

# Factors That Contribute To Early Childhood Obesity

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## Introduction

Childhood obesity is a major public health crisis nationally and internationally. The prevalence of childhood obesity has been increasing over the last few years. Childhood obesity is due to the imbalance between caloric intake and the calories utilized for growth, development, metabolism, and physical activities.<sup>1</sup> The mechanism of obesity development is not fully understood, and it is believed to be a disorder with multiple causes. On the other hand, there is supporting evidence that excessive sugar intake by soft drinks, increased portion sizes, and a steady decline in physical activity have been playing major roles in the rising rates of obesity all around the world.<sup>2</sup>

## Lifestyle and Environmental

Factors such as environmental, lifestyle, and culture all play a role. These factors are affected by age, gender, family characteristics, parenting, and school policies. The biggest factor that is studied and examined as a cause of childhood obesity is genetics, but evidence states that it only accounts for less than 5% of cases.<sup>2</sup>



Families who prioritize and have structured mealtimes together will consume more healthy foods and have a less chance of reaching obesity compared to families that do not partake in structured mealtimes.<sup>2</sup> Families who voluntarily partake in eating out or watching TV while eating are associated with having a higher intake of fat, and a higher prevalence of childhood obesity. Family mealtimes can influence the type of food consumed and the amount. Family habits, whether they are sedentary or physically active can also influence the child.<sup>2</sup>



## Sugar-Sweetened Beverages

A systematic review of published cohort studies examined the influences of sugar sweetened beverages (SSB) consumption on the risk of obesity and diagnosis of obesity among children.<sup>6</sup> The results concluded that when SSB consumption increased, so did obesity levels with children.<sup>6</sup> The study findings highlight the need for the careful and precise measurement of the consumption of SSBs in order to prevent obesity in children.

## Fast-Food and Restaurants

Fast-food and full-service restaurants consumption is associated with higher intake of calories and a poor diet quality. Fast-food restaurants are often located by schools and in low-income neighborhoods, therefore, making it easier for consumption and higher body weight.<sup>7</sup>

### Fast-food consumption

- Increase in total daily energy intake
- Higher intake of SSBs
- Increased intake of total fat, saturated fat, and sodium

### Full-service restaurants

- Higher energy intake
- Higher intake of SSBs
- Reduced consumption of milk

## Psychological Factors

Childhood obesity represents a dynamic process, in which behavior, cognition, and emotional regulations all interact mutually with each other.<sup>8</sup> Because of this, obesity can be multifactorial in children. It is believed that childhood obesity is negatively associated with psychological and psychiatric comorbidities, such as depression, emotional and behavioral disorders, and low self-esteem during childhood.<sup>8</sup>

Attention-deficit hyperactivity disorder (ADHD)	Depression	Uncontrolled binge-eating disorder (BED)
<ul style="list-style-type: none"><li>• Excessive food intake can be found in either increased reward sensitivity or the dysfunctional capacity of self-regulation</li><li>• Low dopamine activity may result in compensation by increased food consumption</li><li>• Chemical imbalances increase chances of higher BMI</li></ul>	<ul style="list-style-type: none"><li>• Positive relationship between depression and excessive food intake</li><li>• Consume more calories when being in a low mood</li><li>• Cravings for junk food increases</li><li>• Foods are often higher in sugars and in fats</li></ul>	<ul style="list-style-type: none"><li>• Influenced by both restrictive and emotional eating</li><li>• Experience through regular meals, special occasions, and when snacking</li><li>• Consume large amounts of food in one setting</li></ul>

## References

1. Karnik, S., & Kanekar, A. (2012). Childhood obesity: a global public health crisis. *Int J Prev Med*.3(1), 1–7. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3278864/>
2. Bhadoria AS, Sahoo K, Sahoo B, Choudhury AK, Sufi NY, Kumar R. Childhood obesity: Causes and consequences. *J Family Med Prim Care*. 2015;4(2):187. doi:10.4103/2249-4863.154628
3. Defining childhood weight status. Centers for Disease Control and Prevention. <https://www.cdc.gov/obesity/childhood/defining.html>. Published June 21, 2021. Accessed October 18, 2021.
4. Early childhood development and education. Early Childhood Development and Education | Healthy People 2020. <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/early-childhood-development-and-education>. Accessed October 19, 2021.
5. Childhood obesity. Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/childhood-obesity/symptoms-causes/syc-20354827>. Published December 5, 2020. Accessed November 15, 2021.
6. Bucher Della Torre S, Keller A, Laure Depeyre J, Kruseman M. Sugar-sweetened beverages and obesity risk in children and adolescents: A systematic analysis on how methodological quality may influence conclusions. *J Am Diet Assoc*. 2016;116(4):638–659. doi:10.1016/j.jand.2015.05.020
7. Powell LM, Nguyen BT. Fast-food and full-service restaurant consumption among children and adolescents. *JAMA Pediatrics*. 2013;167(1):14. doi:10.1001/jamapediatrics.2013.417
8. Puder JJ, Munsch S. Psychological correlates of childhood obesity. *Int J Obes Nutr Sci*. 2010;34(S2). doi:10.1038/ijo.2010.238