

After COVID-19, experts say watch for these potential heart and brain problems

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COVID-19 was full of surprises early on, causing mild problems in the

short term for some people and serious complications for others.

Long term, it may be just as capricious.

Studies are spotting potential heart and brain problems up to a year after infection with SARS-CoV-2, even in people who had mild COVID-19.

The possible long-term effects include "a myriad of symptoms affecting different organs," said Dr. José Biller, director of the COVID-19 neurology clinic at Loyola Medicine in Maywood, Illinois. "So, it could be the lungs, it could be cardiovascular, it could be the nervous system, it could be mental health or behavioral problems."

Estimates vary widely on how many people may be affected. Research suggests about 10% to 20% of people experience mid- or long-term issues from COVID-19, according to the World Health Organization.

That may sound small, but COVID has affected hundreds of millions of people, said Dr. Siddharth Singh, director of the post-COVID-19 cardiology clinic at the Smidt Heart Institute at Cedars-Sinai Medical Center in Los Angeles. In the U.S. alone, about 80 million people have been infected with the coronavirus since the pandemic started in early 2020.

There are many more questions than answers, including about who is most at risk for post-COVID problems and how long the effects might last. But experts say people who have had COVID-19 should be aware of these potential risks:

Heart disease and stroke

A study published in *Nature Medicine* in February concluded the risk of heart problems one year after COVID-19 infection is "substantial."

Those heart problems include irregular heartbeats, heart failure (the inability of the heart to pump properly), coronary disease (buildup in arteries that limits blood flow), heart attacks and more.

The study included 153,760 U.S. veterans, most of them white and male, who tested positive for COVID-19 between March 1, 2020, and Jan. 15, 2021, and survived at least 30 days. They were compared to a control group of more than 5.6 million veterans without COVID-19.

Researchers adjusted for pre-existing conditions and found that after one year, those who had COVID-19 were 63% more likely to have some kind of cardiovascular issue, resulting in about 45 additional cases per 1,000 people.

Risks were elevated even among people who did not have severe COVID-19. That matches what Singh has seen in his post-COVID clinic, which began treating patients in December 2020. "A lot of patients that we have seen with long-haul symptoms had minor illness and had been treated at home."

Singh also treats many people with postural orthostatic tachycardia syndrome, or POTS, which can cause dizziness, fainting and heart palpitations. "These palpitations mostly tend to happen when people are standing or sitting upright," he said.

In rare cases, "smoldering inflammation around the heart or in the heart" can occur, Singh said.

The *Nature Medicine* study also found a 52% increased risk of stroke at one year among COVID-19 survivors, or about four extra strokes per 1,000 people.

Brain problems

Among the 113 patients in Biller's long COVID clinic, almost 3 in 4 reported so-called brain fog. "They are unable to multitask, and have difficulties in learning new skills," said Biller, who also leads the department of neurology at the Loyola University Chicago Stritch School of Medicine.

A recent *Nature* study of 785 people ages 51 to 81 found those who had COVID-19 lost more grey matter and had more brain shrinkage than those who had not.

Mental health

A study published in February in *BMJ* used the same pool of U.S. veterans as the *Nature Medicine* study and found a 35% increased risk of anxiety disorders after COVID-19, or 11 additional cases per 1,000 people after one year compared to those without COVID-19. The risk for depression was slightly higher.

When researchers compared people who'd had COVID-19 versus the flu, the risk of mental health disorders was again significantly higher with COVID-19.

"Mental health is closely tied to cardiovascular health," Singh said. If somebody is anxious or depressed, "they're not going to exercise that much. They're not going to watch their diet, take control of their hypertension and other risk factors, their sleep is affected which can impact cardiovascular health, and so on."

He said many COVID-19 survivors also have unresolved pain, grief and post-traumatic stress disorder, which can contribute to a decline in [mental health](#).

Fatigue

At Biller's post-COVID clinic, patients often describe experiencing "crushing" fatigue. Fatigue was the most common post-COVID symptom reported in a review of several studies published in August in *Scientific Reports*.

What you can do

Even though the long-term risks from having COVID-19 may be real, Singh said, they should not cause most people to be terribly worried. Instead, he said, it's a good time to be proactive:

- **Take care of yourself.** "A lot of my family and friends have gotten COVID earlier this year and last year," Singh said. "What I'm telling them is just to be a bit more vigilant when it comes to their cardiovascular health and making sure their cardiovascular risk factors are well-controlled. Obviously, if one is having chest pain, shortness of breath or palpitations, that should not be ignored."
- **Symptoms lingering? See a doctor.** "It can take anywhere from two to six weeks to completely bounce back from the infection," Singh said. But if people have persistent physical and mental symptoms beyond four to six weeks, "it's wise to get checked out."
- **Pay attention to sleep.** Sleep disorders—which are linked to [heart problems](#)—can develop after COVID-19, research shows. "The importance of good sleep cannot be overemphasized," Singh said. If you're having trouble, you might need to see a specialist.
- **Stay informed.** As research continues to untangle the mysteries of COVID-19, people will need trustworthy information. The Centers for Disease Control and Prevention offers regular updates about the coronavirus, and the National Library of Medicine provides a tutorial for evaluating health information.

- **Get vaccinated.** COVID-19 vaccines reduce the risk of infection and severe illness. And while it's not yet clear whether vaccination influences long-term symptoms in people who get breakthrough infections, Biller said, "prevention is the key."

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