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Causes for childhood obesity the strategies for prevention

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Overweight and obesity in childhood show a negative impact on both physical and psychological health. The mechanism of obesity development is not fully understood and it is believed to be a disorder with multiple causes. Environmental factors, lifestyle preferences, and cultural environment play pivotal roles in the rising prevalence of obesity worldwide. Obesity is an excess proportion of total body fat. A person is considered obese when his or her weight is 20 per cent or more above normal weight. The most common measure of obesity is the body mass index or BMI. A person is considered overweight if his or her BMI is between 25 and 29.9; a person is considered obese if his or her BMI is over 30. On the other hand, there are supporting evidences that excessive sugar intake by soft drink, increased portion size, and steady decline in physical activity have been playing major roles in the rising rates of obesity all around the world. Consequently, both over-consumption of calories and reduced physical activity are involved in childhood obesity. Almost all researchers agree that prevention could be the key strategy for controlling the current epidemic of obesity. Prevention may include primary prevention of overweight or obesity, secondary prevention or prevention of weight regains following weight loss, and avoidance of more weight increase in obese persons unable to lose weight. Until now, most approaches have focused on changing the behavior of individuals in diet and exercise. Prevention may be achieved through a variety of interventions like targeting built envir onment, physical activity, and diet. The increased risk of chronic diseases requires effective strategies to promote health, facilitating the adoption of proper life styles from childhood.

Key Words : Multi-factorial, Genetic factors, Hyperlipidaemia, Body mass index, Waist circumference

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INTRODUCTION

Childhood obesity has reached epidemic levels in developed countries. The highest prevalence rates of childhood obesity have been observed in developed countries, however, its prevalence is increasing in developing countries as well. It is widely acknowledged that the causes of obesity are multi-factorial, but those mainly responsible for such an increase are associated with certain modifications of life style, such as sedentary habits and decrease of physical activity, associated with higher and unbalanced food consumption.

Overweight and obesity in childhood have significant impact on both physical and psychological health. For example: overweight and obesity are associated with Hyperlipidaemia, hypertension, abnormal glucose tolerance, and infertility. In addition to this psychological disorders such as depression occur with increased frequency in obese children (Daniels *et al.*, 2005). Obesity is characterized by an excess of adipose tissue relative to lean body mass. With rare exceptions, it simply reflects a long-term imbalance in energy intake vs. expenditure. The excess energy is stored as fat.

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Definition of childhood obesity:

Although definition of obesity and overweight has changed over time (Kuczmarski and Flegal, 2000, Flegal *et al.*, 2002), it can be defined as an excess of body fat (BF). There is no consensus on a cutoff point for excess fatness of overweight or obesity in children and adolescents. There are also several methods to measure the percentage of body fat. In research, techniques include underwater weighing (densitometry), multi-frequency bioelectrical impedance analysis (BIA) and magnetic resonance imaging (MRI). In the clinical environment, techniques such as body mass index (BMI), waist circumference, and skin fold thickness have been used extensively.

Although, these methods are less accurate than research methods, they are satisfactory to identify risk (Table 1). While health consequences of obesity are related to excess fatness, the ideal method of classification should be based on direct measurement of fatness.