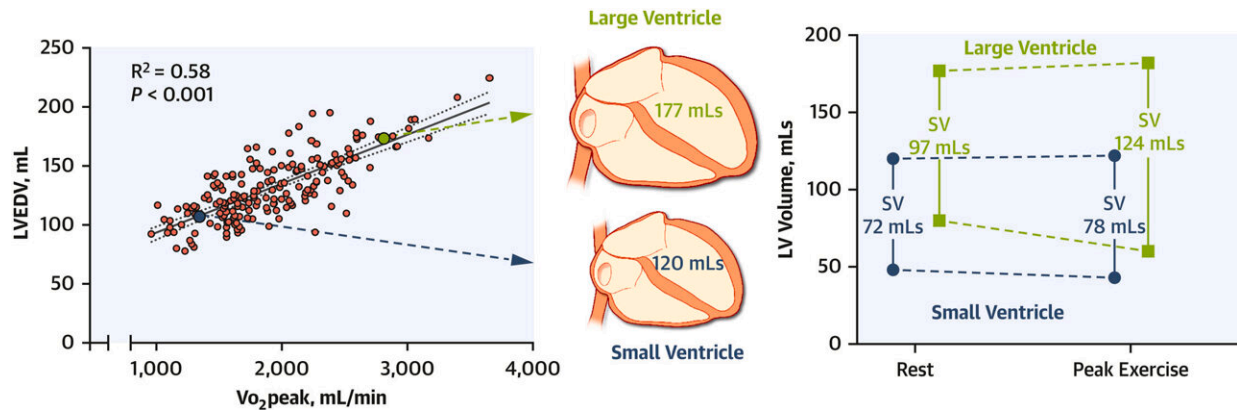


# A big heart could help keep women healthy

February 10 2023



Central Illustration. Credit: *JACC: Cardiovascular Imaging* (2023). DOI: 10.1016/j.jcmg.2022.12.009

Baker Heart and Diabetes researchers have found that middle-aged women with a small heart have low cardiorespiratory function (CRF). Lower cardiorespiratory function is associated with disability, heart failure and premature death.

The paper, led by Associate Professor Andre La Gerche and titled Too Little of a Good Thing—Strong Associations Between Cardiac Size and Fitness Among Women, was published in *JACC: Cardiovascular Imaging* today.

Decades of studies in athletes have established a relationship between an enlarged heart and increased CRF but A/Prof La Gerche and his team

have now shown that, at the other end of the spectrum, there is a clear physiologic mechanism linking a small ventricle to lower CRF.

"We made two important and novel findings," he said. "The first is that there is a strong positive relationship between ventricular size and CRF, and secondly, that there is diminished augmentation of cardiac function during [exercise](#) in those women with small cardiac size.

"So, low CRF in this cohort could be partly explained by a "double hit" in which a smaller heart has a lesser capacity at rest and a lesser ability to increase the amount that it can pump during exercise.

"In [younger people](#), fitness is tested when having fun with friends. In middle-aged and older individuals, fitness defines your resilience to illness, operations and health challenges. You need to build your [heart muscle](#) when you are young to have the reserve to cope with challenges when older. Our hospitals are disproportionately weighted by people in whom modest illnesses push their hearts to their capacity. This is, at least in part, preventable"

Despite the limitations of having a small heart, A/Prof La Gerche said that we all have the capacity to increase the size of our hearts.

"Although we found in this study that women with the smallest ventricles had lower exercise capacity and a constrained ability to increase capacity, we do know that through exercise, we can all change the size of our hearts," he said.

"For women in their [middle age](#), one of the biggest risk factors of heart failure is fitness. So the key message from this study should be that young and middle-aged women need to exercise to make a difference to the size of their hearts and add years to their heart health bank."

A/Prof La Gerche said further prospective studies are needed to determine the implications of small cardiac size on the risk of future functional impairment and [heart](#) failure, specifically [heart failure](#) with preserved [ejection fraction](#) (HFpEF).

**More information:** Stephen J. Foulkes et al, Too Little of a Good Thing, *JACC: Cardiovascular Imaging* (2023). [DOI: 10.1016/j.jcmg.2022.12.009](#)

Provided by Baker Heart and Diabetes Institute

Citation: A big heart could help keep women healthy (2023, February 10) retrieved 6 May 2024 from <https://medicalxpress.com/news/2023-02-big-heart-women-healthy.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>
--