

People with Parkinson's disease have a higher risk of dying from COVID-19

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A new study of approximately 80,000 patients shows that people with Parkinson's disease (PD) have a 30% higher risk of dying from COVID-19 than people without the neurodegenerative condition.

The new analysis conducted by researchers with University of Iowa Health Care based on [patient data](#) in the TriNetX COVID-19 research network suggests that Parkinson's disease is an [independent risk factor](#) for dying from COVID-19.

The UI research team led by neurologists Qiang Zhang, MD, and Nandakumar Narayanan, MD, Ph.D., identified the COVID-19 patient cohort as of July 15 and analyzed the mortality data eight weeks later. They found that 5.5% (4,290 out of 78,355) of COVID-19 patients without PD died compared to 21.3% (148 of 694) COVID-19 patients who also had PD.

However, the patients with PD were generally older, more likely to be male, and less likely to be African American than the patients without PD. All of these factors also increase the risk of death from

COVID-19.

So, the UI team used two approaches to account for these differences: logistic regression with age, sex, and race as covariates, and matching each PD patient with five non-PD patients with the exact age, sex, and race, and performing a conditional logistic regression. In both cases, the researchers found that the risk of dying from COVID-19 was 30% higher for patients with PD. The findings are published in the journal *Movement Disorders*.

"We recognize the limitations of this study; it is retrospective data from a single database, but we are confident that these data show that Parkinson's disease is independent risk factor for death in COVID-19," says Narayanan, UI associate professor of neurology and a member of the Iowa Neuroscience Institute. "We believe this observation will be of interest to clinicians treating patients with Parkinson's disease, and public health officials."

The researchers say the findings should also inform patients with PD, and their physicians, of the increased importance of preventing COVID-19 infection in these patients.

"For our own patients, we can give advice that it's important that you wear a mask. It's important that you socially distance," says Zhang, an associate in the UI Department of Neurology.

Zhang adds that physicians should also weigh the increased risk of death from COVID-19 when considering how to care for PD patients in person during the pandemic.

A potential reason why PD patients have an increased risk of death from COVID-19 may be related to the fact that COVID can cause pneumonia and pneumonia is a leading cause of death in patients with PD. This is partly because Parkinson's patients can have trouble swallowing or

choking that can cause aspiration.

"We are all focused on COVID right now, but this is a clear example of a respiratory illness that leads to increased mortality [in PD patients]. These findings may also have implications for understanding risks for PD patients from other diseases, including influenza," Narayanan says. "I would recommend a [flu vaccine](#) and pneumonia vaccine to try to prevent these problems in patients with PD."

More information: Qiang Zhang et al, COVID ?19 case fatality and Parkinson's disease, *Movement Disorders* (2020). [DOI: 10.1002/mds.28325](https://doi.org/10.1002/mds.28325)

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