


# Sedentary lifestyle may impair academic performance in boys

30 November 2016

## SEDTARY LIFESTYLE LINKED TO POOR ACADEMIC PERFORMANCE IN BOYS

...Suggest a study published in the Journal of Medicine and Science in Sport




**What was done?**

The aim of this study was to investigate the associations of physical activity and sedentary time with reading and arithmetic skills.

A total of 153 (l) children aged 6-8-years old participated in the study.

Physical activity and sedentary time were measured objectively using a combined heart rate and movement sensing in Grade 1.

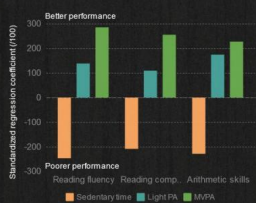
Reading and arithmetic skills were assessed by standardized tests in Grades 1-3.



**What was found?**

In boys, higher levels of sedentary time and lower levels moderate-to-vigorous physical activity (MVPA) were related to poorer reading and arithmetic skills in Grade 1.

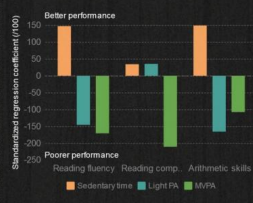
The corresponding associations of sedentary time and MVPA with reading skills were similar in Grades 2 and 3.



**What was found?**


In girls, sedentary time, light physical activity, or MVPA were not significantly related to academic achievement in Grade 1.

The corresponding associations were similar in Grades 2 and 3.



**Sedentary boys had on average...**

6.6




...points lower scores in reading fluency and reading comprehension, respectively, than all other boys.

These differences correspond to 17-33% lower scores in reading fluency and 15-26% lower scores in reading comprehension.

**In girls...**

1.3



We did not find similar associations.

**Conclusions**

A combination of low levels of brisk physical activity and high levels of sedentary time might be particularly harmful for the development of academic skills in boys.

Increasing brisk physical activity, reducing sedentary time, or especially both of them may improve academic achievement.

**For more information**

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## Promoting physically active lifestyle may kick-start boys' school performance

Credit: University of Eastern Finland

A sedentary lifestyle is linked to poorer reading skills in the first three school years in 6-8 year old boys, according to a new study from Finland. The study conducted at the University of Eastern Finland in collaboration with the University of Jyväskylä and the University of Cambridge was recently published in the *Journal of Science and Medicine in Sport*.

"Low levels of moderate-to-vigorous [physical activity](#) and high levels of sedentary time in Grade 1 were related to better [reading skills](#) in Grades 1-3 among [boys](#). We also observed that boys who had a combination of low levels of physical activity and high levels of sedentary time had the poorest reading skills through Grades 1-3," explains Eero Haapala, PhD, from the University of Eastern Finland and the University of Jyväskylä.

The study, constituting part of the Physical Activity and Nutrition in Children Study conducted at the University of Eastern Finland and part of the First Steps Study conducted at the University of Jyväskylä, investigated the longitudinal associations of physical activity and sedentary time with reading and [arithmetic skills](#) in 153 children aged 6-8 years old in Grades 1-3 of the primary school. Physical activity and sedentary time were measured objectively using a combined heart rate and movement sensor in Grade 1, and reading and arithmetic skills were assessed by standardised tests in Grades 1-3.

The study showed that high levels of moderate-to-vigorous physical activity, low levels of sedentary time, and particularly their combination in Grade 1 were related to better reading skills in Grades 1-3 in boys. High levels of physical activity and low levels of sedentary time were also associated with better arithmetic skills in Grade 1 only in boys. In girls, there were no strong and consistent associations of physical activity and sedentary time with reading or arithmetic skills.

The results of the study suggest that a combination of low levels of moderate-to-vigorous physical activity and high levels of sedentary time might be particularly harmful for the development of academic skills in boys, and that increasing physical activity, reducing [sedentary time](#), and especially their combination may improve academic achievement.

**More information:** Eero A. Haapala et al. Physical activity and sedentary time in relation to academic achievement in children, *Journal of Science and Medicine in Sport* (2016). [DOI: 10.1016/j.jsams.2016.11.003](#)

Provided by University of Eastern Finland

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