

# Nitrites aid heart failure with preserved ejection fraction

6 October 2015



(HealthDay)—In patients with heart failure with preserved ejection fraction (HFpEF), sodium nitrite infusion favorably reduces exercise-linked hemodynamic derangements of cardiac failure, according to a study published in the Oct. 13 issue of the *Journal of the American College of Cardiology*.

In a randomized trial, Barry A. Borlaug, M.D., from the Mayo Clinic in Rochester, Minn., and colleagues examined whether acute nitrite administration improves [exercise](#) hemodynamics and cardiac reserve in HFpEF. Twenty-eight participants underwent invasive cardiac catheterization with simultaneous expired gas analysis at rest and during exercise, before and 15 minutes after sodium nitrite or placebo treatment.

The researchers found that subjects displayed an increase in pulmonary capillary wedge pressure (PCWP) with exercise before the study drug infusion. Exercise PCWP was significantly improved by nitrite versus placebo ( $P = 0.0003$ ). Exercise correlated with improved nitrite-enhanced cardiac output reserve ( $P = 0.002$ ) and with normalization of the increase in cardiac output relative to oxygen consumption. Compared with placebo, nitrite improved pulmonary artery pressure-flow relationships and increased left

ventricular stroke work with exercise.

"Acute sodium nitrite infusion favorably attenuates hemodynamic derangements of [cardiac failure](#) that develop during exercise in individuals with HFpEF," the authors write. "Prospective trials testing long-term nitrite therapy in this population are warranted."

One author disclosed financial ties to Aires Pharmaceuticals for a separate study examining the use of inhaled [nitrite](#) in patients with HFpEF.

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

Copyright © 2015 [HealthDay](#). All rights reserved.

APA citation: Nitrites aid heart failure with preserved ejection fraction (2015, October 6) retrieved 6 September 2022 from <https://medicalxpress.com/news/2015-10-nitrites-aid-heart-failure-ejection.html>

*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.*