

Physical fitness trumps body weight in reducing death risks

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even if your body weight has not changed or increased -- you can reduce your risk of death, according to research reported in *Circulation: Journal of the American Heart Association*.

In a study of 14,345 [adult men](#), mostly white and middle or upper class, researchers found that:

- Maintaining or improving fitness was associated with a lower [death risk](#) even after controlling for [Body Mass Index](#) (BMI) change.
- Every unit of increased fitness (measured as MET, metabolic equivalent of task) over six years was associated with a 19 percent lower [risk of heart disease](#) and stroke-related deaths and a 15 percent lower risk of death from any cause.
- Becoming less fit was linked to higher death risk, regardless of BMI changes.
- BMI change was not associated with death risks.

BMI is a measurement based on [weight](#) and height (kg/m²). MET measures the intensity of [aerobic exercise](#) – specifically, the ratio of metabolic rate during a specific physical activity to a reference rate of metabolic rate at rest.

"This is good news for people who are physically active but can't seem to lose weight," said Duck-chul Lee, Ph.D., the study's lead researcher and

physical activity epidemiologist in the Department of Exercise Science at the University of South Carolina's Arnold School of Public Health in Columbia. "You can worry less about your weight as long as you continue to maintain or increase your fitness levels."

Results of the study underscore the importance of physical inactivity as a risk factor for death from heart disease and stroke, said researchers. Researchers also found no association between changes in body fat percentage or body weight and death risk.

Participants, who were an average 44 years old, were part of the long-term, large-scale Aerobics Center Longitudinal Study. They underwent at least two comprehensive medical exams.

Researchers used maximal treadmill tests to estimate physical fitness (maximal METs), and height and weight measurements to calculate BMI. They recorded changes in BMI and physical fitness over six years. After more than 11 years of follow-up, researchers determined the relative risks of dying among men who lost, maintained or gained fitness over six years. They accounted for other factors that can affect outcomes, including BMI change, age, family history of [heart disease](#), beginning [fitness](#) level, changes in lifestyle factors such as smoking and physical activity, and medical conditions such as high blood pressure or diabetes.

One possible explanation for these results: about 90 percent of the men were either normal weight or overweight at the beginning of the study. Among obese people, changes in BMI might have a significant effect on death risks. So it's unclear whether these results would apply to severely obese people, Lee said.

A BMI score under 25 is considered healthy, 25 to less than 30 is overweight, and 30 or greater is obese.

Because the study was mostly done in white middle and upper class men, it's difficult to know whether the results apply to other racial and socioeconomic groups. Women would likely have similar results as the men in the study, Lee said.

Provided by American Heart Association

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