

Therapy involving diabetes drug empagliflozin shows promise in delaying hospitalizations for heart failure

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About 800,000 people in the U.S. suffer a heart attack every year, and about 30% of them will go on to develop heart failure. There are limited

treatments to prevent or slow that development.

A large international study led by Duke researchers investigated whether the [diabetes](#) drug empagliflozin (marketed under the brand name Jardiance) might prevent [heart failure](#) in patients after they had suffered [acute myocardial infarction](#) (heart attack).

While the study found that the drug did not reduce deaths, secondary findings show it did slow the time to first hospitalization for heart failure and reduced the total number of subsequent heart failure hospitalizations.

The secondary findings are [published](#) in the journal *Circulation* and presented at the American College of Cardiology's Annual Scientific Session on April 6. Other findings from the study, called EMPACT-MI, were also simultaneously published in the *New England Journal of Medicine* and the *Journal of the American College of Cardiology*.

Empagliflozin was originally approved for use in patients with diabetes, but investigators chose to study the drug based on earlier findings that it showed benefit in preventing active heart failure from becoming worse. The study was funded by two companies that manufacture the drug—Boehringer Ingelheim and Eli Lilly and Company.

The study enrolled 6,522 patients across 22 countries, with roughly half randomly assigned to receive the therapy and the other half placebo. Both groups otherwise received standard care. Investigators credit the study's simple design to its broad reach.

The Duke Clinical Research Institute coordinated and led the conduct of the trial.

The study findings on lower rates of heart failure offer some hope and

underscore the importance of preventing poor outcomes after a heart attack, according to principal investigator and corresponding author, Adrian Hernandez, M.D., director of the Duke Clinical Research Institute.

"Developing heart failure is one of our major public health problems, and any step that gets us closer to preventing it is a step in the right direction," Hernandez said. "After a heart attack, we should really be focused on how to prevent problems, especially the development of heart failure. This therapy fills in that gap."

Hernandez said he would be curious to investigate the secondary findings further, especially because there are so many different factors that can play out after a heart attack.

"Heart attacks are pretty dynamic—in the first 24 hours things can change for the better or the worse; you can end up having a small [heart attack](#) or a big one," Hernandez said. "We don't know if there could be a difference in results from the therapy depending on the type of event and the timing of giving a treatment. Those could be areas to consider."

More information: Adrian F. Hernandez et al, Effect of Empagliflozin on Heart Failure Outcomes After Acute Myocardial Infarction: Insights from the EMPACT-MI Trial, *Circulation* (2024). [DOI: 10.1161/CIRCULATIONAHA.124.069217](https://doi.org/10.1161/CIRCULATIONAHA.124.069217)

Provided by Duke University

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