

What is acupuncture and does it work?

An overview of the alternative medicine acupuncture

By John Jackson © 2006

What is acupuncture?

Acupuncture is claimed to be an ancient system of healing developed over thousands of years as part of the traditional medicine of China. The aim of the treatment is to restore the balance of the universal energy Qi (pronounced chee) in the body, through the painless application of fine needles into strategic points on the body. Qi consists of Yin and Yang and these two opposite, but complementary, forces need to be in balance otherwise disease or illness occurs in the body.

Acupuncture needles are used in specific acupuncture points that give access to the meridians in the body through which the Qi flows so that adjustments can be made to balance the Yin and Yang thus restoring harmony and health.

A brief history of acupuncture

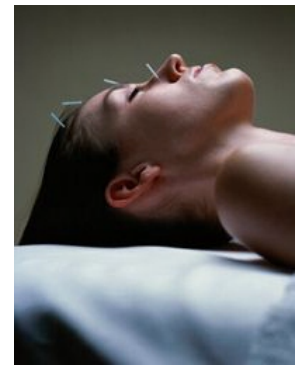
Acupuncture originated in China, although it has also been used in other East Asian countries. Evidence suggests that it was practiced as long as 2,000 years ago, although supporters of it often claim that it has been used for over 5,000 years. It has been intertwined with spiritual and religious practices throughout Chinese history. Acupuncture has a close association with Taoism, Taoists being pioneers of the belief in body-mind-spirit consciousness.

Early accounts of acupuncture written by missionaries describe acupuncture as being quite different to what we're led to believe. The needles were large, inserted deeply, and used in short duration; '30 respirations' being quoted by missionary Wilhelm Ten Rhijn in 1680. Nor is there any mention of Qi, meridians, or specific acupuncture points. These concepts were actually introduced in the 20th century, notably by Georges Soulié de Morant in his 1939 book *L'Acupuncture Chinoise*. Before the 20th century, needles were simply inserted at the site of the pain or problem.

Surprisingly, acupuncture was not introduced into Europe until the early 18th century when it was

embraced by some French physicians. They were accused of "resurrecting an absurd doctrine from well-deserved oblivion" by many prominent doctors however.

It was not introduced into England until 1821 when it was used by midwife Edward Joukes.



Acupuncture in China.

Again, the myth is at odds with the facts. Acupuncture is not widely used in China as a part of traditional Chinese medicine (TCM) - TCM also being a phrase that originated in the 20th century (1954). Acupuncture declined in popularity once scientific medicine was introduced to China. In the 1950s, China's communist leader Mao Zedong realised that China did not have enough doctors to treat its population. He then, for political reasons, reintroduced TCM after realising the situation, although he commented to his own personal doctor, "even though I believe we should promote Chinese medicine, I personally do not believe in it. I don't take Chinese medicine..."

In 1995 the Committee for Scientific Investigation of Claims of the Paranormal (CSICOP) went to China and found that around 15-20% of the population used TCM (not just acupuncture), and that those people used TCM in conjunction with scientific medicine: what we would term complementary medicine. This level of use is at the lower end of the scale compared to other countries with advanced healthcare systems and it falls well short of countries such as Germany, Canada, France and Australia where the use of alternative remedies is more than twice that of China. China's use of alternative remedies is actually lower than the UK population's - currently around 25%. (Ernst, PPS-02-04).

The theory behind modern acupuncture

The principle behind illness is thought to be an imbalance or blockage of **Qi** (Ch'i, Chi pronounced: *Chee*), the natural energy of the universe which flows freely through a healthy body.

Qi, it is proposed, flows through 14 channels in the human body (although this figure is not used consistently), known as meridians, which branch to bodily organs and functions. Disease or illness is the result of a blockage or obstruction in one or more of these meridians.

Qi allegedly consists of opposing forces known as **Yin and Yang**. Yin and yang need to be in the right balance so that harmony is achieved. It is re-balancing the yin and yang in the body to achieve harmony that is the basis of healing.

The body's meridians are believed to be influenced by special points on the body: the acupuncture points. By stimulating the acupuncture points, which are thought to be 'holes' that give access to the meridians, the body's Qi can be adjusted, balanced, and harmonised.

It is unclear exactly what acupuncture is claimed to heal. Some practitioners claim all sorts of cures can be effected by acupuncture; some simply claim that it is useful in pain management.

Scientific evidence and acupuncture

The concept of **Qi**, on which acupuncture is based, is a **metaphysical** one and there is no evidence for existence of this universal energy. There are no scientific instruments that can detect it. It seemingly can only be detected and adjusted by practitioners. It is not a falsifiable hypothesis (it can't be tested) and as such is meaningless.

Testing acupuncture is difficult. It is often compared to 'sham acupuncture'; however, acupuncture is an invasive technique and as such it is hard to fool the patient as to whether they are receiving real or sham acupuncture. The person administering the acupuncture also knows whether they are giving real or sham treatment so trials cannot be done properly double blinded.

There are two basic methods by which sham acupuncture can be performed so that it can be compared to real acupuncture:

1. **Placing needles in non-acupuncture points.**

This method tests the validity of using specific acupuncture points. If acupuncture is given but

the needles are placed in non-acupuncture points (unknown to the patient) and the results are the same as when acupuncture points are used then this shows that specific, important acupuncture points do not exist.

Many trials have been done using this method and the conclusion is that acupuncture gets the same results in patients no matter where the needles are placed.

2. **Using sham needles to mimic the effect of acupuncture.**

Retractable acupuncture needles have been developed which look like the real thing; the only difference is that the point retracts rather than penetrating the skin. To people who have never had acupuncture before they feel genuine. Using retractable needles tests whether needling itself, rather than acupuncture per sé, has any effect.

Again, it is found that people respond in the same way whether genuine needles or sham needles are being used.

These two methods show that the theory of acupuncture involving Qi, meridians and acupuncture points, is not valid and that results can be obtained whether needling occurs or not. It's the belief that acupuncture is being performed that seems to make the difference: the **placebo effect**.

Needling and the brain

Some recent experiments have been performed to look at the effect that acupuncture (strictly speaking - needling) has on the brain compared to using sham needles. It is found that areas of the brain are activated or deactivated (research has given contradictory findings) with needling and not when sham needles are used.

Is this proof that acupuncture works? Well the findings have been hyped by the press but the findings only show that the brain responds when the skin is pierced by a needle. That does not mean anything on its own. If needling produced results better than sham *and* the brain responds in a different way, then the finding may have offered an explanation.

Acupuncture and pain relief

If there is one area that acupuncture can claim to have an effect it's in pain relief. Although most evidence supporting acupuncture can be dismissed as anecdotal, trials have been done where acupuncture does show a pain relieving effect above placebo. The effect is not large, of the same magnitude as taking Aspirin or

Ibuprofen, but nonetheless it's there and cannot be ignored.

That's not to say that there are not problems with such claims however. Pain is an entirely subjective experience; it cannot be directly measured and the severity felt depends to a large extent on the patient's state of mind which can be influenced by the practitioner giving the treatment. This leads on to the problem of blinding procedures with acupuncture. The practitioner is always aware of whether he's giving real or sham acupuncture and which patients he's giving them to. This can lead to the 'experimenter effect' influencing the outcome of trials.

The pain relief effect does seem to exist; however, it's not clear whether it's a real effect of acupuncture or a strong placebo effect that's induced in the patient by the elaborate procedure of an acupuncture treatment.

The dangers and risks of acupuncture

Acupuncture is not inherently dangerous but being an invasive technique, it is not risk free.

Haematoma may result from the accidental puncture of a circulatory structure. Nerve injury can result from the accidental puncture of any nerve. Brain damage or stroke is possible with very deep needling at the base of skull. Also rare, but possible, is pneumothorax from deep needling into the lung, and kidney damage from deep needling in the lower back. Needles that are not properly

sterilized can transfer diseases such as HIV and hepatitis.

Severe injury from acupuncture is rare, but [not unheard of](#).

There is also the danger, common to all alternative therapies, of not seeking proper medical treatment because of an over reliance on alternatives. Acupuncturists are not doctors and will not have the capability of diagnosing a serious illness from its typical symptoms.

Conclusion

Acupuncture is a pseudoscience. The practise is based on untenable principles and the small amount of evidence there is to support its use in pain relief can also be called into question.

Although there are claims that it has a mild pain relieving effect, it probably does so simply because it's an elaborate placebo. Whether the mild pain relieving properties of acupuncture are real or not, the claims of the efficacy of acupuncture are grossly over-exaggerated.

If there is a use for Acupuncture, it can only be in mild pain relief. The question then becomes a matter of whether the cost of acupuncture for this mild pain relief can be justified.

Further reading:

<http://www.ebm-first.com/?cat=43>

<http://dcscience.net/?p=45>

<http://www.medicine.ox.ac.uk/bandolier/band72/b72-5.html>

John Jackson, Jason Braithwaite & Wendy Cousins.

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