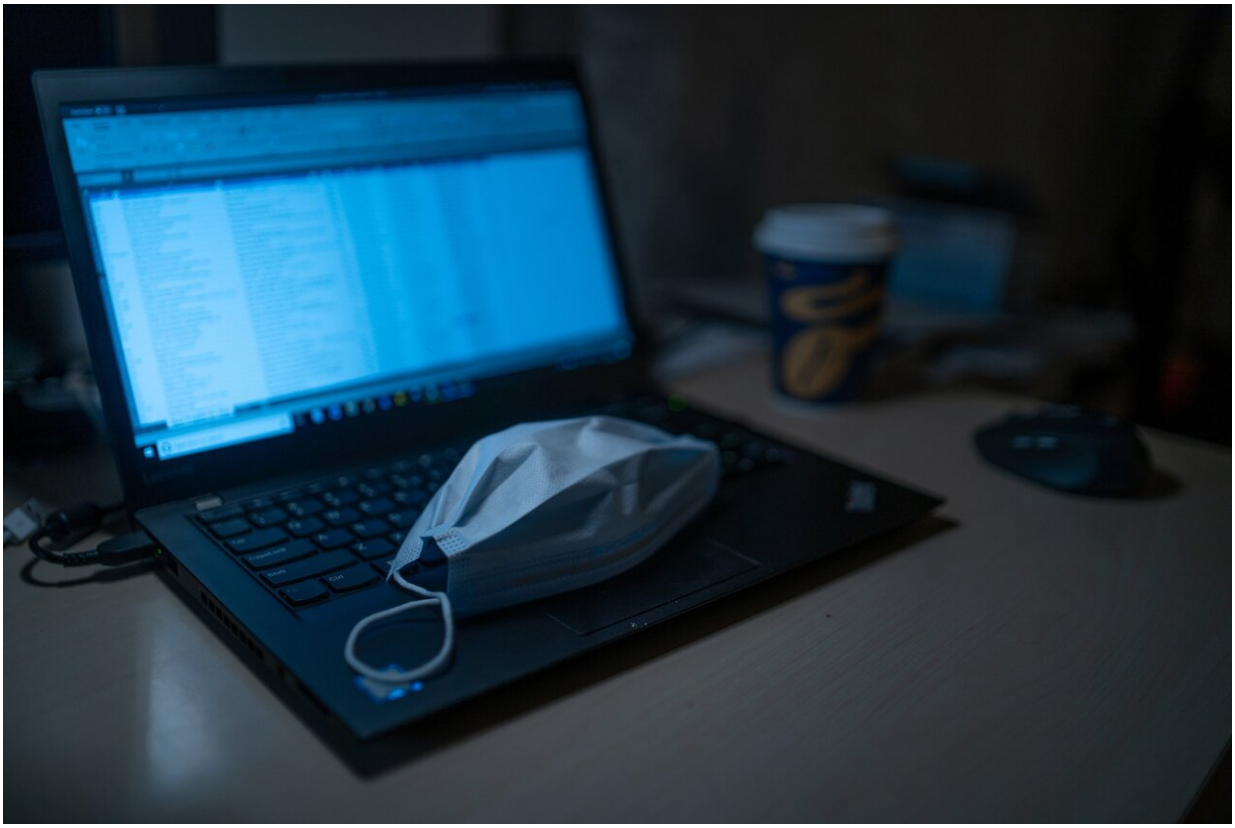
Medical Xpress

Neurologic function and COVID-19

September 17 2020, by From Mayo Clinic News Network, Mayo Clinic News Network



Credit: Unsplash/CC0 Public Domain

My family has a history of neurologic disease. My grandfather died from a stroke. An uncle was diagnosed with early-onset Alzheimer's disease at 40, and my brother recently was diagnosed with an aneurysm. I'm wondering if our family is at greater risk for COVID-19? Are there any

neurologic symptoms we should be on the lookout for?

Being diagnosed with any neurologic disease can be difficult for patients and their families, but it can be even more concerning now. The new coronavirus, SARS-CoV-2, which causes COVID-19, has become a concern for everyone, but it is particularly concerning for older individuals and those with other health issues or decreased immune systems. Neurological disorders are among the underlying medical conditions that may increase the risk of serious COVID-19 complications for individuals of any age.

The neurological effects of COVID-19 are still being studied. What's unknown is whether these are direct effects of the virus entering the nervous system or consequences of the disease's effect on the body. There are bits of information that have come out from a number of studies looking at clinical evaluation of patients that would suggest that there is nervous system direct involvement by the virus, but the reliability of those studies is still in question.

Recent findings are indicating that stroke is one of the conditions that has been seemingly at higher incidence in patients who have involvement in the body by COVID-19. Why the strokes occur in people infected with COVID-19 is yet to be fully determined. It's thought that a lot of it might be worsening of the damaged blood vessels these individuals have, which makes them predisposed to stroke, and then their bodies are being stressed from a respiratory perspective by this intense illness.

Normally, when people are sick, particularly when their respiratory system is failing, we know there will be adverse effects on the brain because of poor oxygenation and other metabolic effects. While these effects are serious, they are not direct effects of the virus on the brain itself.

There have been reports about patients who have experienced COVID-19 and who also had some neurological signs and symptoms, such as change of taste and smell and confusion. The challenge is that there is a lot we do not know about COVID-19, including if these issues are a direct effect of the virus actually getting into the nervous system and damaging the brain, or whether it's an indirect effect as a consequence of the respiratory failure or compromise of other organs of the body. It is important to remember that COVID-19 is not the only virus that causes these symptoms of reduced smell. Influenza is well known to affect taste and smell, too, and there are other respiratory viruses that can cause similar kinds of troubles. COVID-19, however, seems to cause this at a higher frequency. But again, the challenge is whether the virus is actually directly affecting the nerves that have to do with taste and smell, or if it is the respiratory epithelium that is injured, that interacts with the nerve in the back of the nose.

The principle things that we'll see from a neurological viewpoint in relation to COVID-19 will be changes in mental awareness, cognition, troubles with difficulty of interaction or ability to interact with the environment. One of our concerns is how much of this is going to be long lasting and how much of this is just a temporary effect of metabolic disturbances. So, those are very much uncertain points at this time.

Citation: Neurologic function and COVID-19 (2020, September 17) retrieved 19 September 2024 from https://medicalxpress.com/news/2020-09-neurologic-function-covid-.html