

GET MOVING:

Helping children with ADHD through exercise





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Does your child have ADHD?

Many children can, at times, display behaviours that are typical of ADHD (Attention Deficite Hyperactivity Disorder) — things such as being impulsive, inattentive or hyperactive. But that doesn't mean they have the disorder. The diagnostic guidelines for ADHD list a number of requirements that help health care providers determine whether or not a child has ADHD. They consider questions including:

- Did the behaviours appear before age seven and continue for at least six months?
- Are the behaviours inappropriate for the child's age?
- Are the behaviours excessive, long-term and pervasive?
- Do they occur more often in the child than in others the same age?
- Are the behaviours a problem all the time or are they in response to a temporary situation?
- Do the behaviours occur in many different settings or only in one specific place, such as the playground?

- Do the behaviours create a handicap in at least two different realms such as classroom, playground, home, a social setting, the community?

Source: [Mental Health Canada](#)

FACTS

1 ADHD is one of the most common mental health conditions in children

3 Boys are three times more likely than girls to develop ADHD

About **75%** of children with ADHD will have it through adolescence

More than **50%** of children with ADHD will carry it into adulthood

ADHD may be linked to

- premature birth
- exposure to high levels of lead in early childhood
- brain injuries or the maternal use of alcohol or tobacco

Source: [Statistics Canada](#)

Getting physical

It often becomes apparent that a child has ADHD as they start school. Children with the disorder, one of the most common childhood mental health conditions, have a hard time concentrating and controlling their behaviour. Sitting still at a desk and paying attention to the teacher at the front of the classroom is very difficult, if not impossible.

Researchers at the University of Calgary are exploring how to better support children with ADHD so they can succeed at school, at home and in the community. They have found that exercise in the morning helps children perform better in the classroom. Research into an exercise program developed in Calgary, SPARK for Learning, is contributing to a growing understanding of the link between physical activity and emotional and social wellbeing in children with ADHD.

The SPARK program operates in a number of schools in and around Calgary. It sees children and their teachers do about 20 minutes of physical activity first thing in the morning. They do a range of moderate to vigorous activities before they settle in for the day (in some schools they do 10 minutes of exercise twice a day).

These activities include everything from fitness circuits in the hallways or classrooms, to playing tag outside or in the gym, to following along to a workout video in a classroom. The students use a variety of motor skills — jumping, skipping, hopping and running — and they work collaboratively with their classmates and teachers toward the same goal.

“The SPARK for Learning program is very collaborative,” says Emma Climie, a registered psychologist and assistant professor in the School and Applied Child Psychology program in the Werklund School of Education. “It’s not a competitive environment so they do a lot of team activities.”



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– Emma Climie

Michelle Deen, a registered psychologist with Rocky View Schools, started the SPARK for Learning program when she was a teacher in Calgary. After it had been running for about 18 months, Deen started a masters in psychology at the University of Calgary. She and Climie worked together to research the SPARK program and they found that it's helping children with ADHD manage their behaviours and emotions. [SPARK for Learning](#)



“We see changes in self-regulation, self-esteem, and a decrease in terms of the amount of behavioural problems,” says Climie. “And we’ve seen changes in terms of the classroom environment.” The students are more ready and available to learn after the exercise – they’re less anxious and they have fewer complaints about physical ailments like stomachaches or headaches. “Students report significantly decreased levels of hyperactivity and inattention in the classroom,” says Deen. “Teachers report similar findings, with a significant decrease in hyperactivity/impulsivity and attention problems.”

With students more receptive to information, teachers are able to cover more curriculum. “We’ve seen improvements in social domains, emotional domains and we have seen some carry over effects into the academic side of things,” says Climie. “And we’ve seen kids who were excluded re-engage with the classroom.”

The idea of doing 20 minutes of physical activity first thing in the morning doesn’t have to be limited to the classroom. Some children have come back to school after the Christmas holidays or other breaks and told their teachers that their family set up an exercise circuit in the basement. “The kids are taking this home,” says Climie, “Because they feel better after doing it.”

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**STUDENTS REPORT
SIGNIFICANTLY
DECREASED LEVELS OF
HYPERACTIVITY AND
INATTENTION IN THE
CLASSROOM.**

– *Michelle Deen*





How does the exercise program work?

- Students and teachers do 20 minutes of continuous moderate to vigorous aerobic physical activity together every morning during the first period.
- The teachers act as models for the students. Doing the exercise together, they foster positive relationships, help enhance the school climate and increase the sense of community.
- It's different than Physical Education (PE) classes. PE is about mastering skills while SPARK for Learning focuses on participation and effort.

**TEACHERS REPORT
SIGNIFICANT
DECREASES IN
COMPLAINTS FROM
STUDENTS ABOUT
PHYSICAL AILMENTS.**

How is exercise helping?

- Incorporating physical activity in the school day helps students manage their behaviours and regulate their emotions as well as develop positive values, life skills and self-esteem.
- Over the course of the year, students report a significant decrease in levels of anxiety and engaging in odd or strange behaviours.



- Teachers report significant decreases in complaints from students about stomachaches, headaches and other physical ailments.
- Teachers report that their students are better able to adapt to changes in classroom routines and demonstrate leadership in certain situations. They're also more comfortable and confident in their classroom groups.

- By increasing their level of attention and decreasing their behavioural difficulties, students are better able to absorb more curriculum content.

Useful links for Spark for Learning:

[Strengths in ADHD](#)

[CBC NEWS](#)

[PHE Canada](#)