

COVID-19 linked to increased Alzheimer's risk

Neurology Reviews. 2022 November;30(11)

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FROM THE JOURNAL OF ALZHEIMER'S DISEASE

COVID-19 has been linked to a significantly increased risk for new-onset Alzheimer's disease (AD), a new study suggests.

The study of more than 6 million people aged 65 years or older found a 50%-80% increased risk for AD in the year after COVID-19; the risk was especially high for women older than 85 years.

However, the investigators were quick to point out that the observational retrospective study offers no evidence that COVID-19 causes AD. There could be a viral etiology at play, or the connection could be related to inflammation in neural tissue from the SARS-CoV-2 infection. Or it could simply be that exposure to the health care system for COVID-19 increased the odds of detection of existing undiagnosed AD cases.

Whatever the case, these findings point to a potential spike in AD cases, which is a cause for concern, study investigator Pamela Davis, MD, PhD, a professor in the Center for Community Health Integration at Case Western Reserve University, Cleveland, said in an interview.

"COVID may be giving us a legacy of ongoing medical difficulties," Dr. Davis said. "We were already concerned about having a very large care burden and cost burden from Alzheimer's disease. If this is another burden that's increased by COVID, this is something we're really going to have to prepare for."

The findings were [published online](#) in *Journal of Alzheimer's Disease*.

Increased risk

[Earlier research](#) points to a potential link between COVID-19 and increased risk for AD and Parkinson's disease.

For the current study, researchers analyzed anonymous electronic health records of 6.2 million adults aged 65 years or older who received medical treatment between February 2020 and May 2021 and had no prior diagnosis of AD. The database includes information on almost 30% of the entire U.S. population.

Overall, there were 410,748 cases of COVID-19 during the study period.

The overall risk for new diagnosis of AD in the COVID-19 cohort was close to double that of those who did not have COVID-19 (0.68% vs. 0.35%, respectively).

After propensity-score matching, those who have had COVID-19 had a significantly higher risk for an AD diagnosis compared with those who were not infected (hazard ratio [HR], 1.69; 95% confidence interval [CI], 1.53-1.72).

Risk for AD was elevated in all age groups, regardless of gender or ethnicity. Researchers did not collect data on COVID-19 severity, and the medical codes for long COVID were not published until after the study had ended.

Those with the highest risk were individuals older than 85 years (HR, 1.89; 95% CI, 1.73-2.07) and women (HR, 1.82; 95% CI, 1.69-1.97).

“We expected to see some impact, but I was surprised that it was as potent as it was,” Dr. Davis said.

Association, not causation

Heather Snyder, PhD, Alzheimer’s Association vice president of medical and scientific relations, who commented on the findings for this article, called the study interesting but emphasized caution in interpreting the results.

“Because this study only showed an association through medical records, we cannot know what the underlying mechanisms driving this association are without more research,” Dr. Snyder said. “If you have had COVID-19, it doesn’t mean you’re going to get dementia. But if you have had COVID-19 and are experiencing long-term symptoms including cognitive difficulties, talk to your doctor.”

Dr. Davis agreed, noting that this type of study offers information on association, but not causation. “I do think that this makes it imperative that we continue to follow the population for what’s going on in various neurodegenerative diseases,” Dr. Davis said.

The study was funded by the National Institute of Aging, National Institute on Alcohol Abuse and Alcoholism, the Clinical and Translational Science Collaborative of Cleveland, and the National Cancer Institute. Dr. Snyder reports no relevant financial conflicts.

A version of this article first appeared on [Medscape.com](https://www.medscape.com).