

# Flu shots can protect patients with heart failure from death

November 15 2022

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Flu shots can save the lives of people with cardiovascular disease by reducing cardiac complications as well as preventing influenza.

An international study led by McMaster University researchers and published in *The Lancet Global Health* has found that [influenza vaccines](#) greatly reduce both pneumonia and cardiovascular complications in people with [heart failure](#).

"If you have heart failure, you should get your [flu shot](#) because it can save your life—that is what we found in this study," said the study's principal investigator Mark Loeb, a McMaster professor of pathology and molecular medicine, and a Hamilton infectious disease physician and microbiologist. "It is underappreciated that [influenza vaccine](#) can save people from cardiovascular death."

The study showed that over the entire year, the influenza vaccine reduced pneumonia by 40% and hospitalization by 15% in patients with heart failure. During influenza season in the fall and winter, the influenza vaccine reduced deaths by 20% in these patients.

Data gathered during flu season also showed that the vaccine helped protect against cardiovascular complications, such as heart attacks and strokes.

This collaborative clinical trial between McMaster and the Population Health Research Institute of McMaster and Hamilton Health Sciences, had investigators track more than 5,000 patients with heart failure in 10 countries across Africa, Asia and the Middle East, where few people have regular influenza vaccination. They received either an influenza vaccine or a placebo annually between June 2015 and November 2021.

While the flu has long been associated with an increased risk of life-threatening cardiovascular events, Loeb said that people with heart failure are already vulnerable to poor health outcomes. Patients with the condition have a 50% chance of dying within five years, while 20% are hospitalized for cardiovascular complications every year.

"Importantly, we looked at low and [middle-income countries](#) where 80% of [cardiovascular disease](#) occurs and where flu vaccination rates are low."

Salim Yusuf, executive director of PHRI and an author of the study, said, "The flu shot should be part of the standard practice in people with heart failure given how simple, inexpensive and safe it is. Avoiding one-sixth of deaths from heart disease and preventing hospitalizations makes it very cost-effective and that can have an important public health and clinical impact."

The study is the first clinical trial of the flu vaccine's effectiveness in patients with heart failure.

**More information:** Influenza vaccine to reduce adverse vascular events in patients with heart failure: a multinational randomised, double-blind, placebo-controlled trial, *The Lancet Global Health* (2022). DOI: 10.1016/S2214-109X(22)00432-6 , [www.thelancet.com/journals/lan ... \(22\)00432-6/fulltext](http://www.thelancet.com/journals/lan... (22)00432-6/fulltext)

Provided by McMaster University

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