

World's largest study shows the more you walk, the lower your risk of death, even if you walk fewer than 5,000 steps

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The number of steps you should walk every day to start seeing benefits to your health is lower than previously thought, according to the largest

analysis to investigate this.

The study, published in the *European Journal of Preventive Cardiology* today, found that walking at least 3967 steps a day started to reduce the risk of dying from any cause, and 2337 steps a day reduced the risk of dying from diseases of the heart and blood vessels ([cardiovascular disease](#)).

However, the new analysis of 226,889 people from 17 different studies around the world has shown that the more you walk, the greater the health benefits. The risk of dying from any cause or from [cardiovascular disease](#) decreases significantly with every 500 to 1000 extra steps you walk. An increase of 1000 steps a day was associated with a 15% reduction in the risk of dying from any cause, and an increase of 500 steps a day was associated with a 7% reduction in dying from cardiovascular disease.

The researchers, led by Maciej Banach, Professor of Cardiology at the Medical University of Lodz, Poland, and Adjunct Professor at the Ciccarone Center for the Prevention of Cardiovascular Disease, Johns Hopkins University School of Medicine, found that even if people walked as many as 20,000 steps a day, the health benefits continued to increase. They have not found an [upper limit](#) yet.

"Our study confirms that the more you walk, the better," says Prof. Banach. "We found that this applied to both men and women, irrespective of age, and irrespective of whether you live in a temperate, sub-tropical or sub-polar region of the world, or a region with a mixture of climates. In addition, our analysis indicates that as little as 4,000 steps a day are needed to significantly reduce deaths from any cause, and even fewer to reduce deaths from cardiovascular disease."

There is strong evidence that a [sedentary lifestyle](#) may contribute to an

increase in cardiovascular disease and a shorter life. Studies have shown that insufficient physical activity affects more than a quarter of the world's population. More women than men (32% versus 23%), and people in higher income countries compared to low-income countries (37% versus 16%) do not undertake a sufficient amount of physical activity.

According to World Health Organization data, insufficient physical activity is the fourth most frequent cause of death in the world, with 3.2 million deaths a year related to physical inactivity. The COVID-19 pandemic also resulted in a reduction in physical activity, and activity levels have not recovered two years on from it.

Dr. Ibadete Bytyçi from the University Clinical Centre of Kosovo, Pristina, Kosovo, senior author of the paper, says, "Until now, it's not been clear what is the optimal number of steps, both in terms of the cut-off points over which we can start to see [health benefits](#), and the upper limit, if any, and the role this plays in people's health. However, I should emphasize that there were limited data available on step counts up to 20,000 a day, and so these results need to be confirmed in larger groups of people."

This [meta-analysis](#) is the first not only to assess the effect of walking up to 20,000 steps a day, but also to look at whether there are any differences depending on age, sex or where in the world people live.

The studies analyzed by the researchers followed up participants for a median (average) of seven years. The mean (average) age was 64, and 49% of participants were female.

In people aged 60 years or older, the size of the reduction in risk of death was smaller than that seen in people aged younger than 60 years. In the [older adults](#), there was a 42% reduction in risk seen in those who

walked between 6,000 and 10,000 steps a day, while there was a 49% reduction in risk in younger adults who walked between 7,000 and 13,000 steps a day.

Prof. Banach says, "In a world where we have more and more advanced drugs to target specific conditions such as cardiovascular disease, I believe we should always emphasize that [lifestyle changes](#), including diet and exercise, which was a main hero of our analysis, might be at least as, or even more effective in reducing cardiovascular risk and prolonging lives."

"We still need good studies to investigate whether these benefits may exist for intensive types of exertion, such as marathon running and iron man challenges, and in different populations of different ages, and with different associated health problems. However, it seems that, as with pharmacological treatments, we should always think about personalizing lifestyle changes."

Strengths of the meta-analysis include its size and that it was not restricted to looking at studies limited to a maximum of 16,000 steps a day. Limitations include that it was an observational study and so cannot prove that increased step counts cause the reduction in the risk of death, only that it is associated with it. The impact of step counts was not tested on people with different diseases; all the participants were generally healthy when they entered the studies analyzed.

The researchers were not able to account for differences in race and [socioeconomic status](#), and the methods for counting steps were not identical in all the studies included in this meta-analysis.

More information: Maciej Banach et al, The Association Between Daily Step Count and All-Cause and Cardiovascular Mortality: A Meta-Analysis, *European Journal of Preventive Cardiology* (2023). [DOI:](#)

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