

ADHD and Healthy Lifestyle Behavior

ARE CHILDREN WITH ADHD more likely to have difficulty following healthy lifestyle behaviors compared to children who don't have ADHD? This research update will focus on two studies that considered different aspects of that question.

The first study examined a number of different lifestyle factors, such as water intake, consumption of sweetened beverages, multivitamin and supplement use, reading, screen time, physical activity, and sleep. Findings from this study showed that children with ADHD may be more likely to have overall less healthy lifestyle behaviors compared to children without ADHD.

The second study focused specifically on the area of nutrition, and found that higher child ADHD symptoms predicted later lower diet quality.

Overall, these findings indicate that unhealthy lifestyle behaviors may be associated with ADHD, which suggest potential areas to target in promoting healthy lifestyles for children with ADHD.

Lifestyle behaviors and children with ADHD

This study investigated lifestyle behaviors and compared children with ADHD to children without ADHD. Parents of 184 children with

ADHD and 104 children without ADHD completed questionnaires asking about child lifestyle behaviors known to be related to health. The children in this study ranged in age between seven and eleven years old.

A composite lifestyle index was created from questionnaire responses examining seven factors: water intake, sweetened beverage consumption, multivitamin/supplement use, reading, screen time, physical activity, and sleep. The researchers used a composite index for lifestyle as overall lifestyle behaviors may have more impact on health than any one health behavior.

In this study, healthy lifestyle behaviors involved increased water intake, less sweetened beverage intake, multivitamin use, more reading, less screen time, more physical activity, and more sleep. With some exceptions, the cut-off thresholds used by the researchers were based on recommendations from authoritative sources such as the American Academy of Pediatrics, the US Department of Health and Human Services, the National Sleep Foundation, and the US Department of Agriculture.

Study findings showed that children with ADHD were approximately two times as likely to have a healthy lifestyle index that is lower than children without ADHD,



even after taking into account factors such as stimulant medication, age, sex, and co-occurring mood, anxiety, oppositional defiant, and conduct disorders. This lower lifestyle index was found for inattention and hyperactivity/impulsivity symptoms independently, suggesting that unhealthy lifestyle behaviors may be associated with both ADHD presentations. On the whole, these results suggest that children with ADHD are more likely to have unhealthy lifestyle behaviors. These behaviors may be important targets for interventions to promote healthy lifestyles.

Holton KF & Nigg JT. (2020). The association of lifestyle factors and ADHD in children. *Journal of Attention Disorders*, 24, 1511-1520.

Diet quality and children with ADHD

This study focused on the area of nutrition and examined the question of causation with respect to the relationship between healthy dietary intake and ADHD. Data was analyzed from responses to questionnaires by parents of 3,680 children in the Netherlands. ADHD symptoms were measured when children were six and ten years of age, and dietary intake was measured when children were eight years of age. Parents responded to questionnaires assessing ADHD symptoms and dietary intake. An overall diet quality score was used to represent how consistent the diets were with Dutch dietary guidelines, which included food groups such as vegetables, fruits, fish, legumes, whole grains, nuts, and dairy.

Findings showed that children who had higher ADHD symptoms at age six were more likely to have lower diet quality scores at age eight, even after taking into account factors such as ADHD medication use, maternal age, screen time, and exercise. However, diet quality at age eight was not related to child ADHD symptoms at age ten. As well, the overall unhealthy diet quality for children with ADHD was not driven by a specific food group, which suggests that children with ADHD may have lower dietary patterns overall.

These results provide support for the idea that ADHD symptoms may cause lower diet quality but that lower diet quality may not cause ADHD symptoms. However, more research is needed to examine this question, such as by exploring the relationship between diet and ADHD among children of different ages with longer time periods between measurements and using multiple measurement methods.

Mian A, Jansen PW, Nguyen AN, Bowling A, Renders CM, & Voortman T. (2019). Children's attention-deficit/hyperactivity disorder symptoms predict lower diet quality but not vice versa: Results from bidirectional analyses in a population-based cohort. *The Journal of Nutrition*, 149, 642-648. 



Yuanyuan Jiang, PhD, is an assistant professor and registered psychologist at Saint Paul University and adjunct professor at the University of Alberta. Her research focuses on understanding how attention, behavior, and cognitions relate to each other to learn how to improve assessments and interventions for individuals with attentional difficulties.



Minyeong Cho is a psychology honors student at the University of Alberta. Her research interests include emotion regulation of youth with inattentiveness and/or hyperactivity/impulsivity and the development of family- and school-based interventions.

