

# Evidence for the effectiveness of acupuncture

Mark Bovey, February 2001

This comes from two chapters of the book '**Clinical Acupuncture. Scientific Basis**' (edited by **G. Stux and R. Hammerschlag, 2000, Springer**). It is to be thoroughly recommended as well for the sections on how acupuncture may work (i.e. physiological mechanisms), qualitative research, clinical trial design and future research possibilities.

The evidence presented comes almost entirely (the exception is mental health) from the West, since that is where there is accessible publication of RCT (randomised controlled trial) results. This is the sort of evidence that persuaded an investigative committee of the UK parliament's House of Lords to put acupuncture in the first division of CAM (complementary and alternative) therapies; but note that there is little or nothing to distinguish the type of acupuncture involved, no evidence to say that traditionally-based acupuncture works better (or worse) than modern, 'medical' acupuncture. If you want to convince people about your particular brand of treatment then do some research yourself: there have been various examples of simple (!) clinical audit/outcome studies used successfully in this context. On the whole, doctors will look for a variety of different sorts of supporting evidence and this may include outcome studies and case histories along with the RCTs.

## A. The evidence from systematic reviews

Systematic reviews are the preferred tools of evidence-based medicine and they aim to summarise completed research in a manner that is comprehensive, methodical and unbiased. What they have singularly failed to do as yet is assess the adequacy of the acupuncture treatment applied in each trial. If studies were excluded as rigorously on this basis as on other criteria then there would probably be none left to review for most conditions. Bear that in mind when looking at the results collected in Table 1.

The authors pointed out that four recent RCTs are not included in the summarised reviews. All were positive for acupuncture and three were large and well designed. For low back pain a large (n=186) German trial found acupuncture to be way ahead of both sham acupuncture and standard therapy. For osteoarthritis acupuncture again significantly outperformed sham acupuncture in one trial and improved on medical care alone in the other. Also one more dental pain trial further confirmed the efficacy of acupuncture there.

**Table 1. A summary of acupuncture systematic reviews**

Condition	Year of review	Number of studies	Results
Chronic pain	1989	14	Inconclusive
Chronic pain	1990	51	Inconclusive

Chronic pain	2000	51	Acupuncture better than no treatment. Inconclusive vs. placebo, sham or standard care
Low back pain	1999	11	Inconclusive
Osteoarthritis	1997	13	Inconclusive
Fibromyalgia	1999	7	Positive with reservations (only one high quality study)
Acute dental pain	1997	16	Positive
Headache	1999	22	Positive trend for comparison with sham. Inconclusive vs. other forms of treatment
Nausea and vomiting	1996	33	Positive
Tobacco addiction	1997	16	Negative
Asthma	1991	13	Inconclusive
Asthma	1996	7	Inconclusive

### Comments

1. 'Inconclusive' indicates that the results were too contradictory between different trials and/or that studies were generally of too poor a quality to say anything definite.
2. A systematic review by Ernst and White declared a positive effect for acupuncture in **low back pain**, and the recent German trial would incline things in that direction.
3. The recent **osteoarthritis** results also would tend to tip the balance towards a positive conclusion (the earlier, reviewed trials were all smaller).
4. For **asthma** it is suggested that trials comparing real and sham acupuncture or placebo are of little clinical relevance and acupuncture should be compared to standard care, or used as an adjunct to it. This would rule out all except one of them.
5. Predictably **tobacco addiction** provides the only negative, as opposed to inconclusive, outcome. (See ARRC's Briefing Paper No. 7 for a discussion of this).
6. There is the impression that as bigger and better studies are carried out the 'inconclusives' will move more towards 'positive'.

### B. An overview of the evidence in some other conditions

To be systematic a review requires a certain minimum number (5-7?) of constituent studies. Yet there are still a lot of conditions for which only one or two controlled studies exist, perhaps with some uncontrolled supporting evidence. The findings from an overview of these trials are shown in Table 2.

**Table 2. An overview of clinical trial evidence for a number of conditions not covered by the systemic reviews**

<b>CONDITION</b>	<b>NO. OF CONTROLLED TRIALS</b>	<b>QUALITY OF TRIALS</b>	<b>RESULTS</b>
<b>Stroke</b>	4	Good	<b>Consistently positive</b>
<b>Alcohol addiction</b>	1	Good	<b>Positive</b>
<b>Drug addiction *</b>	3	Poor	<b>Inconclusive</b>
<b>Angina</b>	4	Poor	<b>Positive</b>
<b>Urology</b> (chronic UTI, acute colic, incontinence)	4	Quite good	<b>Consistently positive</b>
<b>Obstetrics</b> (breech presentation, labour)	5	Variable	<b>Consistently positive</b>
<b>Gynaecology</b> (dysmenorrhoea, infertility, hot flushes)	3	Quite good	<b>Positive</b>
<b>Mental health</b> (depression, schizophrenia)	4	Quite good	<b>Positive</b>
<b>Male sexual problems</b>	2	Poor	<b>Positive</b>
<b>Xerostomia</b>	2	Poor	<b>Positive</b>
<b>Raynaud's syndrome</b>	1	Poor	<b>Positive</b>
<b>Weight loss +</b>	?	?	<b>Negative</b>
<b>Hearing problems +</b> (deafness, tinnitus)	?	?	<b>Negative</b>

\* A recent large, well designed study – not included here – produced very positive results

+ Individual trials not specified. Conclusions based on other authors' reviews

## **Comment**

The control treatments were in some cases standard medical care and in others placebo or sham acupuncture. I have just lumped the results together for the table here but the distinction does have some ramifications. Thus for stroke, where three of the four trials compared standard care plus acupuncture to standard care alone, the recommendation is that acupuncture be used as an adjunctive treatment. In some other cases (e.g. some of the urology and mental health work) acupuncture performed similarly to standard care but gave fewer side effects – hence a case for using it in place of the standard regime. Whilst there were also good results for acupuncture v. sham (as in Rosa Schnyer's depression study) the trend over the last 15 years has been for less use of this methodology and a move towards 'pragmatic' trials using standard care. Which is good news for acupuncturists.

In all there were 33 studies (1985-99) of which 29 found in favour of acupuncture. Whilst there is insufficient evidence to make firm conclusions for individual conditions there are promising results across the board, an indication that sooner or later there will be official recognition that acupuncture works for more than just nausea and pain.