Childhood obesity and dietary patterns: A global health challenge.

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Introduction

Childhood obesity is one of the most serious public health challenges of the 21st century. According to the World Health Organization (WHO), the number of overweight or obese children aged 5–19 has risen dramatically from 11 million in 1975 to over 124 million in 2016. Poor dietary patterns, coupled with sedentary lifestyles and environmental factors, are central to this growing epidemic. As childhood obesity increases across both high-income and low- to middle-income countries, its implications for health systems and future generations demand urgent attention [1].

Childhood obesity is defined as excessive body fat that may impair a child's health. Body mass index (BMI)-for-age is the most commonly used metric. Obese children are at greater risk for non-communicable diseases (NCDs) such as type 2 diabetes, cardiovascular disease, and certain cancers [2].

Moreover, obesity can cause psychosocial problems including low self-esteem and depression. Unhealthy dietary habits are a leading driver of childhood obesity. These include: High intake of energy-dense, nutrient-poor foods (e.g., processed snacks, sugary beverages), Skipping breakfast, Low consumption of fruits, vegetables, and whole grains [3].

Globalization and urbanization have altered traditional diets. Children in many parts of the world now consume more fast food and ultra-processed items that are high in salt, sugar, and unhealthy fats. The Western diet, characterized by high-calorie, low-nutrient food, is associated with increased obesity rates worldwide [4].

The food environment plays a significant role in shaping children's dietary patterns. In low-income settings, healthy food may be unavailable or unaffordable, while unhealthy snacks are cheap and accessible. Marketing of junk food especially via digital media—targets young audiences, influencing their preferences and consumption behaviors. School cafeterias, vending machines, and food advertisements contribute to the "obesogenic environment [5]."

While poor diets contribute to excess energy intake, sedentary behaviors like prolonged screen time reduce energy expenditure. Many children spend hours watching television or playing video games, further displacing physical activity. A meta-analysis found a strong association between screen time and increased BMI in children [6].

Childhood obesity is no longer confined to high-income countries. Middle-and low-income countries, especially those undergoing rapid economic transitions, are experiencing a double burden of malnutrition where under nutrition and obesity coexist. For instance, countries like Mexico, South Africa, and India report rising childhood obesity even as under nutrition remains prevalent [7].

Obese children are more likely to become obese adults, perpetuating a cycle of ill health. They are at risk of: Insulin resistance and type 2 diabetes, Hypertension and high cholesterol, Asthma and sleep apnea, Joint and musculoskeletal problems, Mental health is also affected, with stigma and bullying leading to anxiety, depression, and social withdrawal [8].

Several countries have launched public health initiatives to curb childhood obesity. These include: Nutritional labeling on food packaging, School meal regulations, Taxes on sugary drinks (e.g., Mexico, UK), Restrictions on junk food advertising to children, Nutrition education programs [9].

The success of such policies depends on multi-sectoral collaboration between governments, schools, families, and the private sector. Parents play a pivotal role in shaping children's eating habits. Home-cooked meals, shared family meals, and limited sugary snacks can promote healthier outcomes. Schools also serve as critical settings for promoting nutrition through healthy school meals, gardening programs, and physical education [10].

Conclusion

Childhood obesity is a global health challenge with complex dietary, behavioral, and socio-environmental roots. Left unchecked, it poses serious consequences for public health and future generations. Addressing it requires a multi-pronged approach: improving dietary patterns, promoting physical activity, regulating food marketing, and ensuring equitable access to healthy food. Governments, communities, and families must act collectively to create healthier environments and secure a better future for children worldwide.

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***Received:** 03-Apr-2025, Manuscript No. AAJFSN-25-165447; **Editor assigned:** 04-Apr-2025, PreQC No. AAJFSN-25-165447(PQ); **Reviewed:** 17-Apr-2025, QC No AAJFSN-25-165447; **Revised:** 22-Apr-2025, Manuscript No. AAJFSN-25-165447(R); **Published:** 28-Apr-2025, DOI:10.35841/AAJFSN-8.2.287*

***Citation:** Rogge C. Childhood obesity and dietary patterns: A global health challenge. J Food Sci Nutr. 2025; 8(2):287*

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Citation: *Rogge C. Childhood obesity and dietary patterns: A global health challenge. J Food Sci Nutr. 2025; 8(2):287*