

# DRUG & ALCOHOL FINDINGS *Hot topic*

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## Acupuncture: potential value of a 'theatrical placebo'

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Acupuncture is a key component of traditional Chinese medicine, and practiced by some professionals such as those in the [Acupuncture Association of Chartered Physiotherapists](#) under the umbrella of evidence-based western medicine. While there are certainly many patients receptive to complementary and alternative therapies, the question for this hot topic is whether these therapies can or should be recommended within mainstream healthcare spaces for their effectiveness in *treating* acute substance use problems and disorders, or *relieving symptoms* of withdrawal.

In medicine generally, whether acupuncture can be considered a bona fide treatment has been hotly contested. Cynical of the benefits of acupuncture, pharmacologist David Colquhoun and neurologist Steven Novella [argued](#) in 2013 that "the benefits of acupuncture [were] likely nonexistent, or at best ... too small and too transient to be of any clinical significance"; and in what became the headline message of their editorial, that acupuncture may be "little or no more than a theatrical placebo".

The pro-acupuncture counter-argument published in the same journal, written by Shu-Ming Wang and colleagues, [concluded that](#) "Instead of criticizing this ancient art with arguments culled from modern medicine and science, physicians and scientists should try to integrate current knowledge into this ancient, yet ever-evolving practice so it may be used to treat conditions for which pharmaceutical interventions are ineffective and/or potentially dangerous."

This debate is also present within substance use treatment – when there is no accepted medication, and no specific psychosocial therapy for the particular problem presented by a client, one solution has been to offer complementary therapies, among which acupuncture (usually at sites in the ear) is by far the most widely used. A case in point is those dependent on cocaine, for whom acupuncture is a [popular alternative](#), though [in fact](#) just about any psychosocial therapy helps some of these clients some of the time. It is also commonly used to ameliorate withdrawal symptoms from drugs including [alcohol](#) and [heroin](#).

### HOW ACUPUNCTURE WORKS

An [extract](#) from the NHS choices website

"Western medical acupuncture is the use of acupuncture following a medical diagnosis. It involves stimulating sensory nerves under the skin and in the muscles of the body."

"This results in the body producing natural substances, such as pain-relieving endorphins. It's likely that these naturally released substances are responsible for the beneficial effects experienced with acupuncture. [...]"

"Traditional acupuncture is based on the belief that an energy, or 'life force', flows through the body in channels called meridians. This life force is known as Qi (pronounced 'chee')."

"Practitioners who adhere to traditional beliefs about acupuncture believe that when Qi doesn't flow freely through the body, this can cause illness. They also believe acupuncture can restore the flow of Qi, and so restore health."

### When sham treatment is as good as the 'real' thing

However, the faith placed in acupuncture by services and patients appears contradicted by research, which generally finds that whether the needles are placed where they are supposed to be or at 'sham' sites (see ▶ [box](#) describing how acupuncture works) makes little or no difference.

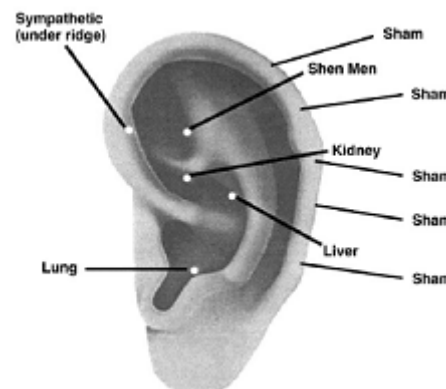
For example, in patients withdrawing from alcohol, nicotine or drugs, acupuncture was found **no better** at reducing withdrawal-associated anxiety than acupuncture needles inserted at sham sites, or a relaxing experience in the same setting as acupuncture was provided. In other words, if acupuncture does work, it seems it may not be working in the way it is supposed to (again, see ► [box](#)).

The study above tested the [National Acupuncture Detoxification Association protocol](#), developed in the 1970s to “help addicts with their recovery dealing with trauma, anxiety, depression, irritability and cravings”. The following [extract](#) from the UK version of the website describes the protocol:

*“The process involves the gentle insertion of up to five fine, single use, [sterilised], stainless steel disposable needles into specific energetic points in the outer ear. No electrical stimulation is used.”*

*“The five ear points:*

- 1. Sympathetic – calms the nervous system and helps with overall relaxation.*
- 2. Shen Men / ‘Spirit Gate’ – reduces anxiety and nervousness.*
- 3. Kidney Point – for calming fears and healing internal organs.*
- 4. Liver Point – for detoxification, blood purification, and to quell aggression.*
- 5. Lung Point – promotes aeration and helps clients let go of grief.”*



**An image depicting the National Acupuncture Detoxification Association acupuncture protocol and ‘sham’ points**

*“The outer ear acts like a switchboard that sends impulses to the brain, which stimulate the release of endorphins, lowers stress and induces relaxation.”*

Traditionally, studies comparing ‘real’ versus sham acupuncture points (see image ► [above right](#)) have kept the other conditions of treatment the same, including the type of needle used – the **only difference being** where the needles are placed. More recently, other types of needles have been used for the **control** group, **for example** using a needle that “has a blunt tip and achieves no skin penetration”.

Similar improvements in ‘real’ and sham acupuncture suggest that acupuncture may only be having a ‘placebo effect’. Of course, as the [NHS website](#) acknowledges on its page *The placebo effect and complementary and alternative medicine*, “improvement in a health condition due to the placebo effect is still improvement, and that is always welcome”. Nonetheless, “it is important to remember that for many health conditions, there are treatments that work better than placebos [... and by choosing] a treatment that only provides a placebo effect, [the patient] will miss out on the benefit that a better treatment would provide.”

When in 2011 the evidence for acupuncture in relation to alcohol treatment and withdrawal **was reviewed** for the UK’s National Institute for Health and Care Excellence, the verdict reached for this official advisory body was that conflicting evidence meant no recommendation could be made, except for more research. Currently, acupuncture is only a **recommended treatment option** for chronic tension-type headaches and migraines, though it is also used for treating other types of pain. More research too was called for in 2006 when the respected Cochrane collaboration published **an assessment** of whether acupuncture at sites on the ear has helped in the treatment of cocaine dependence. The unusually definite conclusion was, “There is currently no evidence that auricular acupuncture is effective for the treatment of cocaine dependence.” However, evidence was limited and from methodologically poor studies, so neither could it be said for sure that acupuncture was *ineffective*.

More up-to-date reviews have yielded positive results, but the small number of studies on which they were based fundamentally limits the strength of the conclusions that can be drawn. This was the case with a **meta-analysis** combining the results of studies published up to August 2016. It **found** a significant difference in reductions of clinical symptoms such as craving and withdrawal between the acupuncture and **control** group in patients with alcohol use disorder, where the control groups were variously given placebo needles or sham acupuncture via needles inserted into nonspecific points, or a different type of intervention altogether (eg, relaxation or transdermal stimulation). Another **review** reported the potential for acupuncture to reduce alcohol craving and withdrawal symptoms (to a statistically significant degree), but this was based on only two studies (of the 15 randomised controlled trials assessed). Similarly, a 2018

[review](#) of non-human studies (involving rats) found evidence that acupuncture may effectively reduce alcohol consumption, reduce [alcohol withdrawal](#) syndrome, and rebalance neurotransmitters and hormones associated with cravings and consumption. However, the key consideration of this review was the application of acupuncture to alcohol use disorder, and it is questionable whether the conclusions could be extrapolated from rats to humans as rats cannot have what we understand as 'alcohol use disorder'. Finally, a [systematic review](#) reported that results in favour of acupuncture for withdrawal/craving and anxiety symptoms are limited by low-quality bodies of evidence, and that overall, available evidence suggests no consistent differences between acupuncture and comparators for substance use.

## Placebo effect can provide a platform for active ingredients

In the broader context of trying to support people experiencing problem drinking and drug use through their recovery, offering something concrete like acupuncture – even if in reality this is 'only' a placebo – may attract people to services, and, as some studies have suggested, help [retain patients](#) in treatment by engaging clients and staff in something they believe is worthwhile. If this is the case, acupuncture could indirectly improve outcomes by increasing the patient's exposure to treatment's active ingredients. These considerations may explain why despite no convincing evidence of efficacy (ie, how well something works under highly controlled conditions), acupuncture has featured in many of the [treatment plans](#) developed by local partnerships responsible for commissioning treatment services in England. It will take more and different kinds of studies to determine whether even if all they are buying is a possible placebo effect, it remains a worthwhile investment.

Is there something valuable here which simply has not yet been *proven* to work due to few and sometimes methodologically weak studies, or is trying to find proof a dead end because the technique is simply ineffective? For the evidence to date run this [hot topic search](#).

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