

Walk more to reduce heart failure risk, study says

September 5 2018



Credit: CC0 Public Domain

A new University at Buffalo study has shown for the first time that walking more can significantly lower the risk of heart failure in older women.

The U.S. study of more than 137,000 postmenopausal women aged 50 to 79 is the largest and most comprehensive to date that has evaluated

physical activity within the context of [heart](#) failure prevention. The findings were published online today ahead of print in the *Journal of the American College of Cardiology: Heart Failure (JACC-HF)*.

In addition to reducing overall heart failure by 25 percent, increased physical activity benefitted two heart failure subtypes defined by cardiac function: reduced [ejection fraction](#), which typically has a worse prognosis, and preserved ejection fraction, which is more common in older adults, especially women and racial-ethnic minorities.

"This is the first study to report physical activity levels are related to a lower risk of developing heart failure with reduced ejection fraction in older adults, particularly in women," says Michael LaMonte, Ph.D., the study's lead author and a research associate professor of epidemiology in the UB School of Public Health and Health Professions.

"This is pretty important from a public health standpoint, given the poor prognosis this type of heart failure has once it's present," LaMonte added.

Heart failure disproportionately affects older adults, with about 80 percent of cases occurring in people 65 and older, an age group for whom heart failure is the leading cause of hospitalization.

Reduced ejection fraction heart failure typically occurs in individuals who've had a heart attack. The heart becomes a poorer pump, which leads to related complications, including the failure of other organs and, in a worst-case scenario, the need for a heart transplant or even sudden cardiac death, LaMonte explains.

Heart failure with preserved ejection fraction tends to occur in people who haven't had a heart attack but do have high blood pressure or diabetes. "The heart muscle more or less wears out and becomes an

inefficient pump, although not to the extreme seen with reduced ejection fraction," LaMonte said.

LaMonte and colleagues examined self-reported physical activity information from 137,303 participants in the Women's Health Initiative (WHI), a long-term prospective study that has yielded important findings on death and disease risk in postmenopausal women, and for which UB has been a clinical center since WHI began in the early 1990s.

They then looked at a subset of 35,272 women who had either reduced ejection fraction or preserved ejection fraction heart failure. Over an average 14-year follow-up, there were 2,523 cases of heart failure, including 451 with reduced ejection fraction and 734 with preserved ejection fraction.

As part of their analysis, researchers accounted for heart attack development prior to the heart failure diagnosis. That's critical because heart attack after the completion of the physical activity assessment, but before the diagnosis of heart failure, could lead to biased results by suggesting a stronger relationship than would be the case.

"By accounting for this, our results are likely not being influenced in this regard," LaMonte said. "We also showed that the protective relationship between physical activity and heart failure development held when we examined changes in physical activity levels over time."

The cumulative incidence of overall heart failure was lower with increasing physical activity, compared to women who reported no physical activity at baseline. Each additional 30 to 45 minutes per day of activity was associated, on average, with a risk reduction of 9 percent for overall heart failure, 8 percent for heart failure with preserved ejection fraction and 10 percent for heart failure with reduced ejection fraction.

Physical activity and walking were inversely associated with the development of heart failure, whereas intensity-specific (mild, moderate, intense) physical activity was not. That suggests that it's the amount, not the intensity, of physical activity performed that can help prevent heart failure later in life, researchers say.

"The finding that walking showed a protective association with heart failure and its subtypes is particularly important in a public health context," LaMonte said. "This is especially relevant given that walking is by far the most commonly reported physical activity in older adults."

The findings are also significant considering that the population of people 60 and over in the U.S. is expected to double by 2035, with women outnumbering men 2 to 1.

"Because [heart failure](#) is much more common after age 60, and because its treatment is very challenging and costly, the possibility of preventing its development by promoting increased [physical activity](#) levels, and specifically walking, in later life could have an important impact on the overall burden of this disease in an aging society," LaMonte said.

The take home message, according to LaMonte, is "move more, sit less, which is probably prudent advice for us all."

Provided by University at Buffalo

Citation: Walk more to reduce heart failure risk, study says (2018, September 5) retrieved 26 April 2024 from <https://medicalxpress.com/news/2018-09-heart-failure.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.