

# Heart TALK

Heart-healthy and Stroke-free Living with Dr. Amy L. Doneen, DNP, ARNP

SPECIAL EDITION



Thoughts from Dr. Amy

## COVID-19: What Every Patient with Heart Disease Needs to Know

A portrait of Dr. Amy L. Doneen, DNP, ARNP, wearing a red sleeveless top, is shown on the left. The background features a repeating pattern of red and blue COVID-19 virus particles. A dark blue surgical mask is draped diagonally across the center of the image.

The World Health Organization (WHO) has officially declared that the new coronavirus (COVID-19) has reached pandemic levels. Numerous news reports also state that COVID-19 poses the greatest threat to older adults and those with certain medical conditions, including heart disease (also known as cardiovascular disease), diabetes and high blood pressure. But what is missing from this frightening media coverage is what, exactly, should people with these conditions be doing to protect themselves? And how great is their risk?

To help our patients — and all of the 116.8 million Americans affected by cardiovascular disease (CVD), including the 108 million with high blood pressure — stay as safe as possible during this crisis, we will be providing weekly updates by email and in our blog with the latest facts, studies and safety precautions. In this special update, you'll find the answers to frequently asked questions and trustworthy resources where you can learn more. The Heart Attack & Stroke Prevention Center is also offering phone or Skype visits for our patients if requested.

### HOW DANGEROUS IS COVID-19 TO PEOPLE WITH CVD AND OTHER CHRONIC DISEASES?

Overall, more than 80 percent of people

with COVID-19 experience mild illness from which they can recover without intensive medical intervention, according to a report from the American College of Cardiology (ACC). In early March, WHO's Director-General reported that the global death rate from the virus is 3.4 percent, up from an earlier WHO report of 2 percent.

More recently, an article in the New England Journal of Medicine coauthored by Anthony Fauci, MD, director of the National Institute of Allergy and Infectious Disease, and Robert Redfield, MD, Director of the CDC, opined that the true fatality rate of the COVID-19 "may be considerably less" than 1 percent and "may ultimately be more akin to those of a severe seasonal influenza (which has a case fatality rate of approximately 0.1%) or a pandemic influ-

enza (similar to those in 1957 and 1968) rather than a disease similar to SARS or MERS, which have had case fatality rates of 9 to 10% and 36%, respectively."

However, both death rates and cases of more severe or fatal illness are higher in older adults and those with certain medical conditions. Large-scale case studies by the Chinese CDC indicate that rates of death and very severe illness rise with age, with rates of 8 percent in people ages 70 to 79 and nearly 15 percent in patients over 80. People with certain medical conditions have both a higher risk for getting COVID-19 and a worse prognosis if they do. Up to 50 percent of people who develop the virus have co-existing disorders, and for this group of patients

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the following death rates from COVID-19 have been reported by the ACC:

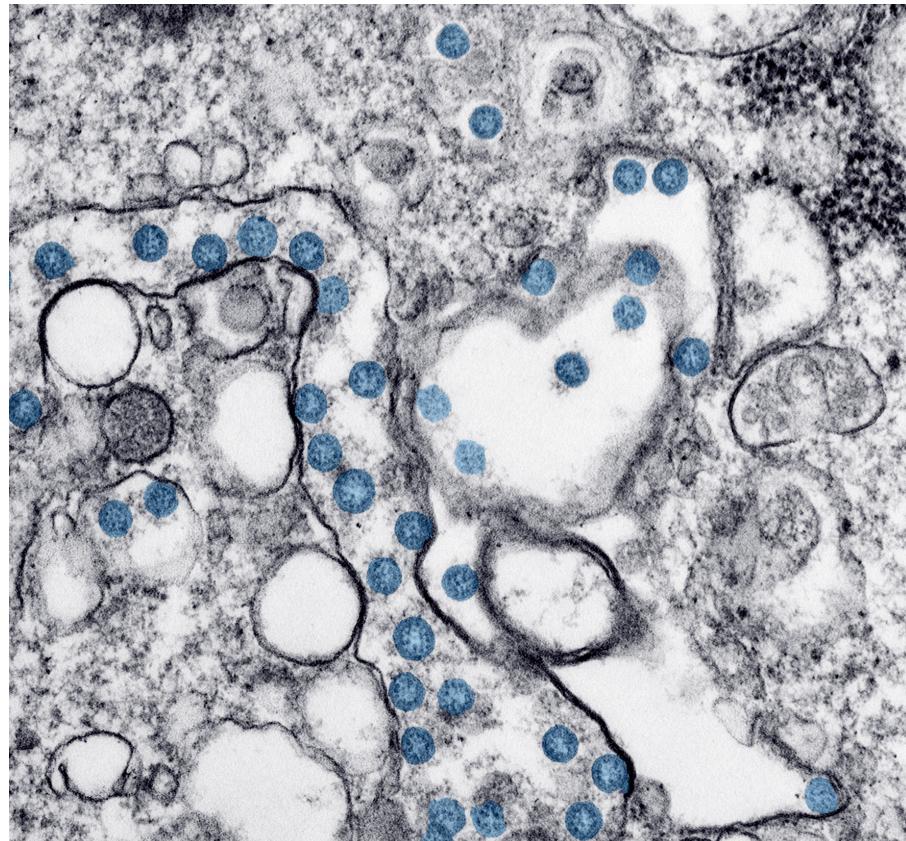
- **Cancer:** 5.6 percent
- **High blood pressure:** 6 percent
- **Chronic respiratory disease:** 6.3 percent
- **Diabetes:** 7.3 percent
- **Cardiovascular disease:** 10.5 percent

### **WHY DOES COVID-19 POSE SUCH A HIGH RISK TO PEOPLE WITH CARDIOVASCULAR CONDITIONS?**

There is a lot that is not yet known about the new coronavirus, which infects the lungs, but the ACC reports that in one study of patients hospitalized with COVID-19, 16.7 percent developed heart arrhythmias and 7.2 percent experienced acute injuries to their hearts, along with other COVID-19 related complications. The ACC also reports that, "there have been reports of acute cardiac injury, arrhythmias, hypotension, tachycardia, and a high proportion of concomitant cardiovascular disease in infected individuals, particularly those who require more intensive care."

Studies from Wuhan, China — the epicenter of the pandemic — have reported that people with the virus have suffered heart attacks, inflammation of the heart, and even cardiac arrest, adds the ACC. The rate of cardiac complications in those with COVID-19 parallels those that occur in people with other types of coronaviruses, such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS), as well as those people who catch seasonal flu. No studies have yet been done to compare the rates of heart complications in COVID-19 patients with and without pre-existing CVD.

A few factors could explain why people with heart disease are at increased risk for severe illness if they catch COVID-19. First of all, any infectious disease increases inflammation in the body as one of the immune system's defenses against invading pathogens. The result is a "blood storm" of inflammation coursing through the body's more than 60,000 miles of blood vessels. In people who have arterial disease (plaque), inflammation can ignite a plaque rupture, much like a volcano erupting. This can lead to the formation of an obstructive blood clot, potentially followed by a heart attack or a stroke. Think of plaque as kindling.



Inflammation is what lights the match.

High blood pressure also contributes to the development of atherosclerosis, while having type 2 diabetes elevates risk for a heart attack as much as having had a prior heart attack does in a non-diabetic person of the same age! Because COVID-19 often causes shortness of breath, which in turn quickens the pulse, both the lungs and the heart have to work harder when people catch the virus. But if your heart is already weakened by CVD or you have narrowing of the arteries, then your heart has to pump much harder than that of a healthy person to circulate blood and oxygen through your body.

### **WHAT SPECIAL PRECAUTIONS SHOULD PATIENTS WITH HEART DISEASE TAKE?**

The CDC, the American Heart Association and the BaleDoneen Method advise patients with CVD to get vaccinated for the flu and bacterial pneumonia. Influenza is so strongly linked to an increased risk for heart attacks and strokes in people with atherosclerosis that some experts have theorized that flu is a direct cause of these events, largely driven by associated rises of infection-induced inflammation in people with influenza.

Indeed, a 2018 study published in New

England Journal of Medicine reported that within one week of catching the flu, people are at six times higher risk for a heart attack! Conversely, flu shots reduce risk for heart attacks and strokes by 61 percent for one full year after getting vaccinated, according to a recent analysis of studies of more than 7,000 people! Similarly, getting vaccinated against bacterial pneumonia has also been shown to lower risk for CV events.

Right now, the flu season is the U.S. continues to cause high rates of the disease, with about 440,000 Americans hospitalized and almost 8.2 percent of them dying, according to the CDC. Influenza has also been linked to increased risk for heart failure in people with CVD, adding another important reason to get vaccinated today if you haven't already done so. While the shot won't prevent COVID-19, it can also help keep you out of the doctor's office or hospital with flu symptoms — enabling you to avoid being exposed to people who may have COVID-19 or other contagious conditions.

### **ALSO FOLLOW THESE PRECAUTIONS:**

- Wash your hands often with soap and water for at least 20 seconds or use hand sanitizer with at least 60 percent alcohol.

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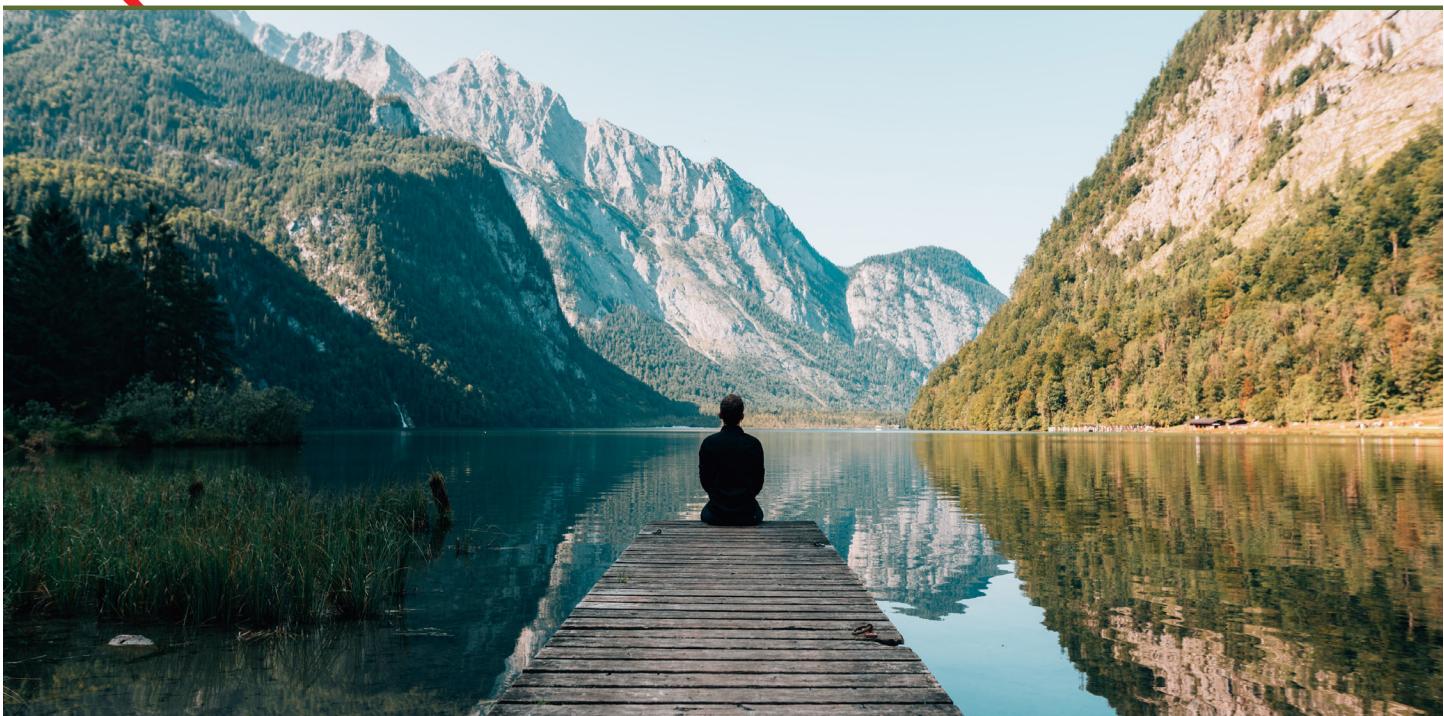


Photo by Simon Migaj on Unsplash

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- Eat an anti-inflammatory diet that is high in plant foods and low in meat and sugar; this has been shown to lower risk for heart attacks and strokes, and for getting CVD in the first place. Stock up on shelf-stable ingredients for healthy meals, such as canned, dried or frozen fruits and veggies, dried grains, and frozen or canned fish. For optimal cardiovascular wellness, we recommend a [diet based on your DNA](#).
- Get 7 to 8 hours of sleep a night. Your immune system is most active when you're sleeping and getting enough sleep also helps you maintain a healthier blood pressure.
- Exercise regularly. The American Heart Association recommends creating an at-home circuit workout as follows: "Select three or four exercises you can do at home like jumping jacks, lunges or jogging in place. Do each exercise in short bursts and repeat the circuit two to three times."
- Reduce stress. Take 15 minutes each morning to practice mindful meditation. Studies suggest that [mindful meditation](#) helps lower levels of inflammation and blood pressure, reduces tension and elevates mood. Mindfulness involves focusing on the present moment in an

open, nonjudgmental way, while letting stressful thoughts about the past or future drift away.

Be sure to continue to take all prescribed medications as directed. Try to keep at least a 30-day supply of your medications on hand.

- Disinfect your entire mouth daily. Taking excellent care of your teeth and gums has been shown to reduce risk for infectious diseases AND heart disease — and also helps lower your risk for heart attacks and strokes. Brushing and flossing daily was also linked to a longer life in a large study of older adults, as compared to people with neither of these habits.

- Clean high-touch surfaces daily. These include counters, tabletops, doorknobs, bathroom fixtures, toilets, phones, keyboards and bedside tables. The EPA has released a [list of disinfectants and sanitizing products that are effective against COVID-19 and many other pathogens](#).

Avoid all but essential travel and try to avoid crowded places or gatherings.

If you feel ill, stay home and call ahead before consulting your medical provider. This will help the healthcare office take appropriate steps to keep others from getting infected or exposed if you do have COVID-19.

#### **WHAT ARE THE BEST PLACES TO FIND MORE INFORMATION FOR PATIENTS WITH HEART DISEASE?**

For more tips on how to protect yourself and the latest news about COVID-19, read our blog post, "[Coronavirus: How Concerned Should You Be?](#)" To learn more about how COVID-19 affects the heart and other organs, read, "[Here's what coronavirus does to the body](#)" in National Geographic. Additional resources include the following:

- American Heart Association: "[What heart patients should know about coronavirus](#)"
- CDC: "[Coronavirus Disease 2019 \(COVID-19\)](#)"
- Heart Matters: "[Coronavirus: what it means for you if you have heart or circulatory disease](#)"
- Johns Hopkins (Interactive Map of COVID-19): "[Mapping 2019-nCOV](#)"
- The Washington Post: "[Older and chronically ill Americans are at the greatest risk from coronavirus](#)"
- National Geographic: "[These underlying conditions make coronavirus more severe, and they're surprisingly common](#)."
- American Heart Association: "[Coronavirus \(COVID-19 Resources\)](#)"



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