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Children With ADHD Must Squirm To Learn

(Photo : Flickr) New research suggests that excessive movement, which is common among children with attention-deficit/hyperactivity disorder, is actually vital to how they remember information and work out complex cognitive tasks

New research suggests that excessive movement, which is common among children with attention-deficit/hyperactivity disorder, is actually vital to how they remember information and work out complex cognitive tasks.

Researchers from the University of Central Florida found that the foot-tapping, leg-swinging and chair-scooting movements of children with attention-deficit/hyperactivity disorder are actually vital is necessary for ADHD kids to learn.

"The typical interventions target reducing hyperactivity. It's exactly the opposite of what we should be doing for a majority of children with ADHD," Mark Rapport, one of the study authors, said in a statement. "The message isn't 'Let them run around the room,' but you need to be able to facilitate their movement so they can maintain the level of alertness necessary for cognitive activities."

For the study, researchers collected and analyzed data from 52 boys ages 8 to 12. Twenty-nine of the children had been diagnosed with ADHD and the other 23 had no clinical disorders and showed normal development.

Each child was asked to perform a series of standardized tasks designed to gauge "working memory," the system for temporarily

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storing and managing information required to carry out complex cognitive tasks such as learning, reasoning and comprehension.

Children were shown a series of jumbled numbers and a letter that flashed onto a computer screen, then asked to put the numbers in order, followed by the letter. A high-speed camera recorded the kids, and observers recorded their every movement and gauged their attention to the task.

Rapport's previous research had already shown that the excessive movement that's a trademark of hyperactive children -- previously thought to be ever-present -- is actually apparent only when they need to use the brain's executive brain functions, especially their working memory.

"What we've found is that when they're moving the most, the majority of them perform better," Rapport said. "They have to move to maintain alertness."

By contrast, the children in the study without ADHD also moved more during the cognitive tests, but it had the opposite effect: They performed worse.

The findings, which are detailed in the *Journal of Abnormal Child Psychology*, show the longtime prevailing methods for helping children with ADHD may be misguided.