



Use of Metformin by Adults With Diabetes Linked to Lower Risk of Long COVID

Patients taking metformin had a 13% to 21% lower incidence of long COVID or death than those taking other diabetes medications.

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Adults who use the prescription drug metformin to treat their type 2 diabetes have a lower risk of developing long COVID or dying after a COVID-19 infection than people with diabetes who take other anti-diabetes medications, according to a large study supported by the National Institutes of Health (NIH).

The findings, [published in the journal Diabetes Care](#), were based on health data from millions of U.S. patients and could have broader implications for use of metformin in long COVID prevention generally. The study is part of the NIH-funded [Researching COVID to Enhance Recovery \(NIH RECOVER\) Initiative](#).

An earlier NIH-supported [clinical trial](#) in 2023 showed that treatment with metformin, commonly used to help control blood sugar, reduced the risk of long COVID by as much as 40% in nearly 1,300 U.S. adults with overweight or obesity, most of whom did not have diabetes. To see if the drug had a similar effect in people with diabetes, researchers examined electronic health record data for nearly 38 million Americans from two large U.S. databases.

The researchers compared health records from 75,996 adults taking metformin for their type 2 diabetes to 13,336 records from patients who were not taking metformin but were using other types of diabetes medicines. Researchers were specifically looking at how many patients either died or were diagnosed with long COVID within six months after infection. They found that patients taking metformin had a 13% to 21% lower incidence of long COVID or death than those in the non-metformin group.

Scientists are not clear how metformin may prevent long COVID, but they speculate the possibility of several mechanisms that reduce inflammation, decrease viral levels, and suppress the formation of disease-related proteins.

Metformin can have [side effects](#) and should be used with caution in some conditions. For these

and other reasons, people should not take the drug unless prescribed by a doctor.

[Long COVID](#) is marked by a wide range of symptoms – including chronic fatigue, brain fog, and chest pain – that vary from person to person and can last for weeks, months, or years after infection from SARS-CoV-2, the virus that causes COVID-19. While rates of new cases have decreased since early in the COVID-19 pandemic, millions of people are still living with it.

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