

Study finds COVID-19 vaccine can help people with heart failure live longer

May 11 2024



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Heart failure patients who are vaccinated against COVID-19 have an 82% greater likelihood of living longer than those who are not vaccinated, according to research presented at [Heart Failure 2024](#), a scientific congress of the European Society of Cardiology (ESC), held 11–14 May in Lisbon, Portugal. Heart Failure is a life-threatening syndrome affecting more than 64 million people worldwide.

"Patients with heart failure should be vaccinated against COVID-19 to protect their health," said study author Dr. Kyeong-Hyeon Chun of the National Health Insurance Service Ilsan Hospital, Goyang, Republic of Korea.

"In this large study of patients with heart failure, COVID-19 vaccination was associated with a lower likelihood of contracting the infection, being admitted to hospital because of heart failure, or dying from any cause during a six-month period compared with remaining unvaccinated."

Previous studies have shown the safety of COVID-19 vaccination in patients with cardiovascular diseases including heart failure, and that COVID-19 outcomes are worse in patients with heart failure compared to those without heart failure. However, there has been little research on how vaccines work specifically in patients with heart failure. This nationwide, [retrospective study](#) examined the prognosis of [heart failure patients](#) according to COVID-19 vaccination status.

This study used the Korean National Health Insurance Service database, which covers nearly all residents of the Republic of Korea, to obtain information on vaccinations and clinical outcomes. Participants who received two or more doses of COVID-19 [vaccine](#) were defined as "vaccinated," and those who were not vaccinated or had received just one dose were defined as "unvaccinated."

The study included 651,127 patients aged 18 years or older with heart failure. The average age was 69.5 years and 50% were women. Of the total study population, 538,434 (83%) were defined as vaccinated and 112,693 (17%) as unvaccinated.

To control for factors that could influence the relationship between vaccination status and outcomes, the researchers performed 1:1 matching of vaccinated and unvaccinated patients according to age, sex, other health conditions (e.g. [high blood pressure](#), diabetes, high cholesterol, etc.), income, and region of residence. This resulted in 73,559 vaccinated patients and 73,559 unvaccinated patients for the comparative analyses.

The median follow-up was six months. Vaccination was associated with an 82% lower risk of all-cause mortality, 47% lower risk of hospitalization for heart failure, and 13% reduced risk of COVID-19 infection compared with no vaccination. Regarding cardiovascular complications, vaccination was associated with significantly lower risks of stroke, [heart attack](#), myocarditis/pericarditis, and [venous thromboembolism](#) compared to no vaccination.

Dr. Chun said, "This was the first analysis of COVID-19 vaccine effectiveness in a large population of heart failure patients, and the first to show a clear benefit from vaccination. The study provides strong evidence to support vaccination in patients with heart failure. However, this evidence may not be applicable to all patients with heart failure, and the risks of vaccination should be considered in patients with unstable conditions."

Provided by European Society of Cardiology

Citation: Study finds COVID-19 vaccine can help people with heart failure live longer (2024,

May 11) retrieved 23 May 2024 from <https://medicalxpress.com/news/2024-05-covid-vaccine-people-heart-failure.html>

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