

New study finds exercise improves children's brain power

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Credit: University of Auckland

A new study has found that short bursts of intensive exercise boosts children's brain power and has benefits for children with learning difficulties or conditions such as autism.

Scientists have long known that [exercise](#) is good for the brain. Previous research has found that long, sustained workouts lasting for around 30 to 40 minutes improve memory and learning in both adults and children.

But the latest research looked at the effect of [short bursts](#) of high-intensity training (HIT) lasting just ten minutes each day on children aged 7-13 years.

University of Auckland researcher David Moreau from the School of Psychology and his team established baseline data by testing the 305 participants on six tasks involving memory, [information processing](#) and behaviour prior to the study commencing.

They then randomly assigned participants to either a placebo group involving activities such as games and quizzes, or to an HIT group that involved an

intense ten-minute workout every weekday over a six week period.

Participants in the HIT group showed larger improvements in tasks involving memory and tasks involving information processing and behaviour, including the ability to focus on a task to completion without getting distracted.

The latter has been shown to be a key indicator of professional and academic success in adults.

"These findings reinforce previous research which has found that exercise is one of the most effective non-invasive ways to improve memory and cognitive understanding," Dr Moreau says.

"The significance of the study is that it shows exercise does not have to be time-consuming and that a range of children, some with learning difficulties, get real benefits from short periods of fairly intensive physical activity."

The study 'High-intensity Training Enhances Executive Function in Children in a Randomized, Placebo-Controlled Trial' was published in *eLife* which publishes research across the life sciences and biomedicine and is supported by the Howard Hughes Medical Institute, the Max Planck Society and the Wellcome Trust.

More information: David Moreau et al. High-intensity training enhances executive function in children in a randomized, placebo-controlled trial, *eLife* (2017). [DOI: 10.7554/eLife.25062](https://doi.org/10.7554/eLife.25062)

Provided by University of Auckland

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