

# As flu blankets the nation, a new study links the virus to heart attacks

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Credit: American Heart Association

The flu doesn't just cause aches, chills and debilitating fatigue. A new study shows it may also increase the risk of a heart attack.

The Canadian study, published in the *New England Journal of Medicine*, shows a six-fold increase in [heart](#) attacks shortly after people get the flu.

"We found that your risk of a heart attack is six times higher in the first week after the diagnosis of influenza, which is a significant increase for

that short period of time," said Dr. Jeff Kwong, lead author of the study and a scientist at the Institute for Clinical Evaluative Sciences and Public Health Ontario.

The study arrives in the middle of a particularly harsh flu season.

"While [flu activity](#) is beginning to go down in some parts of the country, it remains high in most of the U.S., with some areas still rising," Dr. Dan Jernigan, director of the influenza division at the Centers for Disease Control and Prevention, said Friday during a news conference.

He said while flu rates are high in all age categories, the highest current rates are among children, as students return to school after winter break. While the exact number of flu-associated deaths isn't available, 37 children have died so far this season of flu-related causes, Jernigan said.

Flu activity in the U.S. usually begins in October or November, peaks between December and February, and can last as late as May, according to the CDC. Each year in the U.S., the flu is estimated to cause between 12,000 and 56,000 deaths and up to 710,000 hospitalizations.

While past studies have shown an association between the flu and heart attacks, the new study is the first to look at laboratory tests and show a conclusive link, Kwong said.

Researchers looked at 19,729 adult cases of lab-confirmed flu from 2009 to 2014 in Ontario, Canada. They focused on 332 patients, most of whom were over 65, who had been hospitalized for a heart attack within a year before or after their flu diagnosis. The study found there were 20 admissions per week during the seven days after a flu diagnosis compared with only 3.3 admissions per week in the year before and after a flu diagnosis.

"This is an impressive finding and an important reminder that the flu is not benign," said Dr. Vincent Bufalino, a cardiologist and president of Advocate Medical Group in Naperville, Illinois. Bufalino was not involved in the study.

The study didn't offer reasons why the flu might trigger heart attacks. But Bufalino said advances are being made in understanding the links between infections, inflammation and coronary artery disease.

"Infections increase your clotting. The platelets – the little sticky things in your blood that cause clotting – are activated during the infection, so we know that might be part of what causes the heart attack," Bufalino said.

Some people with the flu take decongestants like pseudoephedrine that may increase blood pressure and heart rates. Bufalino said he doubted those medications play into the link between flu and heart attacks. Kwong said the topic warranted further study.

While [flu vaccinations](#) are never 100 percent effective, the CDC recommends that everyone 6 months and older get an annual [flu shot](#), and the American Heart Association and American College of Cardiology recommend the shot for people with heart disease.

"The bottom line is if you want to reduce your chance of having a heart attack, it's a good idea to get a flu shot – along with doing other things to protect yourself, like washing your hands and staying away from sick people," Kwong said. He added that if you suspect you have the flu, it's especially important to stay home and not go into the office or other public places.

"You might be relatively healthy, but you don't want to go around infecting other people who might be at a higher risk of serious

complications of influenza, because they could have a heart attack."

Bufalino said the study also gives doctors another chance to talk to patients about overall risk factors for a [heart attack](#).

"It's a good opportunity to ask, 'If heart [attacks](#) are six times more prevalent when you get the flu, then should you be doing a better job at controlling your cholesterol and blood pressure? Should you be losing weight, exercising and not smoking?' This is a great opportunity to remind people about primary prevention."

**More information:** Jeffrey C. Kwong et al. Acute Myocardial Infarction after Laboratory-Confirmed Influenza Infection, *New England Journal of Medicine* (2018). [DOI: 10.1056/NEJMoa1702090](https://doi.org/10.1056/NEJMoa1702090)

Provided by American Heart Association

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