

Children with autism are more sedentary than their peers, new study shows

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A new Oregon State University study of children with autism found that they are more sedentary than their typically-developing peers, averaging 50 minutes less a day of moderate physical activity and 70 minutes more each day sitting.

The small study of 29 children, some with [autism](#) and some without, showed that children with autism perform as well as their typical peers on fitness assessments such as [body mass index](#), aerobic fitness levels and flexibility. The results warrant expanding the study to a larger group of children, said Megan MacDonald, an assistant professor in OSU's College of Public Health and Human Sciences.

"These kids, compared to their peers, are similarly fit," MacDonald said. "That's really exciting, because it means those underlying fitness abilities are there."

The findings were published this month in the journal "*Autism Research and Treatment*." Co-authors are Kiley Tyler, a doctoral student at OSU, and Kristi Menear of the University of Alabama at Birmingham. The study was funded in part by the U.S. Department of Education with additional support from OSU.

For the study, researchers tested the fitness and physical activity levels of 17 children with autism and 12 children without autism. The fitness assessments, conducted in the Movement Studies in Disability Lab at OSU, included a 20-meter, multi-stage shuttle run to measure [aerobic](#)

[fitness](#); a sit-and-reach test to measure flexibility and a strength test to measure handgrip strength; as well as height, weight and body mass index measurements.

The fitness tests were selected in part because they are commonly used in schools, MacDonald said. Children in the study also wore accelerometers for a week to measure their movement, and parents filled out supplemental forms to report other important information.

Even though they were more sedentary, the children with autism lagged behind their peers on only one fitness measure, the strength test. The results were surprising but also encouraging because they show that children with autism are essentially on par with their peers when it comes to physical fitness activities, MacDonald said.

"That's really important for parents and teachers to understand, because it opens the door for them to participate in so many activities," she said.

More research is needed to determine why children with autism tend to be more sedentary, MacDonald said. It may be that children with autism have fewer opportunities to participate in organized sports or physical education activities, but if that is the case, it needs to change, she said.

"They can do it. Those abilities are there," she said. "We need to work with them to give them opportunities."

MacDonald encourages parents to make physical activity such as a daily walk or trip to the park part of the family's routine. She's also an advocate for adaptive physical education programs, which are school-based programs designed around a child's abilities and needs. Some communities also offer [physical fitness](#) programs such as soccer clubs that are inclusive for children with autism or other disabilities, she said.

"Physical [fitness](#) and physical activity are so important for living a healthy life, and we learn those behaviors as children," MacDonald said. "Anything we can do to help encourage children with autism to be more active is beneficial."

Provided by Oregon State University

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