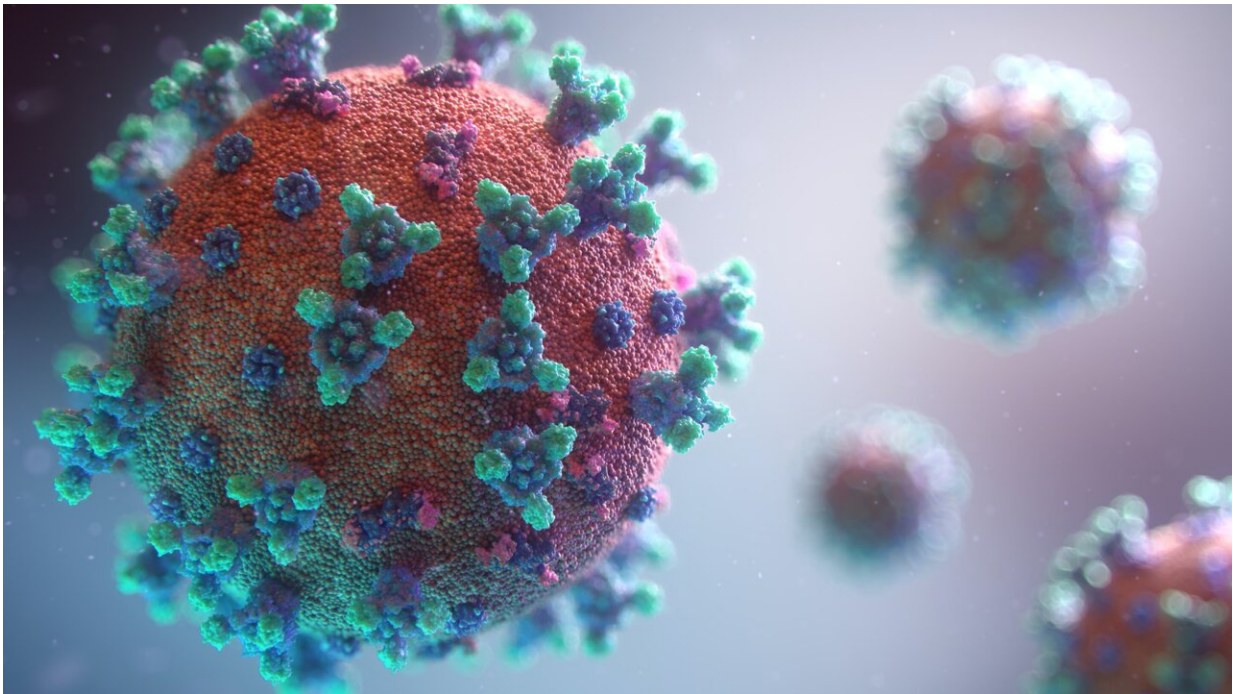


People hospitalized with COVID-19 may have higher heart failure risk, study says

September 26 2022, by Teddy Rosenbluth



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People hospitalized for COVID-19 were more likely to have heart failure after their discharge than those hospitalized for another reason, a Duke University study published this month found.

The study's findings, published in *Nature Communications*, support a growing body of research that suggests some people infected with

COVID-19 go on to develop long-term heart problems.

Using [health records](#) of more than 580,000 patients admitted to U.S. hospitals, Duke researchers tracked how often those who had COVID went to the hospital for heart issues in the year after their discharge. They found the COVID group was 45% more likely to be diagnosed with heart failure when compared to patients hospitalized with something other than COVID.

Duke's study is the first to look at this question in a large, racially diverse population, said Dr. Marat Fudim, a Duke cardiologist and author on the paper.

A paper published in February found a similar link between [cardiovascular disease](#), including heart failure, and COVID hospitalization in US Veterans Affairs hospital patients.

Fudim said that heart disease might in time be revealed to be a complication for those who had a milder COVID-19 infection.

"I think the next few years, we will uncover the true burden of long COVID," he said. "This article just tells us the worst of the worst."

An imperfect study

Fudim is the first to admit that his study has limitations.

He and other researchers used a data set from past hospitalizations and retrospectively ran an analysis. Which means that they can't say that COVID-19 causes heart failure—only that it's associated.

Randomized, controlled experiments are the gold standard in scientific research because researchers randomly assign participants to the groups

they're comparing, making each group as similar as possible.

But randomly assigning a group of people to contract COVID-19 isn't ethical or feasible.

Right now, Fudim's [study design](#) is the best way scientists have to study the long-term impacts of COVID-19, said Dr. Ziyad Al- Aly, an assistant professor of medicine at Washington University in St. Louis who authored the paper on VA hospitals.

"The truth is there is never, ever going to be a randomized study for COVID," he said.

Not everyone is convinced the findings point to a severe side effect from COVID. There may be too many other factors that could explain the link between a COVID hospitalization and heart failure, said Dr. Christopher Kelly, UNC cardiologist.

For example, people who were hospitalized with COVID-19 likely had pre-existing [health conditions](#) that could also explain why they went on to develop heart failure, Kelly said.

Those hospitalized for a non-COVID problem don't necessarily have those same chronic health problems if they were in the hospital for a minor procedure like gallbladder surgery, he said.

The Duke researchers statistically adjusted for a number of health problems that could go on to cause heart failure like obesity, diabetes, hypertension and kidney disease. Still, Kelly said there's no way to perfectly adjust for the differences between the groups.

Al-Aly said the Duke researchers could have made the study design slightly better by comparing the hospitalized COVID-19 patients to those

hospitalized for an infection, who are more likely to have a similar set of preexisting health problems.

"There are tons of ways that you can explain the data that don't involve blaming COVID for them developing [heart failure](#) later," Kelly said.

"There are differences that are unmeasurable and there are differences that you haven't thought about."

More information: Husam M. Salah et al, Post-recovery COVID-19 and incident heart failure in the National COVID Cohort Collaborative (N3C) study, *Nature Communications* (2022). [DOI: 10.1038/s41467-022-31834-y](https://doi.org/10.1038/s41467-022-31834-y)

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