

Physical activity can promote learning and well-being at secondary school

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A study led by the University of Eastern Finland suggests that adolescents who engage in active school transport and leisure-time physical activity perform better at secondary school than their inactive

peers. Regular leisure-time physical activity, even in moderate doses, was also associated with lower odds of school burnout. The findings were published in the *European Journal of Public Health*.

The relationship of [physical activity](#) with learning and academic achievement is complex. However, prior studies have found that especially school-based physical activity, such as [physical education](#), can improve classroom performance—particularly in mathematics. Despite this, few studies have examined the association between active school transport and educational outcomes. Regarding physical activity and school well-being, most of the previous evidence is focused on university-level students.

In the recently published study of over 34,000 [adolescents](#), researchers observed that active school transport was associated with higher odds of high perceived [academic performance](#) and self-reported competency in [academic skills](#). The association was even stronger for leisure-time moderate-to-vigorous physical activity. Similar to prior studies, the relationship between leisure-time physical activity and mathematical skills stood out.

"The results regarding active school transport were particularly intriguing as researchers are increasingly interested in the health benefits of travel-related walking and cycling. Being physically active before school could, for example, enhance concentration in classroom, explaining our observations. However, due to the cross-sectional design, our study cannot establish causality," says Juuso Jussila, a Doctoral Researcher at the University of Eastern Finland.

"There were no surprises regarding the strong association between leisure-time physical activity and perceived [academic achievement](#) due to support from prospective and intervention studies. Although we do not know all the explanatory mechanisms, improved coordination and

perceptual-motor skills, required in various team sports, for example, can at least partially explain these observations. Leisure-time physical activity is also typically more intense than active school transport, leading to increases in brain-derived [neurotrophic factor](#) in our circulation and, thus, improvements in cognitive performance."

Leisure-time physical activity was also inversely associated with school burnout. As little as 30 minutes of weekly moderate-to-vigorous activity was associated with 24% lower odds of school burnout. Adolescents who engaged in leisure-time physical activity for 4 to 6 hours a week had 46% lower odds of school burnout compared to their physically inactive peers. Both leisure-time physical activity and active school transport were also positively associated with school enjoyment.

"To the best of my knowledge, this was the first large-scale study to examine the association between physical activity and school burnout among adolescents. Leisure-time physical activity can be an effective way to disconnect from schoolwork and the potential stress related to it. If we can increase the amount leisure-time physical activity among youth, both learning and well-being benefits can be significant," Jussila says.

More information: Juuso J Jussila et al, Are active school transport and leisure-time physical activity associated with performance and wellbeing at secondary school? A population-based study, *European Journal of Public Health* (2023). [DOI: 10.1093/eurpub/ckad128](https://doi.org/10.1093/eurpub/ckad128)

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