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## Researchers Discover How COVID-19 Damages Heart

By Jay Croft



July 26, 2022 -- For the first time, researchers have learned how the COVID-19 virus can inflame the heart muscle cells and cause heart injury, a new report says.

“Heart damage is common among patients hospitalized with COVID-19, leading many to wonder how the virus affects the heart,” according to a release from the [American Heart Association](#). “Now, researchers have found that the spike protein from the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus can lead to heart muscle injury through the inflammatory process.”

The spike protein is on the surface of the COVID -19 virus, also known as SARS-CoV-2, the heart association explains in its release. Spike proteins let the virus enter healthy cells, which is the first step in infection. The virus can spread to the lungs, of course, and to other organs in the body.

“It’s already known from the clinical side that COVID-19 infection can induce heart injury; however, what we don’t know is the mechanistic details of how this occurs. What we suspect is that the spike protein has unknown pathological roles,” said Zhiqiang Lin, Ph.D., lead author of the study and an assistant professor at the Masonic Medical Research Institute in Utica, New York.

“Our data show that the spike protein from SARS-CoV-2 causes heart muscle damage. That’s why it’s important to get vaccinated and prevent this disease.”

Lab tests showed that the spike protein enlarged heart muscle cells, as well.

“We found direct evidence that the SARS-CoV-2 spike protein is toxic to heart muscle cells,” Lin said.

The research is being presented this week at the association’s Basic Cardiovascular Sciences Scientific Sessions 2022 in Chicago.

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American Heart Association: "Coronavirus spike protein activated natural immune response, damaged heart muscle cells"

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