

# COVID-19 infection significantly increases one's risk of a neurological disorder

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Last week, the latest comprehensive study on Long COVID was published in *Nature Medicine*, underscoring once again the recklessness and criminality of the “forever COVID” policies implemented by nearly every world government. The study examined nine categories of composite neurological disorders and found that a bout with COVID-19 increases one's risk of a neurological disorder by 42 percent. In absolute terms, seven out of every 100 people with COVID-19 involved in the study suffered from a neurological disorder.

The nine categories of disorder evaluated included cerebrovascular, cognition and memory, disorders of peripheral nerves, episodic disorders, extrapyramidal and movement, mental health, musculoskeletal, sensory, and other neurological or related conditions such as Guillain-Barre and encephalitis, with hazard ratios for each category shown in the left-hand column in the figure below.

Each of the nine disorder categories saw risks elevated, with the most substantial increase affecting cognition and memory disorders. Within the nine categories are included common conditions such as strokes, Alzheimer's disease, headaches and seizures, Parkinson's-like symptoms, anxiety and depression, dizziness, loss of smell and taste, as well as ringing in the ears. Each of these disorders can profoundly impact one's quality of life.

The study was led by Dr. Ziyad Al-Aly, the Chief of research and Education Service at Veterans Affairs St. Louis Health Care System, a nephrologist by training and expert on Long COVID, along with Drs. Benjamin Bowe and Yan Xie. In total, 154,068 people with COVID-19 were evaluated in the study, over more than 400 days on average. They were compared with 5.6 million contemporary and 5.8 million historical controls, which provide a highly robust data set for their analyses.

In a widely-shared thread on the study on Twitter, Dr. Al-Aly noted, “Risks of memory and cognitive disorders, sensory disorders and disorders including Guillain-Barre [immune disorder in which the immune system attacks the nerves and causes weakness, in rare cases life-threatening]

and encephalitis or encephalopathy [inflammation of the brain] is stronger in young adults. The effects of these disorders on younger lives are profound and cannot be overstated.”

In the discussion section of the study, the authors note pointedly, “It is imperative that we recognize the enormous challenges posed by Long COVID and all its downstream long-term consequences. Meeting these challenges requires urgent and coordinated—but so far absent—global, national, and regional response strategies.”

They warn that the burden of neurologic disease associated with COVID-19 infections will have “profound ramifications” on the health of the population, health systems, and economic productivity, including risks of “widening inequities.” These warnings have been informed by the meticulous research that Dr. Al-Aly and his team have conducted throughout the pandemic on the clinical aspects of Post-Acute Sequelae SARS-CoV-2 infection (PASC), otherwise known as Long COVID.

In a recent interview, Dr. Al-Aly noted that his interest in Long COVID began when he read an op-ed in the *New York Times* by Fiona Lowenstein chronicling her ordeal with Long COVID after recovering from her infection in April 2020. A curious and honest researcher, Dr. Al-Aly asked, “What is Long COVID?” and “Who is it affecting?” As he explained, “We took a high-dimensional approach to leave no stone unturned and characterize the post-acute sequelae of COVID-19.”

Access to the US Department of Veterans Affairs' integrated electronic health records allowed Dr. Al-Aly and his team at the Washington University School of Medicine in St. Louis, Missouri, to review the charts for over 74,000 veterans infected with SARS-CoV-2 for months after and compare them to contemporary and historical controls to address the relative and absolute risk of the impact of COVID-19 on population health.

The results were astonishing. Dr. Al-Aly recalled that the “breadth of organ dysfunction” people were experiencing shook him to his core. More concerning for him was that

even those with mild symptoms that precluded the need for hospital or ICU admission were still significantly impacted.

Dr. Al-Aly and his team have also conducted the following studies that looked at Long-COVID's impact on the cardiovascular system, kidneys, metabolic function, and mental health. In each category, the outcomes proved detrimental.

- The relative risk of acute kidney injury was two-fold higher compared to contemporary and historical controls affecting one percent of COVID-infected individuals. A small but significant minority suffered a considerable decline in kidney function compared to those without infection.

- For any cardiovascular disease, the risk was increased by 60 percent in the first year after acute COVID infection, with approximately 4.5 percent more people developing these conditions. For major adverse cardiovascular events, the absolute increased risk was 2.3 percent. Although these risks were considerable for patients admitted to hospitals with severe COVID infections, even patients with mild disease had significantly increased cardiovascular outcomes.

- Examining mental health disorders, they found that COVID-19 infection caused a 35 percent increase in relative risk for anxiety disorders and a 39 percent increase in depression. These patients were also experiencing higher use of medications to control their symptoms and opioid prescriptions. Additionally, they suffered poor sleep and cognitive declines. On this issue, Dr. Al-Aly warned, "We've seen early signals in our data—which I hope does not continue—of a resurgence of opioid use, specifically in people with SARS-CoV-2 infection. That demands our attention to nip it in the bud."

- Similarly, there was a 40 percent increase in diabetes with an excess disease burden between 1 and 2 percent. Many who developed diabetes had to be prescribed medication to control their elevated blood sugars. When these are extrapolated for the population that required hospitalization, the figures are considerable at around 8 to 14 percent. Even for those with "mild" COVID-19, the absolute risk increased by 5 percent above non-infected controls.

- Earlier this year, Dr. Al-Aly and his team published a study that found that people with breakthrough infection after being vaccinated only had a 15 percent lower chance of developing Long COVID and were at increased risk of death and organ damage compared to controls who never were infected. This remained true when compared to seasonal flu, dispelling the constant reference by the bourgeois press that COVID is no more harmful than the flu.

Dr. Al-Aly has compared the tragic deaths and hospitalizations from COVID-19 to the tip of an enormous iceberg, with the massive long-term consequences associated

with Long COVID lying below the water line. An umbrella term, Long COVID is more than just brain fog and fatigue. It can impact almost every organ in the body, and imaging and autopsy reports have proven the profound dangers that COVID-19 continues to pose to the population.

In their latest study, Dr. Al-Aly et al. make important observations on the long-term neurological consequences of the pandemic, writing, "Given the colossal scale of the pandemic, and even though the absolute numbers reported in this work are small, these may translate into a large number of affected individuals around the world—and this will likely contribute to a rise in the burden of neurological disorders."

They add, "This places more emphasis on the continued need for multipronged primary prevention strategies through nonpharmaceutical interventions (for example, masking) and vaccines to reduce—to the extent possible—the risk of contracting SARS-CoV-2. There is also an urgent need to develop long-term sustainable strategies to prevent mass infection with SARS-CoV-2 and to determine whether and how these long-term neurological (and other) complications could be prevented or otherwise mitigated in people who are already infected with SARS-CoV-2."

What makes these peer-reviewed studies critical is not just their presentation of the medical dangers posed to people by the COVID-19 pandemic. They are also of a political character in that the purpose of these works has been, from the outset, to inform the public of the scale of the consequence of the pandemic policies that have been implemented. The horrific results of the pandemic are counted not only in the estimated over 20 million deaths from COVID-19 globally, but also in the tens of millions of people suffering from debilitating Long COVID worldwide.

In his Twitter thread, Dr. Al-Aly observed, "The best way to prevent Long COVID is to prevent COVID in the first place." This speaks to the profound need for a global elimination strategy to stop the pandemic once and for all. In the absence of a worldwide anti-COVID movement, uniting workers and scientists in every country, the pandemic threatens to continue, with new variants producing wave after wave of mass infection, death and debilitation of millions more with Long COVID.



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