

research snapshot

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Physical Activity Levels In Teens With Autism

What is this research about?

There are health and social benefits of participating in physical activity but few teenagers achieve the recommended 60 minutes of moderate-to-vigorous activity per day. Teens with autism, on average, have increased obesity compared to teens without autism. In this study, researchers measure the time spent in moderate and vigorous activity, the types and frequencies of activities by teenagers with and without autism.

What did the researchers do?

The researchers recruited 35 teens with autism and 60 without autism from local schools, community organizations, Special Olympics and local newspapers. The participants were only included if they were in good health and not living with any chronic illnesses. Participants wore accelerometers to measure activity for 7 days (5 weekdays and 2 weekend days). Accelerometers had to be worn for at least 10 hours a day to be counted in the analysis. Their parents recorded any atypical days (e.g. sick days, missed school, participation in unusual activity), which were excluded from the analysis.

The researchers also interviewed the teens and parents about the types and frequency of activities in the past year. Participation in activities on a regular basis was defined as at least once per month.

What you need to know:

Teens with autism are less than half as active as those without autism even though they have similar interests and frequency of participation. Weekday activity levels are higher because of school programming while there is a large drop in weekend activity levels.

What did the researchers find?

The researchers found 83% of teens with autism and 92% of teens without autism wore the trackers for the time needed to be included. After accounting for differences due to age and sex, the total activity level was lower in the teens with autism compared to those without autism, both on weekdays and weekends. Teens with autism spend 29 minutes a day in moderate and vigorous activity compared to 50 minutes for those without autism.

When the researchers split the groups further, with one group under 16 years old and the other 16 or older – the younger age cohort had the larger group difference. Particularly, on weekends, the younger teens with autism only had 12 minutes of moderate and vigorous activity per day, much less than the 40 minutes of those without autism.

Interestingly, in the questionnaire, frequency and variety of participation were not different between those with autism and those without. The common top 10 activities in both groups included walking/



hiking, swimming, active video gaming, basketball, running/jogging, dancing, biking, baseball/softball.

How can you use this research?

Teens with autism, especially those under 16 years old, need more physical activity. School-related programming encouraged activity on weekdays but weekend activity is severely lacking. One opportunity to consider are that the teens with and without autism generally had similar interests – suggesting that inclusive programming in this area may be beneficial.

About the Researchers

The research team was from the Department of Psychology at the University of North Carolina at Greensboro, USA. Under the supervision of Nelson-Gray (PhD), a Professor in the department, Thomas and King were researchers and Mendelson was a Clinical Psychology trainee and graduate student at the university.

Citation

Stanish, H.I., Curtin, C., Must, A., Phillips, S., Maslin, M., Bandini, L.G. (2017) Physical Activity Levels, Frequency, and Type Among Adolescents With and Without Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders* 47:785-794.

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This research summary was written by Dr. Jonathan Lai for the Chair in Autism Spectrum Disorders Treatment and Care Research. This research summary, along with other summaries, can be found on our [blog](#) and at asdmentalhealth.ca/research-summaries

About the Chair

The Chair in Autism Spectrum Disorders Treatment and Care Research is dedicated to studying ways to improve the mental health and well-being of people with Autism Spectrum Disorders (ASD) and their families in Canada.

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