

## Severe COVID-19 might injure the heart

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(HealthDay)—The new coronavirus may be a respiratory bug, but it's becoming clear that some severely ill patients sustain heart damage. And it may substantially raise their risk of death, doctors in China are

reporting.

They found that among 416 patients hospitalized for severe COVID-19 infections, almost 20% developed damage to the [heart](#) muscle. More than half of those patients died.

Doctors in China have already warned that heart injuries appear common in COVID-19 patients, particularly those with existing heart disease or [high blood pressure](#). A recent study found that 12% of hospitalized patients had the complication.

These latest findings, from a team led by Dr. Bo Yang of Renmin Hospital of Wuhan University, and published March 25 in *JAMA Cardiology*, add a concerning layer: Patients who develop [heart damage](#) may face an "unexpectedly" high risk of death.

Much remains to be learned. For one, the findings come from a single hospital in Wuhan, where the outbreak began. U.S. experts said it's not known whether the grim outlook will hold true at other hospitals worldwide.

"We certainly hope not," said Dr. Thomas Maddox, head of the Science and Quality Committee of the American College of Cardiology (ACC).

The ACC has already issued clinical guidance to cardiologists. Among other things, it highlights the extra risks to patients with heart disease, and tells cardiologists to be ready to jump in to assist other doctors caring for severely ill patients.

"We're anticipating that patients with underlying cardiovascular disease will struggle," Maddox said.

The novelty of the [coronavirus](#) means that it's not fully clear how to best

manage those hospitalized patients. Standard heart medications and devices to provide cardiac support are being used, according to Maddox.

"We are continuing to figure this out," he said.

But the importance of prevention is more obvious than ever. Maddox said people with existing heart disease—such as a past heart attack—or a history of stroke should consider themselves at "high risk" and be vigilant about protecting themselves.

For those living in a community with a COVID-19 outbreak, that means staying home as much as possible, according to the U.S. Centers for Disease Control and Prevention. Meanwhile, all high-risk people should wash their hands often, disinfect surfaces they routinely touch, and be serious about "social distance" if they do go out.

Among the unknowns, though, is whether people with high blood pressure might also fall into the high-risk category.

"This is an important question, and one on many people's minds," said Dr. Elliott Antman, former president of the American Heart Association and a senior physician at Brigham and Women's Hospital in Boston.

Of the 82 patients in this study who developed a heart injury, 60% had high blood pressure. About 30% had a previous diagnosis of coronary heart disease, while almost 15% had chronic heart failure.

Antman said it's hard to tell whether high blood pressure alone—without other health issues—was a risk factor for heart injury. Plus, he said, there's no information on whether patients' high blood pressure was under control with medication or not.

Of patients who sustained heart damage, just over 51% died in the

hospital, according to the study. That compared with 4.5% of those without heart injury.

It's not certain, though, that the heart complication is actually what caused those deaths, Antman said. "This could all be a reflection of a very bad infection," he explained.

Why does the coronavirus wreak havoc on some patients' hearts?

Again, no one is sure, Maddox said. But he explained the leading theories.

One suspect is the immune system's reaction to the coronavirus. If it veers out of control, in what's called a "cytokine storm," it can damage the body's organs. A second possibility is that in people who already have heart [disease](#), the overall stress of the infection harms the [heart muscle](#).

Finally, it's possible that the new coronavirus directly invades the heart, Maddox said. Researchers say the virus very effectively latches onto receptors on our body cells called ACE2. Those receptors are found not only in the lungs, but elsewhere in the body—including the heart and digestive tract, he explained.

There has been some speculation that common blood pressure drugs—ACE inhibitors and [angiotensin receptor blockers](#)—might make people more vulnerable to falling ill with COVID-19. But that is based only on animal research suggesting that the drugs can boost the activity of ACE2 receptors.

Maddox and Antman stressed that no one should stop taking their prescriptions, since poorly controlled high blood pressure or [heart disease](#) would be dangerous—especially now.

**More information:** People at high risk of severe COVID-19 illness can get advice from the [U.S. Centers for Disease Control and Prevention](#)

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