

Women, exercise and longevity

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Women who can exercise vigorously are at significantly lower risk of dying from heart disease, cancer and other causes. The research is presented today at EuroEcho 2019, a scientific congress of the European Society of Cardiology (ESC).

Study author Dr. Jesús Peteiro, of University Hospital A Coruña, Spain advised women: "Exercise as much as you can. Fitness protects against death from any cause."

Exercise is good for health and longevity, but information on women is scarce. Women generally live longer than men, so dedicated studies are needed. This study examined exercise capacity and [heart function](#) during exercise in women and their links with survival. The study included 4,714 [adult women](#) referred for treadmill exercise echocardiography because of known or suspected [coronary artery disease](#).

Participants walked or ran on a treadmill, gradually increasing the intensity, and continuing until exhaustion. Images of the heart were generated during the test. Fitness was defined as a maximal workload of 10 metabolic equivalents (METs),² which is equal to walking fast up four flights of stairs or very fast up three flights, without stopping. Women who achieved 10 METs or more (good exercise capacity) were compared to those achieving less than 10 METs (poor exercise capacity).

During a median follow-up of 4.6 years there were 345 [cardiovascular deaths](#), 164 cancer deaths, and 203 deaths from other causes. After adjusting for factors that could influence the relationship, METs were significantly associated with [lower risk](#) of death from cardiovascular disease, cancer, and other causes.

The annual rate of death from cardiovascular disease was nearly four times higher in women with poor, compared to good, exercise capacity (2.2% versus 0.6%). Annual cancer deaths were doubled in patients with poor, compared to good, exercise capacity (0.9% versus 0.4%). The annual rate of death from other causes was more than four times higher in those with poor, compared to good, exercise capacity (1.4% vs. 0.3%).

Dr. Peteiro said: "Good exercise capacity predicted lower risk of death

from cardiovascular disease, cancer, and other causes."

He noted that most study participants were middle aged or older women: the average age was 64 and 80% were between 50 and 75. "The results were the same for women over 60 and less than 60 although the group under 50 was small," said Dr. Peteiro.

Regarding imaging of the heart, the researchers assessed function of the left ventricle (one of the heart's pumping chambers) during the exercise test. Patients with poor heart function during exercise had a higher probability of death from [cardiovascular disease](#) during follow-up. Heart function during exercise did not predict the likelihood of death from cancer or other causes.

Dr. Peteiro said: "Looking at both examinations together, [women](#) whose heart works normally during exercise are unlikely to have a cardiovascular event. But if their exercise capacity is poor, they are still at risk of death from cancer or other causes. The best situation is to have normal heart performance during exercise and good [exercise capacity](#)."

More information: The abstract 'Prediction of different causes of mortality by exercise echocardiography in women' will be presented during the session Stress echocardiography in 2020 on 7 December at 11:00 to 12:30 CET in the Agora.

Provided by European Society of Cardiology

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