

Supervised aerobic exercise cuts long-term diabetes risk with obesity

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A 12-month vigorous or moderate aerobic exercise program can produce

long-term beneficial effects on diabetes prevention in individuals with central obesity, according to a research letter published online Jan. 30 in *JAMA Internal Medicine*.

Ying Chen, M.D., Ph.D., from Fudan University in Shanghai, and colleagues assessed the long-term effect of a 12-month vigorous or moderate exercise intervention (coached and supervised) on incident diabetes during 10 years of follow-up. The analysis included participants with central obesity and nonalcoholic fatty [liver disease](#) who were randomly assigned to vigorous [aerobic exercise](#) (73 individuals), moderate aerobic exercise (73 individuals), or a nonexercise control group (74 individuals). Participants were asked not to change their diet.

The researchers observed no significant differences between the groups at 10-year follow-up, although there was a trend of higher levels of leisure-time [physical activity](#) in the exercise groups versus the control group. The risk for diabetes was lower in the vigorous aerobic exercise group (relative risk, 0.51) and in the moderate aerobic exercise group (relative risk, 0.47) versus the nonexercise group. Similarly, hemoglobin A1c and [waist circumference](#) were significantly reduced in the vigorous and moderate exercise groups versus the nonexercise group. Fasting plasma glucose level and weight regain trended lower in the exercise groups than the nonexercise group, although not significantly.

"Our results are supportive of physical exercise as an effective scheme for obesity management to delay the progression of type 2 diabetes," the authors write.

More information: Ying Chen et al, Effect of Moderate and Vigorous Aerobic Exercise on Incident Diabetes in Adults With Obesity, *JAMA Internal Medicine* (2023). [DOI: 10.1001/jamainternmed.2022.6291](https://doi.org/10.1001/jamainternmed.2022.6291)

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