

# Move more to live longer

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Improving fitness doesn't require doing activities you don't like. That's the main message of research presented today at EuroPrevent 2019. The largest study to date of cardiorespiratory fitness in healthy people found that moving more is linked to living longer, regardless of age, sex, and starting fitness level.

"People think they have to start going to the gym and exercising hard to get fitter," said study author Dr. Elin Ekblom-Bak, of the Swedish School of Sport and Health Sciences in Stockholm. "But it doesn't have to be that complicated. For most people, just being more active in [daily life](#)—taking the stairs, exiting the metro a station early, cycling to work—is enough to benefit health since levels are so low to start with. The more you do, the better."

The study included 316,137 adults aged 18-74 years who had their first occupational health screening between 1995 and 2015 in Sweden. Cardiorespiratory [fitness](#) was measured using a submaximal cycle test and expressed as maximal oxygen uptake (VO<sub>2</sub> max) in ml/minute/kg body weight. This is the maximum amount of oxygen the heart and lungs can provide the muscles during exercise. You can estimate your VO<sub>2</sub> max using

either submaximal cycle tests, treadmill tests, or walking tests.

Swedish national registries were used to obtain data on all-cause mortality and first-time cardiovascular events (fatal and non-fatal myocardial infarction, angina pectoris, or ischaemic stroke) during 1995-2015.

The risk of all-cause mortality and cardiovascular events fell by 2.8% and 3.2%, respectively, with each millilitre increase in VO<sub>2</sub> max. Benefits of fitness were seen in men and women, in all age groups, and at all fitness levels. Previous studies have been too small to ascertain whether all of these subgroups profit from improving their cardiorespiratory fitness. There was no plateau of benefit in the total population, with some variation between sex- and age-subgroups.

"It is particularly important to note that an increase in fitness was beneficial regardless of the starting point," said Dr. Ekblom-Bak. "This suggests that people with lower levels cardiorespiratory fitness have the most to gain from boosting their fitness."

Increasing fitness should be a public health priority and clinicians should assess fitness during health screening, said Dr. Ekblom-Bak. There are simple tests that could be used. "Our previous research has shown that fitness levels in the general population have dropped by 10% in the last 25 years.<sup>2</sup> In 2016-2017, almost every second man and woman had a low [fitness level](#), so this is a huge problem. Fitness is needed for daily activities. Poor fitness is as detrimental as smoking, obesity and diabetes even in otherwise healthy adults, yet unlike these other [risk factors](#) it is not routinely measured."

She advised, as a rough guide, that for every additional millilitre of VO<sub>2</sub> max there will be an average 3% risk reduction of all-cause mortality and cardiovascular events. "This is more motivational than just telling people they need to do better. People in the lower range of VO<sub>2</sub> max will

reduce their risk even more (9%) while those at the upper end of VO2 max will reduce their risk by 1%," she said.

**More information:** Elin Ekblom-Bak et al. Decline in cardiorespiratory fitness in the Swedish working force between 1995 and 2017, *Scandinavian Journal of Medicine & Science in Sports* (2018).  
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