



Obesity

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It is quite evident that over the past few decades the globalization of food markets, urbanization, and economic growth have played a crucial factor in the increase of consumption and therefore a rise in the prevalence of obesity. Hypertension, diabetes, stroke, cardiovascular diseases, and certain forms of cancer are all possibly consequences to a heightened body mass.

The definition of obese and overweight are as follows. Measured in kg/m^2 , where kg is the mass of the person and m^2 is the height of the person squared., the BMI scale is used to determine a person's mass to height ratio. The 'Normal' status is found at a range of 18-25, while the 'Overweight' and 'Obese' are found at 25-30 and >30 , respectively. Such an accumulation of body fat is caused by the consumption of high energy dense foods, those high in sugars and fats. There has been an alarming rise in obesity since the 1980s, nearly a threefold rise. The World Health Organization has determined that globally, there are nearly 1 billion overweight adults with about 300 million of them obese. On a local scale it had been recorded that, in 2000, Canada had 2,006,000 overweight people; The United States, 17,702,000 [1]. The projections for the year 2030, for both countries, predict more than a doubling of those numbers. With this issue become such a pandemic, there have been many studies completed, recognized by the WHO and The Obesity Society, and many demonstrate that people who are overweight have a higher risk of developing several problems, mainly diabetes and hypertension.

These diseases have crippling effects on people's lives, such as lowered life spans, higher risk of cardiovascular problems, and many more. Concerning the relationship of overweight and obesity to type 2 diabetes, it has been found that 90% of those suffering with the sickness are over the 25, suggested, BMI. The University of British Columbia has show why this correlation exists. Type 2 diabetes is described as an insulin, used in the process of storing sugars, deficiency or resistance can be explained by the fact that "high levels of fats in the blood stream destroy insulin producing beta-cells in the pancreas by reducing the protein Carboxypeptidase E (CPE)"[2]. With a reduction in life span of about 5-10 years, diabetes is currently responsible for the deaths of 41,500 Canadians each year. In addition to diabetes, hypertension is another possible consequence to having a $\text{BMI} > 25$. The Framingham Offspring Study had shown that 78% of hypertension cases in men and 64% in women are connected to obesity [3]. It is quite evident that these diseases could be prevented by controlled dieting and a lower intake of sugars and fats, which is currently not the case in North American Society.

The accessibility to fast food and high sugar carbonated drinks is a major cause of obesity . It has been found, as per *Shanthy et al.*[4], that adults who are consuming fast foods on a daily basis neglect the recommended intake of dairy products, fruits, and vegetables. These same adults showed an increased percentage of overweight and obese individuals. In addition, one of the most popular soft drinks holds 42 grams of sugar, an equivalent to 10 teaspoons of sugar. The Canadian food guide suggests a drastic reduction in the consumption of these drinks and foods, due to their high caloric, and low nutrient

contents [5]. All of these factors coupled with the fact that less than 50% of Canadians receive daily exercise lead to higher numbers of overweight and obese people[6].

It is clear that a reduction in sugar intake would be a great improvement to the health of North American society. Although coupling this with daily physical activity would be most beneficial, alone it would still be a great improvement.

[1]World Health Organization. "Obesity and overweight," <http://www.who.int/dietphysicalactivity/publications/facts/obesity/en/> ;10/09/09

[2]UBC, " New Link Between Obesity and Type 2 Diabetes: UBC Researchers Discover New Way Fats Kill Beta-cells," <http://www.publicaffairs.ubc.ca/media/releases/2008/mr-08-072.html> ; 10/10/09

[3] The Obesity Society, "Obesity Statistics,"http://www.obesity.org/statistics/obesity_trends.asp; 10/10/09

[4] Shanthy A. Bowman, PhD and Bryan T. Vinyard, PhD, " Fast Food Consumption of U.S. Adults: Impact on Energy and Nutrient Intakes and Overweight Status," Journal of American College of Nutrition, Vol. 23, No. 2, 163-168 (2004)

[5]Health Canada, "Canada's Food Guide," <http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php> ; 10/09/09

[6] Statistics Canada, " Physical activity during leisure-time, by sex, provinces and territories," <http://www40.statcan.gc.ca/101/cst01/health78a-eng.htm>; 10/10/09