

Exercise before school may reduce ADHD symptoms in kids

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Alan Smith, chairperson of Michigan State University's Department of Kinesiology, helped conduct a study showing the benefits of exercise before school for kids at risk of ADHD. Credit: MSU

Paying attention all day in school as a kid isn't easy, especially for those who are at a higher risk of ADHD, or attention deficit hyperactivity disorder.

A new study from Michigan State University and University of Vermont researchers shows that offering daily, before-school, aerobic activities to younger, at-risk children could help in reducing the symptoms of ADHD in the classroom and at home. Signs can include inattentiveness, moodiness and difficulty getting along with others.

The study can be found in the *Journal of Abnormal Child Psychology*.

"Early studies suggest that [physical activity](#) can have a positive effect on children who suffer from ADHD," said Alan Smith, chairperson of MSU's Department of Kinesiology, who conducted the research along with lead author Betsy Hoza, a psychologist from the University of Vermont.

Previous MSU research has shown improved brain function and better math and reading skills in elementary students who were exposed to a bout of physical activity. Yet, it's not as widely known how consistent exercise might improve the broad range of symptoms and impairments associated with the disorder.

Over a 12-week period, Smith and Hoza studied about 200 early elementary school students ranging from kindergarten to second grade that either exhibited signs of ADHD or didn't. During the trial, students were randomly selected to participate in a group that completed moderate to [vigorous physical activity](#) each day before school, or a group that completed more sedentary classroom-type activities.

"Although our findings indicated that all participants showed improvements, children with ADHD risk receiving exercise benefited

across a broader range of outcomes than those receiving the sedentary activities," Smith said.

Smith indicated that further studies are needed to better understand the frequency and amount of physical activity that can provide benefits to children and added that the effects of exercise may be different based on a child's age.

"Despite the number of remaining questions, physical activity appears to be a promising intervention method for ADHD with well-known benefits to health overall," he said. "This gives schools one more good reason to incorporate physical activity into the school day."

Provided by Michigan State University

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