

Giving kids with ADHD room to move could boost test scores: study

ADRIANA BARTON

The Globe and Mail

Published Sunday, Jun. 14, 2015 12:00PM EDT

Last updated Sunday, Jun. 14, 2015 10:24PM EDT

tend to do better on tests, researchers have found.

Instead of interfering with learning, toe-tapping, twitching or shifting around in a seat may help kids with ADHD compensate for deficits in attention and working memory.

“I think these movements are boosting their arousal system – their mental alertness,” said Dr. Julie Schweitzer, a psychiatrist and director of the ADHD program at the UC Davis MIND Institute in Sacramento, Calif.

Kids with ADHD should not be forced to sit still, she said: “If a child is physically active and getting their work done – and they’re not disrupting their peers – then let them move.”

Two new studies back up this view.

In a study published on Thursday in the journal *Child Neuropsychology*, Schweitzer and her colleagues monitored 26 children with ADHD and 18 without the disorder, all aged 10 to 17. The kids wore a device on their ankles that measured their activity levels as they completed a standard “flanker test” while sitting at a computer.

Participants were asked to track the direction in which the middle arrow in a series of arrows was pointing. Since the middle arrow sometimes pointed in the opposite direction to the others, the task required concentration as well as the ability to avoid being distracted by the flanking arrows.

The researchers found that the more the children with ADHD moved during the task, the more accurate their answers were on the test.

The findings are consistent with the results from a separate study published online in April by the Journal of Abnormal Child Psychology.

In this study, researchers observed motor activity in 29 children with ADHD and 23 developmentally typical kids. The children were shown a series of jumbled-up numbers, plus one letter. Then they were asked to say the numbers out loud, in ascending order, followed by the letter.

“They had to hold onto the information and rearrange it in their minds – the definition of working memory,” said the study’s lead author, Dr. Dustin Sarver, a clinical psychologist at the University of Mississippi Medical Center.

The children completed the test 24 times over a four-week period. Like the UC Davis researchers, Sarver and his colleagues found that the more the ADHD children moved in their seats, the better they did on the test.

The finding did not apply to all the kids with ADHD, however. In Sarver’s study, 50 per cent of those with ADHD did better when they moved, but 15 per cent did worse. And in 35 per cent, motor activity had no effect on the test results.

Fidgeting did not benefit kids without ADHD. In about half of them, movement made no difference one way or the other. But in 40 per cent, motor activity had a negative effect on task performance. Kids without the disorder may already have optimal levels of mental alertness, Sarver said. When they start moving around, he said, “I think it then distracts them and becomes impairing.”

Researchers are not sure why movement seems to improve the concentration of children with ADHD. They hypothesize that motor activity may stimulate blood flow and electrical activity in the brain, or affect neurotransmitters known to be dysregulated in ADHD.

While the biological mechanisms remain unclear, the new findings may support tactics that some teachers already use, such as allowing students to chew gum in class or do their work at standing desks.

Nevertheless, Sarver cautions against giving children carte blanche to run around the classroom. “What we measured were more subtle movements, like shifting in your seat or bouncing your leg up and down.”

He noted that in follow-up studies, the timing and type of movement may prove to matter. Ideally, he added, researchers will find ways to help individual children leverage the benefits of their instinct to move around.

In the past, interventions for the disorder have focused on decreasing hyperactivity. “But it may largely be positive in kids with ADHD,” Sarver said.