



ALIMENTARY OBESITY IN SCHOOL-AGED CHILDREN: GLOBAL PREVALENCE, ETIOLOGY, CONSEQUENCES, AND PREVENTION STRATEGIES

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Abstract

Childhood obesity, particularly alimentary obesity, has become a major global public health challenge. This study aims to analyze the prevalence, causes, consequences, and preventive strategies of obesity among school-aged children. A comprehensive literature review of global data from WHO, UNICEF, and peer-reviewed sources was conducted. Findings indicate that approximately 1 in 10 school-aged children worldwide is affected by obesity, with prevalence increasing rapidly over recent decades. The primary causes include excessive caloric intake, sedentary lifestyle, and environmental influences. Consequences range from metabolic disorders to psychosocial problems. Effective prevention requires multi-level interventions involving families, schools, and policy frameworks. Early prevention is crucial to reduce long-term health risks.

Keywords: childhood obesity, alimentary obesity, school-aged children, prevalence, prevention, global health

1. Introduction

Childhood obesity is one of the most serious public health problems of the 21st century, affecting both developed and developing countries. The number of obese children has increased dramatically, rising more than tenfold over the past four decades.

Alimentary obesity refers specifically to obesity caused by excessive caloric intake relative to energy expenditure, often associated with unhealthy dietary habits. Among school-aged children (5–19 years), obesity has now surpassed undernutrition in many parts of the world. This shift reflects major changes in lifestyle, food environments, and socioeconomic conditions.[1,2,3,4,5]

2. Materials and Methods

This study is based on a systematic review of scientific literature, including:

- WHO and UNICEF reports
- Peer-reviewed journals (PubMed, NCBI, Nutrition Journal)
- Global epidemiological datasets

Inclusion criteria:

- Studies published in English
- Focus on children aged 5–19
- Data on prevalence, causes, or prevention

Data were analyzed using a qualitative synthesis approach.[6,7]

3. Results

3.1 Global Prevalence

Childhood obesity has reached epidemic proportions worldwide:

- Around 188 million (≈ 1 in 10) school-aged children are obese globally

-Over 124 million children were obese in 2016, with an additional 216 million overweight
-Prevalence increased from 3% in 2000 to ~9.4% in recent years
Obesity rates are highest in high-income countries but are rapidly increasing in low- and middle-income countries.[8,9]

3.2 Causes of Alimentary Obesity

Alimentary obesity is multifactorial, but key determinants include:

1. Dietary Factors

- High consumption of ultra-processed foods, sugar, and fats
- Increased portion sizes and frequent snacking
- Sugary beverages and fast food consumption [10,11]

2. Sedentary Lifestyle

- Reduced physical activity
- Increased screen time (TV, smartphones, gaming)
- Lack of sports participation

3. Behavioral and Environmental Factors

- Family eating habits
- School food environment
- Food marketing targeting children [12,13]

4. Biological Factors

- Genetic predisposition
- Hormonal and metabolic influences

Overall, obesity develops when energy intake exceeds energy expenditure.

3.3 Consequences

Childhood obesity has both short-term and long-term effects:

Physical Health Consequences

- Type 2 diabetes
- Cardiovascular diseases
- Hypertension
- Musculoskeletal disorders

Psychological Consequences

- Low self-esteem
- Depression and anxiety
- Social stigma and bullying

Long-term Risks

- Persistence into adulthood
- Increased risk of premature mortality
- Higher healthcare costs

Children with obesity are highly likely to become obese adults, increasing chronic disease risk.[15]

3.4 Prevention Strategies

1. Individual and Family Level

- Balanced diet (fruits, vegetables, whole grains)
- Limiting sugar and fat intake
- Encouraging daily physical activity



2. School-Based Interventions

- Healthy school meals
- Nutrition education programs
- Regular BMI monitoring

3. Community and Policy Level

- Regulation of unhealthy food advertising
- Promotion of physical activity infrastructure
- Public health campaigns

4. Early Prevention

Early childhood interventions are critical, as obesity often tracks into adulthood.

4. Discussion

The findings confirm that childhood obesity is a complex, multifactorial disease influenced by biological, behavioral, and environmental factors. The global rise is strongly linked to modernization, urbanization, and changes in food systems.

Despite increased awareness, prevention remains challenging due to:

- Aggressive marketing of unhealthy foods
- Socioeconomic disparities
- Limited access to healthy nutrition in some regions

A multisectoral approach involving healthcare, education, and government policies is essential.[14]

5. Conclusion

Alimentary obesity among school-aged children is a growing global epidemic with serious health and social consequences. The increasing prevalence highlights the urgent need for effective prevention strategies.

Key conclusions:

- Obesity affects approximately 10% of children globally
- It is primarily caused by dietary imbalance and sedentary lifestyle
- It leads to serious physical and psychological outcomes
- Prevention requires early, coordinated, and multi-level interventions

Addressing childhood obesity is essential for improving future population health and reducing the burden of noncommunicable diseases.

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