

Over-the-counter antioxidant mix improved vascular health in some heart failure patients

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A combination of over-the-counter antioxidants shows promise for mitigating some damaging effects of heart failure with preserved ejection fraction (HFpEF), a new study reports. The research, which will be presented today at the American Physiological Society's (APS) annual meeting at Experimental Biology 2019 in Orlando, Fla., is the first to evaluate the efficacy of antioxidants to improve vascular function in patients with HFpEF.

HFpEF, previously known as diastolic heart failure, is a chronic condition in which the heart does not fill properly. It is the most common form of heart failure among the elderly, particularly women. To date, very few treatments have proven successful in improving clinical status in patients with HFpEF. Because of this, there is a focus on treating the many comorbidities that accompany the disease, such as inflammation, which can impair [vascular function](#).

In a double-blind study, 16 patients with HFpEF were given a placebo or an antioxidant cocktail consisting of alpha lipoic acid (600mg), vitamin C (1,000mg) and vitamin E (600IU). This was a balanced, cross-over study, which means that all participants receive both treatments sequentially, thus serving as their own controls. The research team measured various markers of vascular function, inflammation and [oxidative stress](#). Though the measures of small blood vessel function and oxidative stress did not show changes, the measure of function in large blood vessels and of inflammation improved with treatment. Similarly, the presence of biologically available nitric oxide, a compound that helps blood vessels dilate, also increased.

The findings provide "new insight into the mechanisms that govern peripheral vascular

dysfunction" in HFpEF patients, the researchers explained, and suggest that antioxidant administration may represent a simple and readily available option to improve vascular health in this patient group.

More information: Stephen Ratchford, Ph.D., a postdoctoral fellow at the University of Utah Department of Internal Medicine and the Salt Lake City VA Geriatric Research, Education, and Clinical Center (GRECC), will present "Impact of acute antioxidant administration on inflammation and vascular function in heart failure with preserved ejection fraction" Sunday, April 7, as part of the oral session "Aging, exercise and heart failure: common connections and new targets" in the Orange County Convention Center W312A. He will also present the poster on Tuesday, April 9, during the APS Cardiovascular Section Young Investigators poster session in West Hall B of the exhibit hall of the Orange County Convention Center.

Provided by American Physiological Society

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