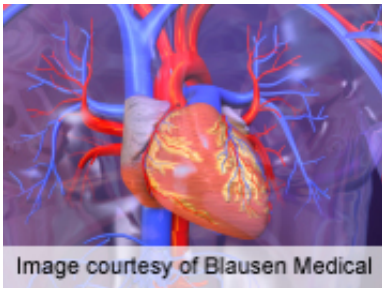


# Fitness impacts concentric remodeling, diastolic function

May 8 2014

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(HealthDay)—Low cardiorespiratory fitness is associated with increased concentricity and diastolic dysfunction, according to a study published in the April issue of the *Journal of the American College of Cardiology: Heart Failure*.

Stephanie K. Brinker, M.D., from the University of Texas Southwestern Medical Center in Dallas, and colleagues estimated [fitness](#) in participants (1,678 men and 1,247 women) of the Cooper Center Longitudinal Study. Participants received an echocardiogram from 1999 to 2011 and were categorized into age-specific quartiles of fitness, with quartile 1 representing low fitness.

The researchers found that higher levels of mid-life fitness (metabolic equivalents) correlated with larger indexed left atrial volume and

indexed left ventricular end-diastolic diameter. There was also a correlation for higher level of fitness with a smaller relative wall thickness and E/e' ratio. No significant association was observed for low fitness with left ventricular systolic function.

"Low fitness is associated with a higher prevalence of concentric remodeling and [diastolic dysfunction](#), suggesting that exercise may lower [heart failure](#) risk through its effect on favorable cardiac remodeling and improved [diastolic function](#)," the authors write.

Two authors disclosed financial ties to the pharmaceutical and medical device industries.

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