Medical Xpress

Moderate physical activity associated with lower risk of heart failure in men

August 12 2015

Men who participated in moderate amounts of physical activity, particularly walking and bicycling, were associated with a lower risk of future heart failure compared to those with lower and higher levels of activity. However, recent active behavior may play a more important role than past physical activity, according to a study published today in the *Journal of the American College of Cardiology: Heart Failure*.

Heart failure is a condition where the heart is unable to pump as much blood as the body needs. Around 23 million people suffer from heart failure globally, including almost 6 million in the United States. On average, people have a 20 percent lifetime risk for developing heart failure.

Researchers followed 33,012 men from the Cohort of Swedish Men from 1998 until 2012—or first event of heart failure—to determine if physical activity was associated with heart failure risk. Overall, men who had the lowest and highest levels of physical activity had a higher risk of heart failure, 47 percent and 51 percent respectively, than men with a median level. When analyzing the different types of physical activity, walking or bicycling for 20 minutes per day was associated with the largest risk reduction.

When enrolling in the study, participants from two counties in Sweden completed a questionnaire about their level of activity at work, home, walking or bicycling, and exercise in the year prior at an average of 60 years old and retrospectively at 30 years old. Researchers assigned each

type of physical activity an intensity score and determined walking or bicycling just 20 minutes per day was associated with a 21 percent lower risk of heart failure and accounted for the largest difference in heart failure free survival. Of the men diagnosed with heart failure during the course of study, those who had engaged in at least 20 minutes per day in walking or bicycling were approximately eight months older compared to heart failure cases who had engaged in less than 20 minutes per day of walking or bicycling.

While researchers acknowledged the use of self-reported physical activity meant levels were possibly misclassified, the questions on physical activity in the Cohort of Swedish Men were validated in a prior study using a sub-population of the participants.

Upon analyzing the different types of activities, certain types of physical activity were associated with reduced risk of heart failure such as walking and bicycling or exercising more than one hour per week. Meanwhile occupation, household work and physical inactivity were not significantly associated with heart failure development. Researchers also found that men who were active at 30 years old but were inactive at the time of study enrollment did not have a decreased risk of heart failure.

"Because participants in the study cohort had also provided information about their physical activity at age 30, as well as at the time of enrollment around age 60, we were able to examine the long-term impacts of physical activity on heart failure," said Andrea Bellavia, M.Sc., of the Karolinska Institutet in Stockholm and one of the study authors. "We found that recent activity may be more important for heart failure protection than past physical activity levels. The first incidence of heart failure in men was also later for those who actively walked or bicycled 20 minutes each day."

While the study suggests both low and high levels of physical activity,

compared to more moderate levels, could increase the risk of heart failure in men, study authors cautioned that the link between physical activity and heart disease is not fully understood. Heavy physical activity, such as long distance running, or manual labor may put stress on the body, which in turn has adverse effects on the heart.

"The U-shaped relationship between exercise levels and the likelihood of subsequent heart failure is a unique finding and will stimulate further research in the important field of prevention," said Christopher O'Connor, M.D., editor-in-chief of the *Journal of the American College of Cardiology: Heart Failure*.

In an accompanying editorial, Steven J. Keteyian, Ph.D., and Clinton A. Brawner, Ph.D., of the Division of Cardiovascular Medicine at Henry Ford Hospital in Detroit, wrote, "We are reminded that we still know relatively little about how variations in physical activity and exercise 'dose' might impact disease onset."

According to Keteyian and Brawner, the paradoxical nature of the findings that risk of heart failure development actually increases for those reporting high levels of physical activity leads them to ask, "How much exercise it too much?" However, they also said they believe the study findings reinforce the "message that a moderate level of total physical activity is an important behavioral strategy" in both the treatment and prevention of heart failure.

More information: Full Text (subscription or payment may be required)
Editorial (subscription or payment may be required)

Provided by American College of Cardiology

Citation: Moderate physical activity associated with lower risk of heart failure in men (2015, August 12) retrieved 6 May 2024 from https://medicalxpress.com/news/2015-08-moderate-physical-heart-failure-men.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.