

Does COVID harm the heart? New study says maybe not

12 March 2021, by Ernie Mundell and Robert Preidt



analyzed the medical records of 310 people in the UK Biobank database. It includes health and genetic information from over half a million people, including detailed MRIs of their hearts and links to COVID-19 test results from Public Health England.

People with preexisting unhealthy heart structures and poorer heart function were more likely to test positive for COVID-19 than those with no heart problems, the researchers found. This remained true after they accounted for factors such as age, sex, ethnicity, poverty, diabetes, high blood pressure, high cholesterol, and previous heart attack.

"In our study, we used imaging data obtained before COVID-19, and showed that many of these abnormalities likely preexist and predispose people to COVID-19, rather than occur as a result of infection," Raisi-Estabragh explained in a university news release. "This is a very important distinction for guiding our management of patients with COVID-19."

Does COVID-19 help create heart problems, or are people with preexisting heart issues simply more prone to getting the illness?

The issue remains unclear, with a new British study finding that people with [heart](#) problems appear to have an increased risk of contracting COVID-19.

"In this research, we've discovered that poorer heart structure and function is linked to a higher risk of subsequent COVID-19. This is important because some studies have suggested that COVID-19 may cause structural damage to the heart. However, these studies only use heart scans from people after infection, so they cannot be certain whether the poor heart structures preexisted COVID-19," explained study lead researcher Zahra Raisi-Estabragh. She's a clinical research training fellow at Queen Mary University of London.

In their research, the London investigators

But two experts in the United States who read over the new study said the jury may still be out on which comes first, heart trouble or COVID-19.

"Multiple studies have demonstrated the detrimental impact of COVID-19 on the heart," noted Dr. Aeshita Dwivedi, a cardiologist at Lenox Hill Hospital in New York City. "Cardiac complications of COVID-19 include heart failure, abnormal heart rhythms, as well as changes in the structure of the heart."

The new study "raises the question as to what proportion of the heart abnormalities identified after COVID-19 may have been present prior to the infection," she said. "It alludes to the fact that people with abnormal hearts are more vulnerable to COVID-19 infection."

But Dwivedi said the study is small and at this point

simply raises a key question about COVID and the heart. "Larger, long-term studies are warranted to answer this question and enhance our understanding of how COVID-19 impacts the heart," she said.

Dr. Michael Goyfman directs clinical cardiology at Long Island Jewish Forest Hills Hospital, also in New York City. He said that because of the study's design—a look back at old data—"causality cannot be inferred or implied." Other factors could explain the link, Goyfman said.

For example, "it is possible that patients with underlying heart disease may have more severe COVID-19 symptoms and therefore be more likely to be tested for COVID-19," he said.

"Viral infections in general can cause inflammation of and damage to the heart, and the high prevalence of COVID-19 may explain the prevalence of heart-related complications," Goyfman said.

"There is currently a lot of uncertainty around the relationships between the heart and COVID-19," study supervisor Steffen Petersen, professor of cardiology at Queen Mary University, said in the release. "Further studies in diverse populations and settings are required to definitively answer these questions."

The study was published March 8 in the journal *Aging Clinical and Experimental Research*.

More information: The American Heart Association has more on [COVID-19](#).

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