture.”

Conclusions: “In conclusion, acupuncture appears to be effective in a range of chronic conditions and it seems to have acceptable cost-effectiveness in Western health economic terms. These programmes of research do not confirm the hypothesis that needling at specific points is essential to achieve satisfactory clinical effects of acupuncture. Sham acupuncture, in the form of minimal off-point needling in a therapeutic context, is unlikely to be an inactive placebo.”

“In April 2006, the German health authorities decided that acupuncture would be included into routine reimbursement by social health insurance funds for chronic low back pain and chronic osteoarthritis of the knee.”

SECTION 4: BREAKTHROUGHS IN UNDERSTANDING

HOW ACUPUNCTURE WORKS

Since 1965 Dr. Ji-Sheng Han has conducted research into how “High and low frequency electroacupuncture analgesia are mediated by different opioid peptides.” Basically he has found that there are three different basic forms of endogenous opioid peptides (EOP’s) involved in acupuncture analgesia:

1. meta-enkephalin (MEK) and leu-enkephalin (LEK);
2. beta-endorphin (BEP)
3. dynorphin A (Dyn A) and dynorphin B (Dyn B)

Han concluded that “Different kinds of EOP may be released in the spinal cord by EA stimulation of different frequencies,

- MEK at 2 Hz,
- Dyn A at 100 Hz, and
- a mixture of enkephalins and dynorphins at 15 Hz.”

Han further concluded that “BEP and LEK do not seem to play a significant role in the mechanisms of acupuncture analgesia.”² His research through 1987 is compiled in The Neurochemical Basis of Pain Relief by Acupuncture by J.S. Han, Beijing Medical University, 1987.

Dr. Han amplifies upon these findings in a study published in Trends in Neuroscience, Volume 26, Issue 1, pp. 17-22, January, 2003, entitled ***Acupuncture: neuropeptide release produced by electrical stimulation of different frequencies.*** This can be found online at [www.cell.com/trends/neurosciences/abstract/S0166-2236\(02\)00006-1](http://www.cell.com/trends/neurosciences/abstract/S0166-2236(02)00006-1)

The abstract states that “Brain functions are regulated by chemical messengers that include neurotransmitters and neuropeptides. Recent studies have shown that acupuncture or electrical stimulation in specific frequencies applied to certain body sites can facilitate the release of specific neuropeptides in the CNS, eliciting profound physiological effects and even activating self-healing mechanisms. Investigation of the conditions controlling this neurobiological reaction could have theoretical and clinical implications.”

Dr. Han also did extensive research into the mechanisms of finger acupuncture, that is, acupuncture done without electrical stimulation. He found that similar endogenous opioid peptides were released, but in lesser amounts.

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Neuroscientist Maiken Nedergaard and her team of scientists at the University of Rochester focused their studies on finger acupuncture done on mice, and in 2010 they discovered a breakthrough explanation for how acupuncture works to relieve pain. Adenosine is an inhibitory neurotransmitter that plays a role in promoting sleep, and its levels rise with each hour an organism is awake. Nedergaard *et al.* tested the adenosine levels of mice before and after experiencing half an hour of acupuncture. They found that adenosine levels rose **24 times** after acupuncture, especially when the needles were twirled, as is done with traditional acupuncture. That's a 2400% jump! Moreover, the pain sensitivity of these mice decreased dramatically after acupuncture, and they were able to withstand painful stimuli three or four times longer than without acupuncture.

Nedergaard *et al.* proved that acupuncture raises adenosine levels dramatically. They hypothesize that the high adenosine levels in turn bind to receptors on pain nerves, in effect putting them to sleep. Dr Nedergaard observed that **“Most painkillers have various side effects. Acupuncture has almost none.”** She calls for more research to be done into the efficacy of acupuncture, so that it may be more fully integrated into Western medicine.

For a thoroughly illuminating discussion of the University of Rochester adenosine/acupuncture study, please visit the following site online:

<http://www.scribd.com/doc/60049054/Science-Illustrated-July-and-August-2011#scribd>

This link contains a well-illustrated article entitled “The Secret behind Acupuncture” by Af Gorm Palmgren.

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Discussion of Nedergaard et al.'s original research was published in Nature Neuroscience, Volume 13, Pages 783-784, 2010, DOI: doi:10.1038/nn0710-783 as “Needling adenosine receptors for pain relief,” by Mark Zylka and the actual research study appears on pages 883-888 of the same journal as “Adenosine A1 receptors mediate local anti-nociceptive effects of acupuncture,” by Goldman, Chen, Fujita, Xiu, Peng, Liu, Jensen, Peng, Wan, Han, Chen, Schnermann, Takano, Bekar, Tieu, and Nedergaard. The article appears online at:

<http://www.nature.com/neuro/journal/v13/n7/full/nn0710-783.html>

Journal: *Nature Publishing Group's was kind enough to allow for reprint of the following abstract of this article. Reprinted by permission from Macmillan Publishers Ltd: [Nature Neuroscience] (Volume: 13, Pages: 883–888, Year published: (2010), DOI:*

doi:10.1038/nn.2562, Published online 30 May 2010), copyright (2010)

Title: Adenosine A1 receptors mediate local anti-nociceptive effects of acupuncture

Authors: Nanna Goldman, Michael Chen, Takumi Fujita, Qiwu Xu, Weiguo Peng, Wei Liu, Tina K Jensen, Yong Pei, Fushun Wang, Xiaoning Han, Jiang-Fan Chen, Jurgen Schnermann, Takahiro Takano, Lane Bekar, Kim Tieu & Maiken Nedergaard

Abstract

“Acupuncture entails stimulating discrete points on the body with needles to alleviate pain. A study in this issue finds that local activation of adenosine A1 receptors in mice contributes to the anti-nociceptive effects of acupuncture. “Acupuncture entails stimulating discrete points on the body with needles to alleviate pain. A study in this issue finds that local activation of adenosine A1 receptors in mice contributes to the anti-nociceptive effects of acupuncture.”

“Acupuncture is an invasive procedure commonly used to relieve pain. Acupuncture is practiced worldwide, despite difficulties in reconciling its principles with evidence-based medicine. We found that adenosine, a neuromodulator with anti-nociceptive properties, was released during acupuncture in mice and that its anti-nociceptive actions required adenosine A1 receptor expression. Direct injection of an adenosine A1 receptor agonist replicated the analgesic effect of acupuncture. Inhibition of enzymes involved in adenosine degradation potentiated the acupuncture-elicited increase in adenosine, as well as its anti-nociceptive effect. These observations indicate that adenosine mediates the effects of acupuncture and that interfering with adenosine metabolism may prolong the clinical benefit of acupuncture.”

SECTION 5: RESOLUTION OF THE NATIONAL FOUNDATION FOR WOMEN LEGISLATORS ON ACUPUNCTURE

Weblink: <http://www.womenlegislators.org/committees/resolutions.php?id=737>

ABOUT THE NATIONAL FOUNDATION FOR WOMEN LEGISLATORS

“The greatest rising force in American politics today is not a political party, nor is it a lobbying community, it is women. Thirty years ago, women held a mere 10% of all state legislative seats in the country, today they hold 24% of 7,382 seats nationwide. Currently 17 women currently serve in the US Senate and 73 serve in the US House of Representatives, while 72 women hold statewide elective office including 6 state governorships. Women chair numerous committees, they influence policy and they understand the importance of building bipartisan coalitions in support of the nation's most pressing concerns to ensure widespread change in both thought and policy on a variety of issues.”

MISSION STATEMENT

“The mission of The National Foundation for Women Legislators (NFWL) is to provide strategic resources to women leaders for leadership development and effective governance through conferences, seminars, education materials, professional and personal relationships, and networking at both the state and federal levels.

“NFWL is a non-partisan 501c-3, educational foundation. Its membership consists of members of the National Order of Women Legislators (all current and former women elected officials) corporate leadership and association members.”³

COMMITTEE RESOLUTIONS

September 30, 2009

National Policy Committee on Healthcare and Empowerment

Resolution in Support of Ensuring that any Congressional Effort to Expand Healthcare Access through Medicare and Other Government Funded Programs Include Professional Acupuncturists and Doctors of Oriental Medicine

(Ratified September 2009)

WHEREAS, the United States faces a \$36 trillion deficit in the coming decades in part due to

unfunded healthcare liabilities related to the Medicare and Medicaid programs; and

WHEREAS, the United States spends 17 % of its Gross Domestic Product on health care versus an average of only 9% for the 30 other members of the Organization for Economic Co-operation and Development and 4.5% for China; and

WHEREAS, China has 362,600 Doctors of Traditional Chinese Medicine working in concert with 836,360 Western trained M.D.s; and

WHEREAS, there are 5,500 designated Health Profession Shortage Areas (HPSA) in the US, and 6941 more primary care providers are needed to reduce HPSA's; and

WHEREAS, there are 6,525 Medically Underserved Areas (MUA's) at the county and local levels nationwide (as determined by the number of primary care providers in an area and the distance to a primary care provider); and

WHEREAS, there are 58 nationally accredited colleges of Acupuncture and Oriental Medicine in the U.S. with approximately 8,100 students in attendance; and

WHEREAS, there are over 26,000 duly qualified practitioners of acupuncture and Oriental medicine licensed in 44 states who may serve as primary care professionals; and

WHEREAS, acupuncture has been determined to be a drug-free, safe, and effective form of primary care by the World Health Organization and has been approved by the 1997 National Institutes of Health Consensus study; and

WHEREAS, based upon studies that showed acupuncture to be among the most cost-effective modalities for the treatment of low back pain, the countries of Great Britain and Germany cover acupuncture in their national health systems; and

WHEREAS, a 2003 survey found that nearly 1 in 10 Americans over age 18 have tried acupuncture with 82 % of those surveyed satisfied with their treatment and 65% of physicians surveyed in 2005 found acupuncture to be an effective complementary therapy; and

WHEREAS, a National Health Survey conducted by the National Institutes of Health and the Centers for Disease Control and Prevention reported in 2009 that while visits to all complementary and alternative medicine providers (CAM) appears to have decreased in the past decade, visits to acupuncturists tripled; and

WHEREAS, a 2005 survey found that employer provided insurance increasingly provides coverage for acupuncture. (52% of POS plans, 47 percent of PPO plans, 44% of conventional plans and 41% of HMOs); and

WHEREAS, the availability of acupuncture provides a valuable option for millions of Americans and its inclusion in Medicare and other insurance programs will increase its availability to seniors and others who could not otherwise access this safe and effective treatment;

NOW THEREFORE BE IT RESOLVED, by NFWL's National Policy Committee on Healthcare & Empowerment, that Congress should ensure that licensed acupuncture practitioners are eligible to be included as providers in government insurance programs and health delivery programs; and

BE IT FURTHER RESOLVED, by NFWL's National Policy Committee on Healthcare & Empowerment, that all 50 states' governments, territories, and tribal communities are urged to license the practice of acupuncture and Oriental herbal medicine or improve their licensure guidelines to encourage a broader scope of practice.