

Can COVID-19 Damage Your Heart? Here's What We Know

Written by George Citroner on March 30, 2020 - Fact checked by Dana K. Cassell



COVID-19 may hurt your heart, according to new research (Getty Images)

- **A new study finds COVID-19 can cause heart injury, even in people without underlying heart issue**
- **According to [research](#) from the Chinese Center for Disease Control and Prevention (CCDC), the death rate for COVID-19 patients with heart disease was 10.5 percent**
- **Experts say it's important for people with cardiovascular disease to be isolated from people with COVID-19 symptoms**

COVID-19, the disease caused by the new coronavirus SARS-CoV-2, has sickened hundreds of thousands and continues to kill large numbers of people worldwide.

Primarily considered life threatening for its effects on the lungs, a [new study](#) Trusted Source published this month in *JAMA Cardiology* finds COVID-19 can also cause heart injury, even in people without underlying heart issues.

“We know that the cardiac injury risk is there, no matter if you had prior heart disease or not. So prior heart disease is a risk factor for higher mortality in these patients. Cardiac injury also is a risk factor, but this can happen to people who are free of heart disease,” [Dr. Mohammad Madjid](#), MS, the study's lead author and an assistant professor of cardiology at McGovern Medical School at UTHealth, told Healthline.

Not just COVID-19 but also other viruses

According to Madjid, not only COVID-19 but other respiratory illnesses, like influenza and SARS, can worsen existing cardiovascular disease and cause new heart problems in otherwise healthy people.

He emphasizes that during most flu epidemics, more people die of heart problems than respiratory issues like pneumonia. He expects similar cardiac problems among severe COVID-19 cases.

“In my experience, I realized that more people actually die of heart disease rather than pneumonia, so that [the study findings] was not a surprise for me — that from China, that myocardial injuries are very much related to death in these patients,” Madjid said.

According to [research](#) from the Chinese Center for Disease Control and Prevention (CCDC), the death rate for COVID-19 patients with heart disease in mainland China was 10.5 percent between Dec. 30 and Feb. 11.

“It’s been seen with lots of viruses. In fact, we’ve most commonly seen it with Epstein-Barr, and we’ve seen it with influenza — so that’s definitely not a new thing. The difference seems to be in the later stages of this disease,” said [Dr. Brian Kolski](#), interventional cardiologist with St. Joseph Hospital in Orange, California.

“COVID-19 seems to be more of a respiratory picture first and then at the later stages becomes more of a cardiac,” he said.

How viruses may cause heart damage

There are many reasons viruses, like the flu virus or SARS-CoV-2, can become deadly.

Three common reasons are [coinfection](#) with another germ; [respiratory failure](#) when the lungs are weakened by the disease; and a “[cytokine storm](#)” caused by an overwhelming immune system response to the infection.

“Cytokines are proteins that regulate a wide array of biologic functions, one of them being inflammation and repair,” said [Dr. Ashesh Parikh](#), DO, FACC, RPVI, a cardiologist at Texas Health Presbyterian Hospital Plano and Texas Health Physicians Group.

“The inflammatory response of cytokines can lead to heart damage via the mechanism of heart failure,” he said.

[Dr. Sreenivas Gudimetla](#), a cardiologist at Texas Health Fort Worth and Texas Health Physicians Group, explains that when this happens, a patient could experience a potentially deadly condition called myocarditis.

“Myocarditis is inflammation of the heart muscle. It can potentially result in weak pump function of the heart muscle, known as heart failure with reduced ejection fraction (HFrEF) or systolic heart failure,” Gudimetla said.

He points out [recent research](#) Trusted Source in JAMA Cardiology that concluded cardiac injury is a common condition in hospitalized patients with COVID-19 in Wuhan, China.

Risk much higher for preexisting heart conditions

That study, conducted from January to February, used data from 416 adults confirmed to have COVID-19 and hospitalized at Renmin Hospital of Wuhan University in China.

Cardiac injury was defined by elevated levels of a protein called troponin, which is measured in the blood. However, Gudimetla explains that detecting abnormal troponins in a critically ill patient with COVID-19 isn’t likely to alter management of the patient.

“Without a vaccine for a cure from the infection, only aggressive, supportive care can be rendered, such

as maintenance of blood pressure, treating heart failure with drugs, treating secondary infections, support of renal function, and support of respiratory status, which can require ventilators,” he said.

The findings also show that there was a much higher death rate among patients with cardiac injury compared with those without cardiac injury: 51 percent of the patients with existing cardiac injury died versus only 4.5 percent of those without.

COVID-19 recommendations for patients with heart disease

The American College of Cardiology released a [bulletin](#) (for which Madjid consulted) advising healthcare providers how best to deal with the cardiac risks presented by COVID-19.

They include:

- Make plans for quickly identifying and isolating cardiovascular patients with COVID-19 symptoms from other patients.
- Patients with underlying cardiovascular disease are at higher risk for developing COVID-19 and have a worse outlook.
- Advise all cardiovascular patients of the potential increased risk and encourage additional, reasonable precautions.
- It’s important for people with cardiovascular disease to remain current with vaccinations, especially for influenza and pneumonia.

The bottom line

Typically considered a threat to the lungs, COVID-19 also presents a significant threat to heart health, according to recently published research.

Although people with existing heart disease have a greater risk, a small percent of patients with no preexisting heart issues also experienced heart damage from COVID-19.

Experts say it’s important for those with cardiovascular disease to be isolated from people with COVID-19 symptoms and to remain current with vaccinations for influenza and pneumonia.

HEALTHLINE RESOURCES

Do you have symptoms of COVID-19? Your options for care

Call your primary care provider and discuss symptoms before visiting a healthcare facility, or click below to find a local provider. If this is an emergency, call 911, and tell the operator you have COVID-19.

READ MORE:

[Not Sure You Have COVID-19? Here Are the Symptoms for Coronavirus, Flu, and Allergies \[...\]](#)

[How to Prep for the Coronavirus at Home \[...\]](#)

[Everything You Should Know About the 2019 Coronavirus and COVID-19 \[...\]](#)

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