

Obesity

Sara D. McMullin, M.S

St. Louis University

Eric A. Goedereis, Ph.D.

Webster University

Obesity is defined as having a body mass index (BMI) greater than 30 in adults and above the 95th percentile for children based on age and sex norms. The prevalence of obesity across the lifespan has increased over the last several decades in the United States. Currently, 17% of children and 36% of adults in the United States meet these criteria, with higher prevalence among racial and ethnic minority groups. Childhood and adult obesity are associated with immediate and long-term medical, psychological, and cognitive consequences. Therefore, the United States Preventative Services Task Force (USPSTF) recommends all children and adults are screened for obesity. The USPSTF also recommends intensive, multicomponent behavioral weight loss interventions be provided for children and adults with obesity. However, gaps remain in providing evidence-based treatment for individuals with obesity.

Developmentally, the first 1000 days of life constitute a critical period for the prevention of childhood obesity. Risk factors for childhood obesity in the first 1000 days include higher maternal pre-pregnancy BMI and gestational weight gain as well as high infant birth weight and faster weight gain during infancy. Obesity during childhood and adolescent development can have harmful consequences for brain development. Specifically, childhood obesity negatively impacts cognition including executive function (e.g. inhibition), attention, visuospatial and motor skills as well as academic achievement (e.g., math and reading performance). Additionally, those

children with obesity who experience weight-related bullying show even poorer academic performance, as well as unhealthy eating behavior and weight gain. Therefore, obesity and its stigma during early development can result in poorer cognitive function and academic outcomes. Limited research has shown evidence-based weight loss interventions have an impact on cognitive function and should be a future focus of interventions to avoid further cognitive decline during aging, especially among lower socioeconomic groups who are at greatest risk for cognitive deficits associated with obesity.

In addition to the cognitive consequences of obesity, children and adolescents are at higher risk for psychological comorbidities, which should be addressed as part of multicomponent, weight loss treatment. Additionally, children and adolescents with obesity are five times more likely to be obese in adulthood than healthy weight children. Considering the negative impact of obesity on children and adolescents and its trajectory into adulthood, it is critical young people have access to evidence-based treatments for weight loss. Specifically, family-based behavioral treatments can improve weight-related and psychological outcomes in children and adolescents with obesity. In addition to behavioral treatments, pharmacological and surgical treatments could be considered for adolescent obesity; however, such interventions are higher risk and do not show greater long-term weight loss than behavioral treatments.

Longitudinally, children and adolescents who are overweight or obese are at a greater risk of overweight and obesity as adults. Obesity during adulthood is associated with increased risk of psychological and medical comorbidities, such as cardiovascular disease, depression, cancer, and type II diabetes. Further, because of a greater likelihood of emergency room visits, higher prescription drug use, and more specialist visits, obesity and its comorbidities are associated with approximately \$200 billion a year in healthcare costs. Therefore, implementation of affordable

and sustainable evidence-based interventions is needed to improve the health and well-being of individuals with obesity and curtail future healthcare costs.

Individuals' beliefs about weight management contribute to health-promoting and risk-related behaviors; such beliefs and behaviors fluctuate across the lifespan. Future research is needed in addressing gaps in dissemination and implementation of evidence-based obesity treatment into the community. Specifically, strides need to be made in improving healthcare coverage of evidence-based obesity treatment in order to improve access to care for children and adults suffering with obesity. Additionally, continued research is needed in order to develop culturally appropriate interventions to improve cognitive, psychological and weight outcomes among populations most at-risk for obesity and its consequences.

Further Readings

Altman, M., Wilfley, D.E. (2015). Evidence update on the treatment of overweight and obesity in children and adolescents. *J Clin Child Adolesc Psychol*, 44(4):521-37.

Blake-Lamb, T.L., Locks, L.M., Perkins, M.E., et al. (2016). Interventions for childhood obesity in the first 1,000 days: a systematic review. *Am J Prev Med*, 50(6):780-9.

Liang, J., Matheson, B.E., Kaye, W.H., Boutelle, K.N. (2014). Neurocognitive correlates of obesity and obesity-related behaviors in children and adolescents. *Int J Obes*, 38(4):494-506.

Moyer, V.A. (2012). USPSTF Screening for and management of obesity in adults: USPSTF recommendation statement. *Ann Intern Med*, 157(5):373-8.

Puhl, R., Suh, Y. (2015). Health consequences of weight stigma: implications for obesity prevention and treatment. *Curr Obes Rep*, 4(2):182-90.

Whitlock, E.P., O'Connor, E.A., Williams, S.B., et al. (2010). Effectiveness of weight management interventions in children: a targeted systematic review for the USPSTF.

Pediatrics, 125(2):396-418.

Wilfley, D.E., Staiano, A.E., Altman, M., et al. (2017). Improving access and systems of care for evidence-based childhood obesity treatment: Conference key findings and next steps.

Obesity, 25(1):16-29.