

Childhood Obesity: A New Epidemic

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At the beginning of the 21st Century obesity has become the leading metabolic disease in the World. The World Health Organization refers to obesity as a global epidemic and public health problem and its prevalence is increasing dramatically. Currently 300 million people can be considered obese, and due to this rising trend this figure could double by 2025. A major contributor to this increased prevalence is the rise of childhood obesity.

Childhood obesity is on the rise at an alarming rate. Currently over 15% of young people over six years old are obese, this is increasing to children five and younger. Therefore a need to target this problem at an early age is crucial. Targets include changes at home, at school, the government and information portrayed by the media.

The future impact on healthcare will be dramatic if no action is taken. This involves targeting the problem early in childhood and not waiting until the effects on health have manifested into adulthood. Manifestations include, type 2 diabetes, dyslipidemia, arterial hypertension, cardiovascular disease and respiratory complications such as sleep apnea and orthopedic complications, just to name a few.

How is Obesity Assessed?

Obesity is determined by measurement of body fat, not body weight. Children may be over the normal weight, but if they are very muscular with low body fat, they are not considered obese. Others may be normal or underweight but still have excess body fat. Children are considered overweight when their body mass index is over 85% of the weight group in their age and sex categories. If it is greater than the 95th percentile they are considered obese (body mass index [BMI] is weight in kilograms divided by the height in meters squared).

[BMI=kg/m²]

It should be noted that obesity is the problem and that many overweight children are healthy. Other important factors to consider are ethnic variations, timing of growth spurts, and higher normal fat levels around puberty can skew these measurements.

Stable weight depends on a balance between caloric intake and energy expenditure. When a person's caloric intake exceeds his or her expenditure, the body stores this in the fat cells in adipose tissue. Adipose cells function as energy reservoirs and enlarge or contract depending on energy use. If the supply is greater than the demand fat builds up and the person becomes overweight. Achieving a healthy weight becomes much more difficult as children get older. Fat cells multiply during two growth periods: early childhood and adolescence. Overeating during these times increases the number of fat cells. This is confounded if you have a family history of obesity and are born with more fat cells. After adolescence the fat cells increase in mass rather than number. Losing weight after adolescence only reduces the size of fat cells but not their numbers.

Contributing Factors

There are many factors that will contribute to an increasing weight problem. They include poor quality of food intake, sedentary lifestyle, family history Ethnic and Socioeconomic factors and poor education on healthy living.

One of the most hazardous pastime in childhood is regular television watching. Increased television watching promotes a sedentary lifestyle which has a direct relationship to unwanted weight gain. In addition, television encourages unhealthy snacking and eating patterns. Children are the most vulnerable group for these negative program and advertisement messages and are often targeted directly by advertisers.

Programs targeting children advertise fast foods, and foods that are high in salt, fats and

carbohydrates. Sugar, especially from soda or pop, or other sweetened beverages including fruit juices are a major contributor. Drinking soda regularly can increase a child's risk for obesity by 60%. It was found that the average American teenager consumes 15 to 20 extra teaspoons a day from soda and sweetened drinks, including sweetened juice.

A high level of physical activity is very important in weight control and loss. The revised food pyramid now includes daily exercise and weight control. Exercise needs to be strongly encouraged in school and does not need to be at a competitive level but offer a variety of activities to cater to all levels of agility. It must be emphasized to children that this is a lifelong lifestyle for good health and well being. A regular exercise routine is especially important during the adolescent phase where a lot of body and emotional changes take place.

Family history is another important factor when assessing the risk of childhood obesity. Parental obesity more than doubles the risk that a young child, thin or overweight will become obese later in life. Certain genetic diseases and metabolic disorders should also be considered but will be left for another discussion.

Ethnic and Socioeconomic factors also add to the risk. Children from lower socioeconomic and minority groups are at a higher risk for obesity. These children often don't have access to healthy eating both at home and school and thus develop poor habits which persist into adulthood. Most new immigrants try to retain some of their cultural foods which when prepared at home tend to be healthier than eating highly processed foods. Also, generally they have a closer family unit and usually eat together creating a better social structure for kids. This pattern however tends to normalize after first or second generations to current levels of poor eating habits.

How do we manage this problem?

Childhood obesity is best treated early with a multidisciplinary approach. This includes diet, behavior modification and exercise. These changes must be made at levels including at home and school. The following are some steps to help improve a child's health:

- * Limiting or eliminate altogether take out, fast foods, foods high in sugar and refined carbohydrates. Snacking should be healthy (fruits, vegetables, etc). Encourage children to make healthy choices on their own and congratulate them when they do so.
- * Never criticize a child for being overweight. This compounds the problem. It adds stress to the child and increases the risk for eating disorders which could be very dangerous.
- * Limit sedentary activities, especially that which encourage poor snacking such as television and video games to a few hours a week. In one study watching TV produced the lowest metabolic rate compared to sewing, playing board games, reading or writing.

Conclusion:

In conclusion, the prevalence of childhood obesity has greatly increased over the last four decades, and obesity is occurring at a very early age. It is now classified as an epidemic and a public health concern. The burdens to the healthcare system will be tremendous as the obese population increases and the tonicity creates numerous complications. Prevalence rates of diabetes mellitus, hypertension, coronary artery disease, respiratory complications such as sleep apnea and orthopedic complications, as well as psychological diseases will increase dramatically. Healthcare officials will be forced to focus on dealing with ongoing complications of obesity if the trend does not change. Prescription drug use to control weight loss, or surgeries such as laparoscopic stomach banding or gastric bypass will become common treatment options. All of this can change. This obesity epidemic can be controlled if changes are instituted at an early age and the mindset of parents, schools, government and media are adapted to help create healthy children.

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