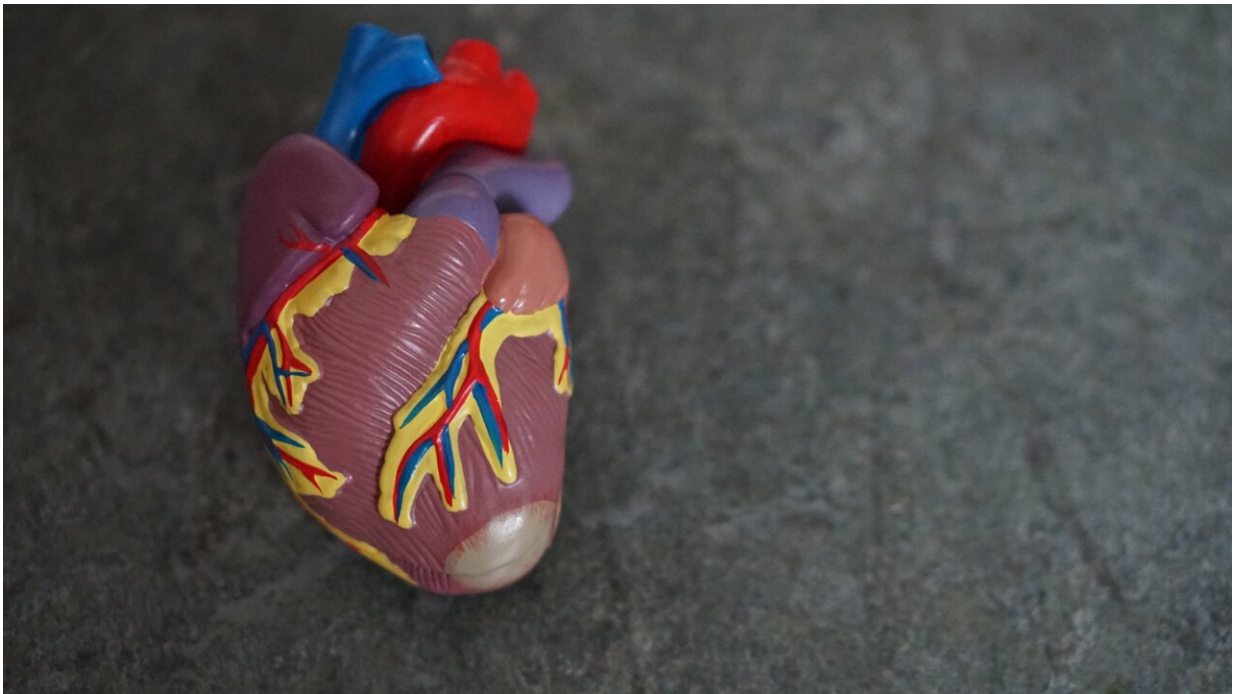


Omecamtiv mecarbil does not improve exercise capacity with heart failure

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Patients with heart failure with reduced ejection fraction (HFrEF) did not experience any improvement in their ability to exercise vigorously after taking the experimental heart failure drug omecamtiv mecarbil, in a study presented at the American College of Cardiology's 71st Annual Scientific Session.

Many patients who have HFrEF—a condition in which the heart doesn't squeeze as forcefully as it should, making it hard to meet the body's needs—tire easily and become winded during physical activity. In previous trials, omecantiv mecarbil was found to offer significant benefits in terms of reducing the time to cardiovascular death or first heart failure event among these patients. However, the new findings suggest the drug does not help to overcome the day-to-day functional limitations that are a hallmark of the disease.

"When added to excellent background therapy, we found no significant improvement in [exercise capacity](#)," said Gregory D. Lewis, MD, section head of heart failure and medical director of heart transplantation at Massachusetts General Hospital and the study's lead author. "This is unfortunately not the first time that there has been a medication that improves outcomes but doesn't improve exercise capacity. There is a persistent frontier in heart failure to help patients improve their functional capacity, and it seems like we may need to look beyond our current and expanding pharmacotherapy regimen to address this need."

The trial enrolled 276 patients who were already receiving guideline-directed [medical therapy](#) for HFrEF at maximally tolerated doses. Two-thirds of the participants were randomly assigned to receive omecantiv mecarbil on top of their normal drug regimen and one-third received a placebo. Researchers performed a variety of tests to assess participants' exercise capacity before the study and after 20 weeks.

Researchers found no difference between the study groups in terms of the trial's primary endpoint, the change in peak oxygen uptake as measured by cardiopulmonary exercise testing, the gold standard method for assessing exercise capacity. There was also no difference in terms of the study's secondary endpoints, which included a variety of other tests used to assess the functioning of the lungs and heart during exercise. Participants showed no improvement in terms of their day-to-day

[physical activity](#), as measured by wearable accelerometers, or their perceived functional capacity after taking omecamtiv mecarbil.

Exercise intolerance is a dominant symptom of heart failure that limits a person's daily activities. As the heart grows weaker, other organ systems deteriorate as well. Since exercise capacity reflects the performance of several [organ systems](#), measurably improving exercise capacity would require quite a large improvement in cardiac functioning to compensate for deficiencies in the functioning of the lungs and other organs, Lewis said. He added that most trial participants had experienced symptomatic heart failure for a long time before enrolling in the study.

"When you have [chronic heart failure](#), there are effects on almost every organ system in the body," Lewis said. "Perhaps a cardio-specific intervention given for a period of five months is not adequate to reverse and overcome the totality of influence of heart failure on the whole body and its ability to perform maximum exercise when [heart failure](#) has been present for more than five years."

The drug was well tolerated, and the researchers did not find any indication of safety concerns either during maximum [exercise](#) or at any other point in the trial. No significant differences were observed between study subgroups, which Lewis said was expected given the trial's relatively small size.

More information: Gregory D. Lewis, Kieran F. Docherty, et al, The Effect Of Omecamtiv Mecarbil On Exercise Tolerance In Patients With Chronic Heart Failure And Reduced Ejection Fraction: METEORIC-HF, American College of Cardiology's 71st Annual Scientific Session, April 3, 2022

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