



# IJFANS

International Journal of Food  
And Nutritional Sciences

Volume 3, Issue 1, Jan-Mar-2014,

[www.ijfans.com](http://www.ijfans.com)

e-ISSN: 2320-7876



**Official Journal of IIFANS**

## **CAUSES OF CHILDHOOD OR ADOLESCENTS OBESITY**

**Priyanka Gupta\***

Department of Home Science, Teerthanker Mahaveer University, Moradabad.

\*Corresponding author: [angel15gupta89@gmail.com](mailto:angel15gupta89@gmail.com)

### **ABSTRACT**

Obesity is the consequence of not only of one factor, but of several environmental factors along with a hereditary predisposition. The change in diet, a decrease in physical activity and too much time spent in front of electronic screens has been blamed for the growing number of overweight and obesity among children's /adolescents. Nowadays, obesity has become a chronic disorder affecting the larger population than any other disease in the world. It mostly affects the adult population but children and adolescent are also prone to develop obesity.

Key words: Obesity, Children's, Adolescents.

### **INTRODUCTION**

The advent of the 21<sup>st</sup> century has seen a shifting of emphasis as far as health is concerned. Obesity has become so common that it is beginning to replace under nutrition and infectious diseases as the most significant contributor to ill-health. It seems to have engulfed every stage, every age and the newest entrants are the children. Obesity is rapidly increasing in developing countries undergoing rapid nutrition and lifestyle transition, and it often co-exists with under-nutrition. The rising prevalence of overweight and obesity in developing countries is largely due to rapid urbanization, mechanization and rapid changes in diets and life styles that have occurred with economic development and market globalization. This is having a significant impact on health, and nutritional status of population, particularly in children. While standards of living have improved, food availability has expanded and become more diversified, leading to a negative consequence in term of reduction in the energy expenditure along with an increase in energy intake and availability of high fat and energy-dense foods, inappropriate dietary patterns, decreased physical activities and a corresponding increase in diet related diseases, especially obesity.

The prevalence of obesity is increasing in both developed and developing countries at an alarming rate. In Europe, the prevalence ranges from 10-20% in men and 15-25% women. While in India the prevalence is estimated to be 25-45% in men and 25-50% in women. Obesity leads to increased risk for type II diabetes, cardiovascular diseases, arthritis and even some malignancies leading to reduced life expectancy and impairment of life (Bhansali, 2010).

Childhood and adolescent overweight and obesity have increased substantially in the past two decades, raising concerns about the physically and psychosocial consequences of obesity in these age groups. Obesity in adolescents is a strong precursor of obesity and related

morbidity in adulthood, with 50% to 80% of obese teenagers becoming obese as adults (Faghin sh et.al., 2009).

The rising prevalence of childhood/adolescent obesity cannot be addressed by a single aetiology. Multiple factors plays role i.e. lack of physical activity, unhealthy eating patterns, or a combination of both with genetics and lifestyle playing important roles in determining a child's weight. Television, computer and video games contribute to children's inactive lifestyles. There are, however, controversies and gaps in understanding the role of dietary composition in determining energy imbalance and subsequent weight gain and diet & physical activities in the aetiology of overweight and obesity.

### **CAUSES OF OBESITY**

Today, rise in childhood obesity has several causes. The main cause of obesity is certainly children eating too much and/or not performing regular exercise or being generally inactive. The extra calories that are not able to burn up through exercise or physical activity will translate into fat, and when this fat become excessive and more one become obese. This difference results in weight gain and will vary from children to children that were due to few factors such as genes, health issues, physical inactivity as well as psychological issues also contribute to weight gain. It is also closely related to people's life style. Childhood obesity has multiple causes centring on imbalance in energy in (calories obtained from food) and energy out (calories expended in the basal metabolic rate and physical activity). Childhood obesity most likely results from an interaction of nutritional, psychological, familial and physiological factors.

### **FOOD HABITS AND DIETARY PATTERN**

Studies have shown that 'Fast food' causes obesity in children. However, the fast food industries claim that their foods do not cause obesity in kids. Well, there

appears to be a link between fast food and obesity. Some of these links are large serving size, low fibre content and increased content of fat, sugar and salt in most fast foods. Therefore it is conceivable that fast food causes obesity. In recent years most fast food restaurants have come out with super size portion of burgers, fries and variety of noodles. While anyone, especially overweight children, are eating burgers, fries, pizza, noodles and coke products they are not getting the nutritious food that they need, instead, they are getting empty calories, which have no nutritional value, and are being set up for diabetes, heart problems and other fatal disorders.

In the year 2009, a study conducted to assess the nutritional profile of selected overweight and obese school going children of Coimbatore city, India. The study was carried out on 9319 school children (5914 boys, 4272 girls) in the age group of 7-12 years from 30 schools of Coimbatore. The children were screened for obesity by measuring their height and weight and calculated their BMI. Out of 9391 children screened, 3943 were between 5<sup>th</sup> and 85<sup>th</sup> percentile and are considered to be normal. 871 children having BMI between 85<sup>th</sup> and 95<sup>th</sup> percentile were classified as overweight and 645 children who were found to have >95<sup>th</sup> percentiles were categorized as obese. While 3942 children below 5<sup>th</sup> percentile were considered as underweight. The prevalence of overweight and obesity was found to be 9.3 % and 6.3% respectively. The findings revealed that prevalence of overweight and obesity was slightly higher among boys of 10-12 years and less in girls of 7-12 years when compared with boys of similar age. Intake of green leafy vegetables, other vegetables, milk and milk products was deficit in both overweight and obese when compared with the recommended dietary allowances of ICMR. The intake of fleshy foods, sugar and fat rich foods was found to be higher than RDA (Kalpana, 2009).

A study was conducted on 3620 school children to know about their eating patterns in Kuala Lumpur. It was found that 19.9% skipped at least one meal a day with the youngest group having the lowest prevalence. The most frequently missed meal is breakfast (12.6%) followed by lunch (6.7%) and dinner (4.4%). The youngest age group had the highest prevalence of snacking and taking of nutritional supplements. Fast food and local hawker food were also consumed by about 60-70% of the students. Result showed that skipping of breakfast is significantly associated with age, sex, BMI and taking of nutritionally supplements (Moy *et.al.*, 2006)..

Adolescents prefer snacks more than traditional foods. The intake of fruit, vegetables and milk has greatly reduced. The foods popular among our children are the ones most under fire. Junk foods cross breed, butter chicken, burger, fried tikki, aerated soft drink processed foods like instant noodles, French fries, chips and crisps are writing a dangerous footnote in the future in the health of Indian children. As these foods may be fast, convenient and tasty but are nutritionally inadequate. They are all laden with sugar, salt and fat and lacking in much needed vitamins, minerals, and to some extent proteins. Thus

children who overindulge in junk eating are more prone to obesity and various secondary deficiency diseases (Ruxton *et al.* 1994).

#### **LACK OF EXERCISE**

Lack of exercise is one of the causes of childhood obesity. The sports our children like to do these days include watching television, playing computer games, surfing internet, chatting and any game they choose while exercising only their mind, head and hands (Bhansali, 2010). A study was carried out for the assessment of obesity in school children, out of 54 students; there were 32 girls and 22 boys. Out of 32 girls 11 were normal, 3 were overweight and 18 were underweight. Researcher observed an association between excess weight, obesity and inactivity in children. The time spent in sleeping was positive factor for maintaining a balance between weight and height (Shah *et.al.*, 2006).

#### **ELECTRONIC SCREENS**

A study was aimed to investigate the sedentary patterns of school-aged active children admitted to a summer sport school. One hundred-twelve children aged 9-11 years were interviewed through a questionnaire about sedentary behaviors and nutrition habits. Seventy-one per cent of children reported they watch TV seven days a week, girls less than boys. The habit of TV viewing during meals was widespread (38% breakfast, 31% lunch, 62% dinner, 18% every meal). Study also shows that the dietary patterns of children watching TV include more snack foods and fewer fruits than the dietary patterns of the same children exercising (Fainardi *et.al.*, 2008). Studies have found that the number of hours of television watching is a strong predictor for high cholesterol levels in children and adolescents. As both children and adolescents tend to consume higher fat food products if they watch a lot of television (Woong *et. al.*, 1992).

#### **SOCIOECONOMIC STATUS**

A study conducted to assess the prevalence of overweight and obesity amongst children age group of 5-18 years belonging to low, middle and high income group in NCT of Delhi, India. The study was carried out on 16,594 children (LIG 5087, MIG 5314 and HIG 6381). Over weight and obesity were assessed using BMI and triceps skin fold utilizing age and sex specific cut off points. The prevalence of obesity and overweight in LIG school children was 0.1% and 2.7% respectively, amongst MIG school children was 0.6% and 6.5 % and in HIG school children it was 6.8% and 15.3% respectively. The results revealed that the prevalence of overweight and obesity was higher in HIG children as compared with MIG and LIG for all age groups and highlighted the possible role of change in dietary pattern and physical activity with increase in income levels (Kaur *et.al.*, 2008).

In the year 2003, researcher examined the public health impact of the socioeconomic status (SES) gradient on adolescents' physical and mental health. Population attributable risk (PAR) for household income and parental

education were calculated relative to depression and obesity among a nationally representative sample of 15 112 adolescents. Result showed that PARs for income and education were large. Across each gender and race/ethnicity group, the PAR for education tended to exceed that for income. For depression, the adjusted PAR for income was 26%, and the PAR for education was 40%; for obesity, the adjusted PAR for income was 32%, and the PAR for education was 39%. Study concluded that SES is associated with a large proportion of the disease burden within the total population (Goodman *et.al.*, 2003).

The prevalence of overweight and obesity in children has increased dramatically over a relatively brief time period. Obesity is now being called one of the greatest neglected public health problems. The main culprits as discussed above are basically eating too much and moving around too little. Obesity affects child's physical health as well as mental health.

## REFERENCES

- Bhansali A (2010): Obesity: an overview. Obesity—a growing challenge, souvenir.
- Faghin sh et al. Trends of overweight and obesity among 14-18yrs old urban adolescent girls among senior high schools, Ahvoz,Iran. Iranian journal of diabetes & lipid disorder. 2009.
- Kalpana (2009): Nutritional profile of selected overweight and obese school going children of Coimbatore. Indian Journal of Nutrition and Dietetics 3(46), 91-132.
- Moy Foong Ming, Gan Chog Ying and Sati Zaleha Mohd Kassim. Eating patterns of school children and adolescents in Kuala Lumpur. Mal J Nutr. 2006; 12(1): 1-10.
- Ruxton et al. The increasing prevalence of snacking among children. Journal of pediatrics. 1994; 138(4):493-498.
- Shah C, Diwan J, Rao P, Bhabhor M, Gokhle P, Mehta H. Assessment of obesity in school children. Calicut Medical Journal. 2008; 6(3): 2.
- Kaur S, K Umeseh, Lakshmy R, Dwivedi Sn, Sachdev Hps. Prevalence of overweight and obesity amongst school children Delhi, India. Journal of Clinical Nutrition. 2008; 17(42), 592-596.
- Fainardi, Chiara Scarabello, Brunella Iovane, Maria Katrin Errico, Alessandrumele, Chiara Gelmetti, Giorgia Monti, Ivonne Sponzilli, Giovanni Chiari, Elio Volta,Marco Vitale And Maurizio Vanelli. Sedentary lifestyle in active children admitted to a summer sport school. Acta Biomed. 2009; 80: 107-116.
- Woong et. al, N.D, hei T.K. Television viewing and pediatrics hypercholesterolemia. 1992; 90: 75- 79.
- Goodman. E , MD, Gail B. Slap, MD, MS, and Bin Huang, PhD, The Public Health Impact of Socioeconomic Status on Adolescent Depression and Obesity. American Journal of Public Health Nov. 2003, Vol 93, No. 11.