

Patients with neurological disease are likelier to die after COVID, finds study

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People with neurological disease have a greater chance of death after contracting COVID-19, according to a new University of Alberta study. The research also confirms a higher risk of developing new neurological

disorders after COVID infection.

"For those who have [neurological diseases](#)—if you have Parkinson's, if you have dementia, if you have a [seizure disorder](#)—you should seriously consider getting a vaccine," and carefully monitor symptoms after contracting the virus, says neurology resident Candace Marsters, first author on the paper [published](#) recently in the journal *Brain*.

The study is the first to look at a large population of people previously diagnosed with disorders such as dementia, Parkinson's, encephalopathy and epilepsy—as well as those with a history of stroke or seizures—before and after contracting COVID.

Marsters says her team—which includes Faculty of Medicine & Dentistry researchers Grace Lam, Christopher Power, Jeffrey Bakal and Finlay McAlister—had access to a huge dataset that included 350,000 Alberta patients who tested positive for COVID in the first year of the pandemic.

The team compared symptoms emerging in the acute phase of the illness, i.e., the first seven days to three months after infection, to those emerging between three months and nine months after infection.

The findings align with other studies that show an increased mortality rate during the COVID-19 pandemic among people with premonitory neurological conditions, Marsters says. She points out that—while her team found an association between COVID infection and neurological disease mortality—they were not able to establish causation.

Marsters' study also confirms others that show COVID infection can affect the brain and nervous system—including incidence of encephalopathy, dementia, seizure/epilepsy, brain fog and myelitis—within three months of a positive COVID test. Her team also

found a higher incidence of inflammatory myopathy and coma within nine months of infection.

The study says that, since the risk of being diagnosed with a neurological disease continues for an extended period after a COVID [infection](#), it "warrants heightened awareness of these disorders during medical follow-up."

In June of 2021, the U of A opened the Long COVID Clinic, the first of its kind in Alberta, for people who suffer symptoms that persist at least 12 weeks beyond the original COVID-19 diagnosis.

Many patients treated at the clinic have complained of myriad neurologic symptoms, says Maeve Smith, co-director of the clinic. They include persistent loss of sense of smell and taste, nerve pain and weakness, insomnia and neurocognitive dysfunction—problems with short-term memory, concentration and focus.

"Patients are often unable to return to work because their physical and cognitive function isn't where it needs to be to function at previous levels," says Smith. "Or they have to find a daycare because they can't run around after their toddler."

The new research "demonstrates that COVID-19 continues to burden health care systems," say the study's authors. They write that their findings might convince people at higher risk for complications to seek vaccination or, if they catch COVID, to seek medical attention such as antiviral therapy sooner.

More information: Candace M Marsters et al, Increased frequency and mortality in persons with neurological disorders during COVID-19,

Brain (2024). [DOI: 10.1093/brain/awae117](https://doi.org/10.1093/brain/awae117)

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