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## **AHA News: What Heart and Stroke Patients Need to Know About COVID-19 in 2022**

TUESDAY, Jan. 18, 2022 (American Heart Association News) -- Two years into the pandemic, researchers have learned a lot about how COVID-19 affects people with heart disease and stroke survivors. But like the coronavirus itself, what everyone needs to know keeps evolving.

"You can't assume that what was true three months ago is true now," said Dr. James de Lemos, a cardiologist at UT Southwestern Medical Center in Dallas. Thanks to the omicron variant, "it's a fundamentally different pandemic than it was at Thanksgiving."

Early data suggests omicron causes less severe illness but spreads more easily than its predecessors. So heart and stroke patients need to protect themselves, starting with understanding that COVID-19 still is a threat to their health.

"Early on, we recognized that the risk was higher for those with pre-existing cardiovascular disease," said Dr. Biykem Bozkurt, a cardiologist at Baylor College of Medicine in Houston. According to the Centers for Disease Control and Prevention, people with conditions such as heart failure, coronary artery disease and possibly high blood pressure may be more likely to get severely ill from COVID-19. So can people who have diabetes, are overweight or are recovering from a stroke.

SARS-CoV-2, the virus that causes COVID-19, also has been linked to increased risk of several cardiovascular conditions. According to a September 2021 report from the CDC, people with COVID-19 are nearly 16 times more likely to have heart inflammation, or myocarditis, than uninfected people. The report found about 150 cases per 100,000 people with COVID-19 versus about nine cases per 100,000 people without the virus.

In addition, an August 2021 study in the *New England Journal of Medicine* showed people with the coronavirus may have a significantly higher, albeit rare, risk of intracranial hemorrhage, or brain bleeding; heart attack; and having an arrhythmia, or abnormal heartbeat.

Researchers don't have full data on omicron's effects yet, Bozkurt said, but it's still affecting people who are vulnerable. "And that's why the hospitals right now are full."

The risks of any one person having a severe problem from the new variant are relatively small, de Lemos said. "But the flipside is, given how many people are getting infected right now, the cumulative number of people with COVID-19 complications is still very large."

De Lemos, who helped create the American Heart Association's COVID-19 Cardiovascular Disease Registry, said omicron "is obviously wildly more infectious and able to evade the vaccine to some extent, although it does appear that the vaccine seems to prevent severe infections and hospitalizations."

And overall, "we don't know a ton about specifically why certain patients with heart disease do less well," he said, although understanding has evolved over time.

In the beginning, de Lemos said, doctors feared the virus directly infected the heart muscle. "That doesn't really appear to be the case," he said.

Instead, it appears that in severe cases, the virus is inflaming the lining of blood vessels of the heart and increasing the likelihood of clotting in the smallest vessels, he said.

COVID-19 also can overwhelm the heart by making it work harder to pump oxygenated blood through the body as the lungs are overwhelmed.

But as they've learned more about the coronavirus, doctors have gotten better at fighting it. For example, de Lemos said, they now work proactively to treat blood-clotting disorders in hospitalized patients. And although researchers are working to understand lingering effects known as "long COVID," it appears long-term implications for the heart look favorable.

"The vast majority of people who have mild COVID infections really appear to have nothing to worry about with their hearts," he said. "That's good news, I think, and doesn't get emphasized enough."

People with existing heart conditions or a history of stroke still need to protect themselves, and have many ways of doing so.

"Number one: Get vaccinated," said Bozkurt, who has studied COVID-19 vaccine side effects. "And please, do get a booster." Reports of rare cases of vaccine-related myocarditis, particularly in younger males, should not dissuade anybody with an existing condition. Most people with pre-existing cardiovascular disease are not young adult males, she noted. And regardless of age, the benefits from vaccines outweigh the risks.

Given how the vaccines don't seem to be as protective against the spread of omicron, de Lemos said if you're a heart disease or stroke patient, hunker down for the next several weeks until this wave passes, "and then you'll be able to re-emerge."

Patients should avoid indoor crowds, he said, and use a KN95 mask or, when possible, an N95 mask instead of cloth masks when being in a crowd is necessary.

Bozkurt said heart and stroke patients should keep in contact with their health care team and continue taking medications as prescribed. Anybody with symptoms that could be heart-related should seek care immediately. "Do not delay," she said.

Both doctors said it was important to get information from reliable sources. Some false remedies promoted on social media can actually damage the heart, Bozkurt said.

De Lemos acknowledged that even from reliable sources, advice can shift. "I would say that the information is written in pencil, not in pen, because things are changing so fast." It can be frustrating for him, even as a scientist, when experts disagree or alter their recommendations, but "that's the way science goes."

And even as COVID-19 "remains a bizarrely arbitrary virus in terms of who gets sick and who doesn't," he's optimistic.

"Think about all the progress we've made in a year or two, and the remarkable effect of the vaccines, the fact that we have drugs" that should help keep people out of hospitals. Heart and stroke patients need to be extra careful right now, but "as frustrating as it is, we will not be in this situation forever. We really won't."

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