

# Statins may provide protection against depression

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Statins have been hailed as a wonder drug; the cholesterol-lowering drugs have been prescribed to tens of millions of people since their approval in the late 1980s to prevent heart attack and stroke. But the drugs may yet have additional benefits, some research has hinted,

including on mental health. Now, a new study examines the influence of statins on emotional bias, a marker for risk of depression. The study appears in *Biological Psychiatry*.

Researchers led by Amy Gillespie, Ph.D., at the University of Oxford, Oxford, UK, conducted the online observational study from April 2020 through February 2021, at the height of the SARS-CoV-2 pandemic, when global stress levels were elevated and the incidence of psychiatric disorders spiked.

Over 2,000 participants in the UK recorded information about their current psychiatric symptoms, medications, and other lifestyle factors. They also performed [cognitive tasks](#) meant to measure memory, reward, and emotion processing, which are linked to depression vulnerability. One task required participants to identify the emotional expressions of faces, which displayed varying degrees of fear, happiness, sadness, disgust, anger, or fear.

The vast majority of subjects (84%) were not taking either medication, but a small group were taking only statins (4%), only a different class of anti-hypertension medication (6%), or both (5%).

Participants taking statins were less likely to recognize fearful or angry faces and more likely to report them as positive, indicating they had reduced negative emotional bias.

Dr. Gillespie said that they "found that taking a statin medication was associated with significantly lower levels of negative emotional bias when interpreting facial expressions; this was not seen with other medications, such as blood pressure medications."

"We know that reducing negative emotional bias can be important for the treatment of depression," said Dr. Gillespie. "Our findings are

important as they provide evidence that statins may provide protection against depression. Of particular note, we saw these results during the high-stress context of the COVID-19 pandemic. Our findings also provide the first potential psychological explanation of statins' [mental health](#) benefits," in that they seem to affect emotion processing. It remains unclear exactly how statins could protect against mental illness, but one possibility is that they may work through anti-inflammatory mechanisms, which have also been implicated in depression.

John Krystal, MD, Editor of *Biological Psychiatry*, said of the work, "Statins are among the most commonly prescribed medications based on their ability to prevent heart attacks and strokes. These new data raise the possibility that some of their positive effects on health could be mediated by the effects of these drugs on the brain that promote emotional resilience."

"Researchers should prioritize investigating the possible use of statins as a preventative intervention for depression. Before use in [clinical practice](#), it is important that future research confirms the potential psychological benefits of statins through controlled, randomized clinical trials," Dr. Gillespie concluded.

**More information:** Amy L. Gillespie et al, Associations between statin use and negative affective bias during COVID-19: an observational, longitudinal UK study investigating depression vulnerability, *Biological Psychiatry* (2022). [DOI: 10.1016/j.biopsych.2022.03.009](#)

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