

Researchers find acupuncture reduces alcohol withdrawal symptoms in rats

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A team of researchers affiliated with several institutions in the Republic of Korea and one from the U.S., has found that using acupuncture on alcohol-dependent rats can reduce withdrawal symptoms. In their paper

published in the journal *Science Advances*, the group describes their study of a certain type of acupuncture and its relation to withdrawal symptoms in rats, and what they found.

Alcohol is very addictive—those who become hooked on it find it very difficult to stop drinking. As the researchers note, relapse is very high, despite a host of current treatment options. Because of that, the team began looking into other treatment options that might reduce the numbers of people who go back to drinking after treatment. More specifically, they studied what they describe as [withdrawal](#)-associated impairment in β -endorphin neurotransmission in a part of the hypothalamus, and tested a treatment using acupuncture.

Acupuncture is, of course, an alternative type of integrative medicine that involves sticking needles into various parts of the body—its effectiveness is still debated. But prior research has shown that insertion of acupuncture needles at a certain point in the wrist (HT7) activates β -endorphin neurons in the hypothalamus—doing so releases what have become known as "feel-good" chemicals, which can help reduce pain. This is what led the researchers to consider it as a way to reduce alcohol symptoms.

The work by the team involved feeding ethanol (the alcohol in [alcoholic drinks](#)) to test rats for 16 days to get them addicted. After alcohol cessation, the rats began experiencing typical withdrawal symptoms such as anxiety and tremors. Some of the rats were then subjected to acupuncture. The researchers report that those rats treated with acupuncture experienced reduced [withdrawal symptoms](#). They also found that when the treated rats were allowed to self-administer ethanol, they consumed less than untreated rats. The researchers report that the rats treated with acupuncture had higher levels of beta-endorphins than those that went untreated. And they found that injecting endorphins directly into the dependent [rats](#) had very nearly the same effect. The

researchers conclude that [acupuncture](#) might be a new treatment option for humans who are trying to stop drinking.

More information: Suchan Chang et al. Acupuncture attenuates alcohol dependence through activation of endorphinergic input to the nucleus accumbens from the arcuate nucleus, *Science Advances* (2019). [DOI: 10.1126/sciadv.aax1342](https://doi.org/10.1126/sciadv.aax1342)

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