

Exercise during adolescence linked to lowered risk of death later

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Understanding the long-term impact of modifiable lifestyle factors such as exercise in adolescence is of critical importance and can have substantial public health implications for disease prevention over the course of life, Nechuta explained.

Nechuta and colleagues used data from the Shanghai Women's Health Study, a large, population-based prospective cohort study of about 75,000 women ages 40 to 70, from Shanghai, China, led by Wei Zheng, MD, PhD, at the Vanderbilt Epidemiology Center. The study had detailed information on participants reported at baseline recruitment, including self-reported exercise participation between the ages of 13 and 19, adult lifestyle-related factors, and mortality outcomes. In-person interviews were conducted to collect baseline data and follow-up data every two to three years.

After an average of 12.9 years of follow-up, there were 5,282 deaths, including 2,375 from cancer and 1,620 from cardiovascular disease.

After adjusting for socioeconomic factors in adult life, the researchers found that women who participated in exercise as adolescents for 1.33 hours a week or less had a 16 percent lowered risk for death from cancer, and a 15 percent lowered risk for death from all causes; those who participated in exercise as adolescents for more than 1.33 hours a week had a 13 percent lowered risk for death from all causes.

After adjusting for [socioeconomic factors](#) in adult life, women who

participated in team sports as adolescents had a 14 percent lowered risk for death from cancer, and a 10 percent lowered risk for death from all causes. Women who participated in exercise both in their adolescent and adult lives had a 20 percent lowered risk for death from all causes.

In an interview, Nechuta said, "In women, adolescent exercise participation, regardless of adult exercise, was associated with reduced risk of cancer and all-cause mortality. Our results support the importance of promoting exercise participation in adolescence to reduce mortality in later life and highlight the critical need for the initiation of [disease prevention](#) early in life.

"While we found adolescent exercise to be associated with lowered risk of [death](#) from cancer and [cardiovascular disease](#) as [adults](#), some associations were attenuated after adjusting for adult factors that may influence mortality later in life, such as exercise, diet, body mass index [BMI], socioeconomic status, and a history of chronic diseases. However, it is important to note that adult factors, such as adult exercise, BMI, and chronic diseases are potentially influenced by adolescent exercise, and adjusting for adult factors in these types of studies may not always be the best approach, as overadjustment could be a concern," Nechuta added.

"It is important to note that the exercise data were self-reported and potential measurement error cannot be excluded. Further, we only had data on [exercise](#) and did not have information on activities related to transportation or occupation. Future studies with more detailed adolescent physical activity assessments and studies in other populations are needed," she noted.

More information: Cancer Epidemiology, Biomarkers & Prevention

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