

THE BRAIN

Chemical In Body Odor Makes Men Less Aggressive But Women More So, Study Finds

THE BRAIN

Trauma And Transformation – A Psychologist On Why Difficult Experiences Can Radically Change Us

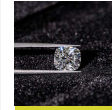
THE BRAIN

Hikikomori: Understanding The People Who Choose To Live In Extreme Isolation

THE BRAIN

Ketamine Reduces Suicidality By Enhancing Cognition Of Depressed Patients

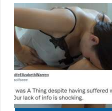
POPULAR STORIES



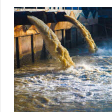
Pandora Is Ditching Mined Diamonds, Moving To Sustainable Lab-Made Alternatives Only



40 Percent Of American Kids Think Hot Dogs And Bacon Are Plants



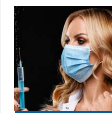
"Period Poops" Are A Thing, And This Is Why You Get Them



Map Shows Where Human Poop Is Entering The Oceans



Woman "Paranoid" About Dating After Ancestry DNA Test Reveals Over 50 Siblings



Austrian Brothel Offers Free "Session" If You Get Vaccinated At Their Clinic

WEEK IN SCIENCE

The IFLScience Newsletter

Sign up today to get weekly science coverage direct to your inbox

SIGNUP

Psilocybin Can Reduce Cravings In Alcohol Dependent Rats, And Now We Know Why

0 SHARES

Share on Facebook Share on Twitter +



THE BRAIN

DON'T DO IT, GEOFF! IMAGE CREDIT: KANASHI/SHUTTERSTOCK.COM

Despite having a reputation as something of a hippie drug, psilocybin or “magic” mushrooms have actually been shown to have a wide range of legit medical benefits in recent years. It can [relieve depression](#), [improve creative thinking ability](#), and possibly even [kickstart the evolution](#) of the human species.

A new study, published today in the journal [Science Advances](#), has found another potential benefit of psychedelic fungi: treating alcoholism. In a rat model of alcohol misuse and addiction, researchers found that alcoholism relapse was significantly reduced when the rats were given a dose of psilocybin.

“[P]silocybin administration was capable of restoring mGluR2 deficit in alcohol-dependent rats and thus could decrease relapse behavior,” explain the study authors. “Therefore, we conclude that psilocybin should be considered for clinical trials in alcohol-dependent patients.”

That mGluR2 is the key. It’s a particular type of protein found in our brains that helps us learn, remember, and feel things like pain and anxiety. It also allows us to get drunk, high on [cocaine](#), and [rabies](#). Basically, if glutamate receptors were movies, mGluR2 would be *The Hangover*.



By Katie Spalding

17 NOV 2021, 19:00

Unfortunately, it's also responsible for when we take those behaviors too far. The more alcohol a rat drank, the study found, the more mGluR2 they lost – and in an ironic feedback loop, the less mGluR2 the rats had, the more alcohol they craved.

“[A] corticoaccumbal mGluR2 deficit is both necessary and sufficient for diminished cognitive flexibility and increased drug craving ... Prefrontal mGluR2 deficits can be caused by excessive alcohol and cocaine exposure,” the study explains. “We ... demonstrate that pharmacological targeting of mGluR2 dysfunction via psilocybin may provide an effective strategy for relapse prevention in [alcohol use disorder].”

That's because, as the researchers showed, a dose of psilocybin was able to undo the damage done by the booze: it could restore the mGluR2 that the alcohol abuse had destroyed. The effect was “highly significant,” the study notes, with a small dose of 1mg/kg performing as well as a dose 2.5 times the size.

Psilocybin was first seen to help alcohol dependency in [2015](#), with interest in the potential for this new therapy ramping up [pretty quickly](#) after that. But precisely why psilocybin seemed to help was not well understood – in fact, even the mechanism behind alcohol dependency remained mysterious. This new study provides not just a potential treatment, but an explanation: it's an mGluR2 deficit.

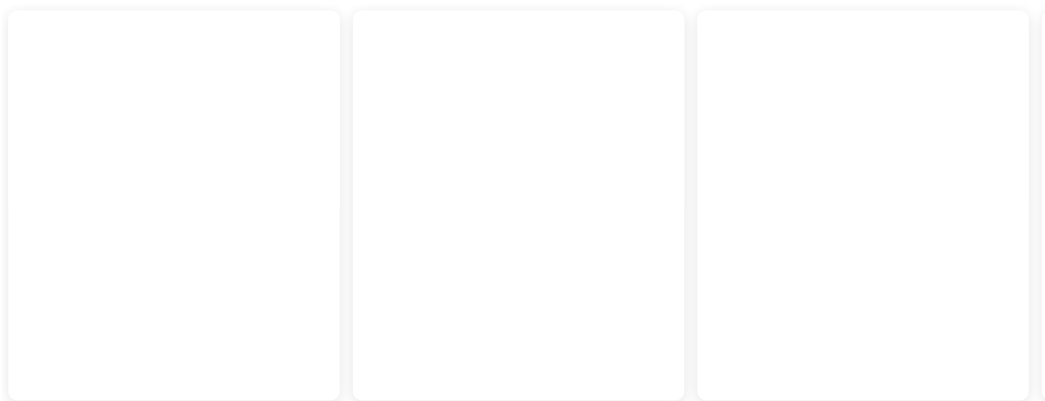
Of course, as with any study whose results rely heavily on drunk rodents, there are some limitations. First and foremost: yes, this study was carried out on rats, and the results may not be generalizable to humans. In fact, they may not even be generalizable to rats, since the study notes that the particular family of rats used in the experiment reacted unexpectedly well to being alcoholics compared to other rats.

Nevertheless, the researchers think their results warrant further investigation – in particular, human trials.

“[W]e suggest performing an experimental medicine trial in alcohol-dependent patients to demonstrate improved cognitive flexibility in response to a single administration of psilocybin,” the authors write. “Second, we suggest performing a cue-elicited craving study in alcohol-dependent patients in the [MRI] scanner ... following a single application of psilocybin.”

Should both these trials be successful, the researchers want to look into how well psilocybin stops relapse in humans. Until then, there's just one thing to do: figure out where to buy some teeny-tiny sobriety chips.

Popular in the Community



OUR COMMUNITY




1,631

Comments posted on **IFL Science** this month

[Comment](#)


 IF YOU LIKED THIS STORY, YOU'LL LOVE THESE

 SHARE

THE BRAIN

5 NOV 2021 5.8K SHARES


Violent Video Games Don't Make Violent Gamers, Confirms Study

 SHARE

THE BRAIN

5 NOV 2021 658 SHARES

Cleo Smith Case: How 'Cognitive Interviewing' Can Help Police Compile The Most Reliable Evidence

 SHARE

THE BRAIN

5 NOV 2021 9.3K SHARES


What Happens When You Mix Cannabis With Psychedelics?

 SHARE

THE BRAIN

29 OCT 2021


Can We Explain Near-Death Experiences?

 SHARE

THE BRAIN

28 OCT 2021

The Science Of Fright: Why We Love To Be Scared

 SHARE

THE BRAIN

27 OCT 2021

This Is What A Psychotic Hallucination Feels Like, Study Shows

NAVIGATION

- Home
- Team
- About
- Careers
- Subscribe

CONTACT

- Submit News
- Contact

EDITORIAL

- Editorial Mission
- Correction Policy

LEGAL

- Terms of Use
- Privacy Policy
- Cookie Policy

