

# Burden of neurologic disease found to be higher after influenza compared to COVID-19

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People who have an influenza infection are more likely to need medical care for neurologic disorders within the next year than people who have

a COVID-19 infection, according to a study published in the March 20, 2024, online issue of *Neurology*. The study looked at people who were hospitalized with either influenza or COVID-19. The study did not look specifically at outcomes associated with long COVID.

"It's important to note that our study did not look at long COVID outcomes, and our results do not necessarily conflict with the findings in other research showing an increase in neurologic symptoms in people with long COVID," said study author and Chair of the American Academy of Neurology's Health Services Research Subcommittee Brian C. Callaghan, MD, MS, FAAN, of University of Michigan Health in Ann Arbor.

"While the results were not what we expected to find, they are reassuring in that we found being hospitalized with COVID did not lead to more care for common neurologic conditions when compared to being hospitalized with influenza."

For the study, researchers used health care claims data to compare 77,272 people who were hospitalized with COVID-19 to the same number of people who were hospitalized with influenza. Then they looked to see how many of those people had medical care within the following year for any of the six most common [neurologic disorders](#)—migraine, epilepsy, stroke, neuropathy, movement disorders and dementia.

The researchers also looked at the people without those conditions at the start of the study to see how many developed a new diagnosis for any of the six conditions during the following year.

People who had a COVID-19 infection were less likely to need care in the following year for common neurologic conditions than people who had an [influenza infection](#).

Of those with COVID, 2.0% received care for migraine compared to 3.2% of those with influenza, and 1.6% of those with COVID received care for epilepsy compared to 2.1% of those with influenza. For neuropathy, the numbers were 1.9% and 3.6%; movement disorders were 1.5% and 2.5%; stroke was 2.0% and 2.4%; and dementia was 2.0% and 2.3%.

Once researchers adjusted for other factors that could affect the need for care, such as age, sex and a number of other health conditions, they found that those with a COVID infection had a 35% lower risk of receiving care for migraine than people who had influenza. Those with COVID had a 22% lower risk of receiving care for epilepsy and a 44% lower risk of receiving care for neuropathy. They also had a 36% lower risk of receiving care for [movement disorders](#), a 10% lower risk for stroke and a 7% lower risk for dementia.

When researchers looked to see who developed new neurologic conditions in the year after infection, they found that 2.8% of those with COVID developed one of the six neurologic conditions, compared to 4.9% of those who had influenza.

"Since COVID-19 has now infected the majority of adults in the US, it's good news that it behaves similarly to other respiratory viruses with respect to these common neurologic conditions," said study author Adam de Havenon, MD, MSc, of Yale University in New Haven, Connecticut, and a member of the American Academy of Neurology Health Services Research Subcommittee.

"There was concern that the already limited access to neurologic care would further shrink if we had a dramatic increase in neurologic care after COVID-19 infection."

A limitation of the study is that the data platform the researchers used is

not a nationally representative sample, so the results cannot be broadly generalized to all COVID-19 survivors in the United States.

**More information:** *Neurology* (2024).

Provided by American Academy of Neurology

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