

# The connection between alcoholism and depression

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Alcoholism and depression often go hand-in-hand.

According to studies, alcoholism has risen sharply in the 2000s, to the

point that one such study suggests that one in eight people meet the criteria as an alcoholic.

And [depression](#) affects many of the 140 million people worldwide struggling with alcohol use disorders. Only a few drugs are approved for treating the disorder. The goal of those medications is to reduce alcohol cravings, but they do not treat psychiatric disorders.

Help may be on the way.

Purdue University researchers have developed a technology that may treat [alcohol use disorder](#) by reducing [alcohol intake](#) while also having the potential to treat depression.

The Purdue team focused on a G [protein-coupled receptor](#), called the [delta opioid receptor](#), which is a novel drug target that is different from the receptor in the body that binds [prescription opioids](#). They developed drugs that bind to this new target and selectively activate a particular protein-signaling cascade of this receptor.

"We can then use this unique property of the drug to provide a therapeutic effect and avoid a side effect," said Richard van Rijn, an assistant professor of medicinal chemistry and molecular pharmacology, who led the research team. "Current types of delta opioids have been failing in clinical trials because, unlike ours, they activate multiple cascades, including those associated with increased side effects like seizures."

The Purdue drug has proven effective in preclinical tests in reducing alcohol use and has pharmacological properties that should enable it to reduce depression without inducing seizures.

"Our lab's research is focused on providing new hope for patients

dealing with neurological disorders and addictions," van Rijn said.

**More information:** Bridget F. Grant et al. Prevalence of 12-Month Alcohol Use, High-Risk Drinking, and DSM-IV Alcohol Use Disorder in the United States, 2001-2002 to 2012-2013, *JAMA Psychiatry* (2017).

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