

Magic mushroom health promise: Psilocybin's antidepressant brain-rewiring capabilities come into focus

Psilocybin, a psychedelic compound that can be derived from over 200 species of mushroom, can remodel connections in the mouse brain. That is the conclusion of a new [study](#) that examined structural changes in the brain that might explain psilocybin's enduring antidepressant effects.

The study was led by researchers at Yale University. Senior author Alex Kwan, associate professor of psychiatry and neuroscience, said in a [press release](#), "We not only saw a 10% increase in the number of neuronal connections, but also they were on average about 10% larger, so the connections were stronger as well."

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More research will need to be conducted to work out whether specific brain areas or cell types are especially important in psilocybin's antidepressant effects, but these findings illustrate that psychedelics like psilocybin, and the already-approved novel antidepressant ketamine, may work in a similar way.

"Synaptic rewiring may be a mechanism shared by compounds with rapid antidepressant effects," write the authors. Summing up, Kwan commented, "It was a real surprise to see such enduring changes from just one dose of psilocybin," he said. "These new connections may be the structural changes the brain uses to store new experiences."

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