

# Alcohol shown to act in same way as rapid antidepressants

September 28 2016

---



Credit: CC0 Public Domain

Can having a few drinks help people with clinical depression feel better?

Yes. At least in terms of biochemistry.

In a study published in the current issue of the journal *Nature Communications*, researchers found that alcohol produces the same neural and molecular changes as drugs that have proven to be rapidly effective antidepressants.

"Because of the high comorbidity between [major depressive disorder](#) and alcoholism there is the widely recognized self-medication hypothesis, suggesting that depressed individuals may turn to drinking as a means to treat their depression," said the study's principal investigator, Kimberly Raab-Graham, Ph.D., associate professor of physiology and pharmacology at Wake Forest School of Medicine, part of Wake Forest Baptist Medical Center. "We now have biochemical and behavioral data to support that hypothesis." "This, however, does not at all suggest that alcohol can be regarded as an effective treatment for depression.

"There's definitely a danger in self-medicating with alcohol," Raab-Graham said. "There's a very fine line between it being helpful and harmful, and at some point during repeated use self-medication turns into addiction." In their study using an animal model, Raab-Graham and her colleagues found that a single dose of an intoxicating level of alcohol, which has been shown to block NMDA receptors (proteins associated with learning and memory), worked in conjunction with the autism-related protein FMRP to transform an acid called GABA from an inhibitor to a stimulator of neural activity. In addition, the research team found that these biochemical changes resulted in non-depressive behavior lasting at least 24 hours.

This study demonstrated that alcohol followed the same [biochemical pathway](#) as rapid antidepressants in the animals, while producing behavioral effects comparable to those observed in people. In recent years, single doses of rapid antidepressants such as Ketamine have proven capable of relieving [depressive symptoms](#) within hours and lasting for up to two weeks, even in individuals who are resistant to

traditional antidepressants.

"Additional research is needed in this area, but our findings do provide a biological basis for the natural human instinct to self-medicate," Raab-Graham said. "They also define a molecular mechanism that may be a critical contributor to the comorbidity that occurs with [alcohol](#) use disorder and major depressive disorder."

Provided by Wake Forest University Baptist Medical Center

Citation: Alcohol shown to act in same way as rapid antidepressants (2016, September 28)  
retrieved 18 April 2024 from  
<https://medicalxpress.com/news/2016-09-alcohol-shown-rapid-antidepressants.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--