

Stroke appears 8 times more likely with COVID than with flu

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Both flu and COVID-19 can raise your risk for a stroke, but the odds

appear to be eight times higher with the coronavirus, a new study finds.

Among more than 1,900 [patients](#) with COVID-19, 1.6% suffered a [stroke](#), versus 0.2% of nearly 1,500 patients seriously ill with flu, researchers found.

"Doctors and practitioners taking care of patients with COVID-19 infection should remain vigilant for signs and symptoms of stroke, because prompt diagnosis may permit effective stroke treatment," said researcher Dr. Neal Parikh, an assistant professor of neurology and neuroscience at Weill Cornell Medicine in New York City.

"Fundamentally, our results support the notion that COVID-19 infection is more severe than influenza infection," Parikh added.

For the study, Parikh and colleagues compared the incidence of stroke among COVID patients and flu patients in two New York City hospitals. Patients with coronavirus were assessed March 4 through May 2, while researchers analyzed flu data from Jan. 1, 2016, through May 31, 2018.

Two neurologists who reviewed the findings weren't surprised that COVID was linked with stroke.

"Infections and other inflammatory conditions are established [risk factors](#) for stroke, so it is not surprising that patients with COVID-19 disease might have stroke as a complication of the infection," said Dr. Larry Goldstein, professor and chairman of neurology at the University of Kentucky.

COVID-19 disease has also been associated with [blood clots](#) that could increase stroke risk, he said.

Dr. Salman Azhar is director of stroke at Lenox Hill Hospital in New

York City. He said, "This virus has a predilection to cause some level of clotting, and we think that maybe it's because of increases in inflammation in the body."

Azhar explained that COVID-19 attacks the cells that line [blood](#) vessels, which is one reason for the [increased risk](#) for blood clots leading to stroke. Also, the virus increases the production of clotting factors, he said.

Antibodies also play a role in the development of stroke, Azhar said.

"There are antibodies that we've known for a long time, nothing to do with this virus, but we know increase people's risk to have strokes and other blood vessel clots, and we are seeing them in a [higher incidence](#) in patients with COVID-19," Azhar said.

Because of these risks, COVID-19 patients are monitored for signs of clotting. In general, "every patient with COVID-19 gets put on low-level blood thinners to try and prevent clots," Azhar said.

"Patients who have clots are put on higher doses of blood thinners to keep them from having clots that may damage vital organs," he said.

Both young and old COVID patients can develop clots, with the sickest most at risk, Azhar said.

In some patients, stroke may be the first sign of COVID-19. In this study, more than one-quarter of patients went to the emergency room because of a stroke and were later diagnosed with the coronavirus.

Fortunately, only a small percentage of COVID-19 patients have strokes, Azhar said. Out of 1,916 patients who had the virus in the study, 31 suffered a stroke. However, the disability after a stroke can be a lasting

effect of the virus, he said.

Not all parts of the country have seen the same risk of stroke in COVID patients as reported in New York, said Goldstein, whose practice is in Lexington, Ky.

"We have yet to have a single patient with both conditions, although the number with COVID-19 in our area is thankfully much lower than in New York," he noted. "Regardless, COVID-19 disease is clearly associated with a propensity for blood clot formation, and stroke needs to be considered as a possible complication."

The report was published online July 2 in the journal *JAMA Neurology*.

More information: Alexander E. Merkler et al. Risk of Ischemic Stroke in Patients With Coronavirus Disease 2019 (COVID-19) vs Patients With Influenza, *JAMA Neurology* (2020). [DOI: 10.1001/jamaneurol.2020.2730](https://doi.org/10.1001/jamaneurol.2020.2730)

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