

Exercising immediately after study may help you remember

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Credit: University of New South Wales

Exercise may be the secret to retaining information, according to new research from UNSW that may encourage more physical activity in classrooms and nursing homes.

In four experiments, 265 participants performed either five minutes of low-impact step aerobics after learning, or no exercise after learning.

Although the strength of the effect varied between experiments, researchers found that women who did step exercise after learning remembered the material better than those who did not do the exercise.

The findings are published in the online, open-access journal *Cognitive Research: Principles and Implications*, and add to accumulating evidence that bouts of exercise after study can lead to measurable improvements in memory.

"The effect came into play only after participants had studied the material, meaning that it retroactively boosted learning of the material," the

study's first author Dr Steven Most says.

"But mysteriously, this effect did not emerge among men in any of the experiments.

"It's unclear whether this is a true sex difference or whether there was something about the experiment conditions that allowed the effect to emerge among women and not men."

In three out of four of the experiments, participants learned to pair male names with male faces. In the test, they were presented with the faces again and had to recall the name that was paired with it.

The results might have been different for the men if more of the faces were women's, Dr Most says.

The mean age of the [participants](#) was 20.0 years, and Dr Most says it is hard to say if the results can be generalised to students or the elderly.

But it should encourage schools and even [nursing homes](#), where memory is a central concern, to consider adopting [exercise routines](#) to assist recall.

"Some schools are under pressure to cut back on recess in order to increase time in the classroom, but it may be that encouraging [physical activity](#) breaks at several points during the day can actually help with the retention of classroom learning," Dr Most says.

"More research needs to be conducted to conclude that with certainty. There is also scope for further study to understand how much [exercise](#) is optimal, how long before or after learning is most effective, and who benefits most."

More information: Steven B. Most et al. Evidence for improved memory from 5 minutes of immediate, post-encoding exercise among women, *Cognitive Research: Principles and Implications* (2017). [DOI: 10.1186/s41235-017-0068-1](https://doi.org/10.1186/s41235-017-0068-1)

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