

New research finds drug for alcohol use disorder ineffective

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Credit: University of Liverpool

A new study, published in the *Addiction* journal, conducted by researchers from the University of Liverpool highlights the ineffectiveness of a specific drug treatment for alcohol use disorders.

Baclofen is a medication which has been used since the 1970s as an anti-spasticity treatment. More recently it has been used as a treatment for alcohol use disorders.

Baclofen has a key advantage compared with currently licensed medications: it is excreted largely through the kidneys. It is therefore possible to give [baclofen](#) to people suffering alcohol-related liver disease, a patient population with very high needs, and who often can't tolerate licensed drug treatments.

'Wonder drug'

Many studies have found baclofen to be successful in treating alcohol use disorders, some have claimed it a wonder drug capable of curing alcoholism.

Following a number of successful [clinical trials](#) the use of use of baclofen increased massively and sales of the drug have soared in some countries.

In more recent years, there have been a growing number of studies which directly compare baclofen against placebo on a number of outcome measures. Often these outcome measures are drink-related, e.g. rate of abstinence at the end of the medication trial, or number of [heavy drinking](#) or abstinent days during the trial.

However, there are other measures, potentially related to why baclofen might work (i.e. its mechanism of action). Several possibilities have been identified; firstly baclofen may reduce craving for alcohol, secondly there are reports that baclofen reduces negative mood states, such as anxiety and depression, which are known risk factors for harmful drinking.

Abstinent rates

Researchers, Dr. Abi Rose and Dr. Andy Jones, from the University's Addiction Research Team conducted a meta-analysis on 12 clinical trials comparing baclofen with placebo on at least one of the described drinking outcomes, craving, anxiety, or depression.

Meta-analysis is an advanced statistical procedure that allows the researcher to merge the results of all the studies regarding a specific topic into a quantitative measure representing the size of the overall effect of one variable on another variable. Thus, meta-analysis provides more accurate and reliable outcomes compared to the single experiment.

The researchers found that baclofen led to higher abstinent rates compared with placebo, and that eight individuals would need to be treated with baclofen for one to remain abstinent due to the medication.

However, all other outcomes failed to show an effect of baclofen: baclofen did not increase abstinent days or decrease number of heavy drinking days during treatment, neither did it reduce rates of [alcohol](#) craving, anxiety or depression.

Issues highlighted

Dr. Rose, said: "Our research highlights several issues with the existing body of trials. Many of the studies only recruited a limited number of patients, so maybe too small to find an effect.

"The existing trials also differ on a number of factors, such as the dose of baclofen given and the length of treatment. Importantly, the pharmacokinetics of baclofen (how it moves in the body) are not well-understood, so there may be individual factors influencing the

effectiveness of baclofen that we do not yet understand."

Dr. Jones, said: "This new meta-analysis shows that baclofen is no more effective than placebo on a range of key outcome measures, suggesting that the current increasing use of baclofen as a treatment for [alcohol use disorders](#) is premature."

More information: Abigail K. Rose et al. Baclofen: its effectiveness in reducing harmful drinking, craving, and negative mood. A meta-analysis, *Addiction* (2018). [DOI: 10.1111/add.14191](https://doi.org/10.1111/add.14191)

Provided by University of Liverpool

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