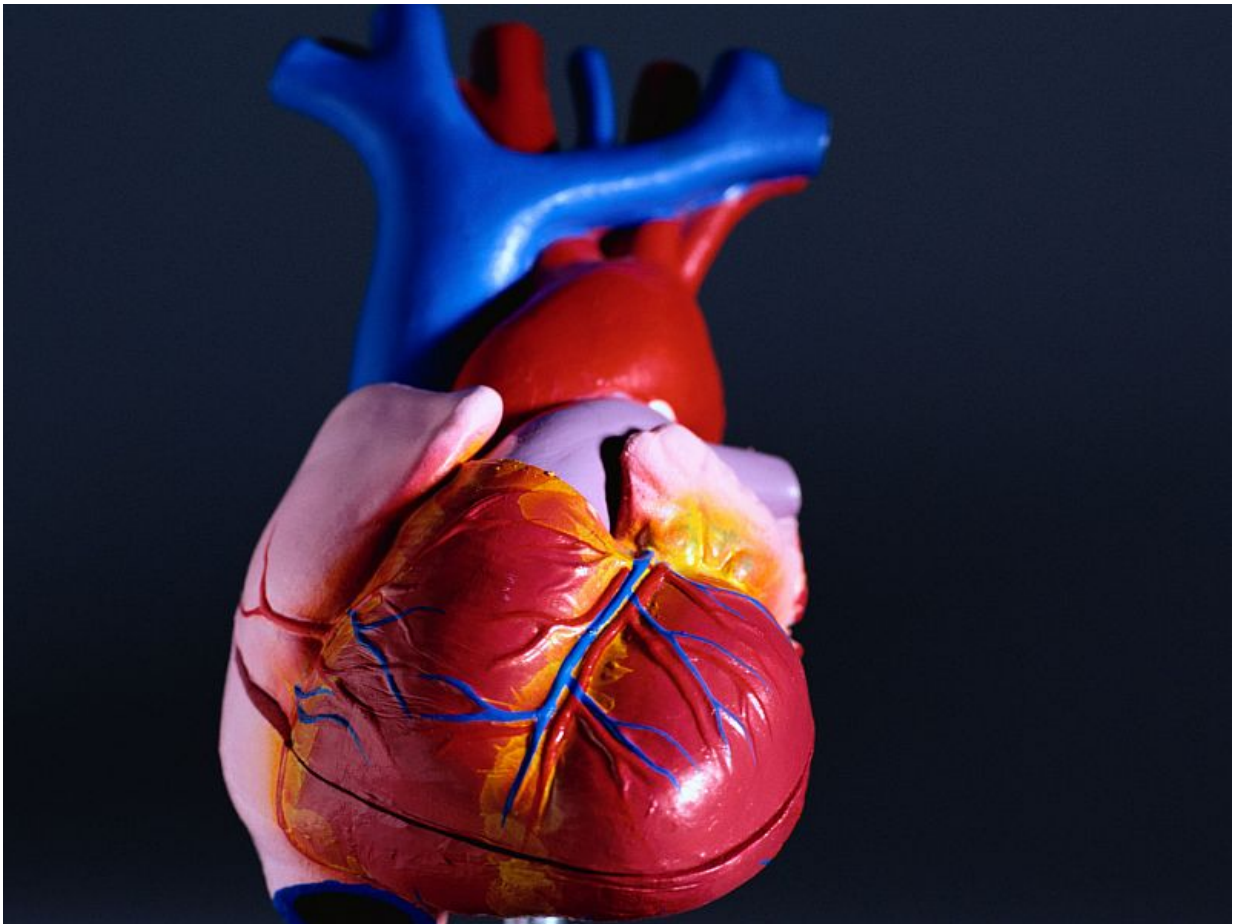


CPX testing predicts mortality in heart failure with reduced EF

February 17 2016



(HealthDay)—Variables measured during a cardiopulmonary exercise

(CPX) test can predict and discriminate mortality in patients with heart failure with reduced ejection fraction (HFrEF), according to a study published in the Feb. 23 issue of the *Journal of the American College of Cardiology*.

Steven J. Keteyian, Ph.D., from the Henry Ford Hospital in Detroit, and colleagues report on the strength of the association among variables measured during a CPX test and all-cause mortality in patients with HFrEF. Ten CPX test variables were measured at baseline among 2,100 patients enrolled in the Heart Failure-A Controlled Trial Investigating Outcomes of Exercise Training.

The researchers identified 357 deaths over a median follow-up of 32 months. With the exception of respiratory exchange ratio, all CPX variables correlated with all-cause mortality ($P < .05$) and exercise duration were able to predict and discriminate mortality equally (c-index, 0.69). Among men and women, respectively, the strongest predictor of mortality was peak Vo_2 and exercise duration. Percent pp Vo_2 , exercise duration, and peak Vo_2 were similarly able to predict and discriminate mortality, in multivariable analyses. A 10 percent one-year mortality rate corresponded to peak Vo_2 of $10.9 \text{ ml/kg}^{-1}/\text{min}^{-1}$ in men versus $5.3 \text{ ml/kg}^{-1}/\text{min}^{-1}$ in women.

"Peak Vo_2 , exercise duration, and percent pp Vo_2 carried the strongest ability to predict and discriminate the likelihood of death in [patients](#) with HFrEF," the authors write. "The prognosis associated with a given peak Vo_2 differed by sex."

One author disclosed financial ties to Merck Research Laboratories.

More information: [Full Text \(subscription or payment may be required\)](#)

[Editorial \(subscription or payment may be required\)](#)

Copyright © 2016 [HealthDay](#). All rights reserved.

Citation: CPX testing predicts mortality in heart failure with reduced EF (2016, February 17)
retrieved 2 May 2024 from

<https://medicalxpress.com/news/2016-02-cpx-mortality-heart-failure-ef.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--