

**Childhood Obesity: A Health Care System Crisis**

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Fat, plump, large, chubby, portly, heavy, overweight – the words may sound innocent but the issues surrounding obesity certainly are not. Childhood obesity is quickly emerging as a global epidemic (Gershenson, Kuzniewski, Way, Cohn, Barbara & Somerville, 2002; Myers & Vargas, 2000; Vessey & MacKenzie, 2000). Canadian children are leading the race, placing a new stress factor on the health care system. The statistics are disturbing as the number of obese children has tripled within the last 15 years, with one in every three Canadian children being overweight (Malcolm, 2003). Our culture has lured children into the grease trap, with French fries accounting for a large portion of vegetable consumption (Vessey & MacKenzie, 2000). Why has this outbreak reached epidemic proportions? What are the consequences of childhood obesity? What kinds of prevention and treatment techniques can be applied to get children off the couch and out of the potato chip bag? Questions such as these must be raised in order to find a solution for childhood obesity. Failure to pay attention to the drastic rise in cases of childhood obesity will create a crisis for our health care system.

### ***Definition***

Obesity is defined as the accumulation of an excessive amount of fatty or adipose tissue, resulting from a greater intake of energy than output (“What is Obesity?” 2000). There are several methods used to measure obesity, the most common being the body mass index (BMI), calculated by dividing a child’s weight in kilograms by his/her height in meters squared. The National Center for Health Statistics of the Centers for Disease Control and Prevention recently released BMI percentile growth charts for children from 2 to 20 years of age. The 95<sup>th</sup> percentile of the BMI is now used to define overweight. Children with a BMI above this cutoff are more

likely to be obese, remain at a risk of staying obese, and are more likely to have future problems than those classified as overweight by lower percentile cutoffs (Vessey & MacKenzie, 2000).

### ***Risk Factors***

There are many factors which may elevate a child's probability of becoming overweight. Some of these risks include hereditary and family factors, the influence of television and media, poor diet choices, and a decrease in physical activity. When these risks cause cases of obesity to increase, the health care system will bear the brunt.

#### *Hereditary and family factors.*

Genetic and environmental influences play a major role in the development of childhood obesity (Buiten & Metzger, 2000). Children with one obese parent have a 40% chance of becoming obese adults and children with two obese parents have a 70% chance of becoming obese adults (Jablow, 1992; Epstein, 1996; Klish, 1995; Slyper, 1998 as cited in Myers & Vargas, 2000). Additionally, as Christoffel and Ariza's study found, this statistic increases if children come from low-income families or are of Hispanic origin (as cited in Buiten & Metzger 2000). Childhood food tastes are developed through parental eating habits (Klesges, Stein, Eck, Isbel & Klesges, 1991 as cited in Vessey & MacKenzie, 2000). The growing predominance of a two-parent working household seriously alters eating patterns. Nutritional home cooked meals are becoming extinct and are being replaced with high convenience, high fat foods.

#### *Television and media.*

There is a strong correlation between the amount of time children spend watching television and playing video or computer games and living a lethargic and sedentary lifestyle (Henner, 2001). Over 91% of food advertisements on television are high in fat, sugar and/or salt and are geared towards attracting the attention of young children (Klein, 1999). Today's typical

television family eats fast food on the run and at odd time intervals (Piscatella, 1997). Children repeatedly view these unhealthy eating habits and become immune to the life-altering effects of leading such an unhealthy lifestyle. These effects include, but are not limited to, the development of diabetes, hypertension, and low self-esteem.

#### *Diet.*

Super sized value meals, gigantic buckets of buttered popcorn, and jumbo sized chocolate bars are all indicative of the growing portion sizes which are increasing the waist lines of today's children (Pescatore, 1998). In a study released by the World Health Organization in 1997, it was found that one fifth of one and two-year-olds drank a cup of soft drink beverages a day (Noble, 2003). Sodas are replacing healthier, nutrient-dense drinks such as milk, trading the benefits of calcium for the fat-enhancing character of sugar. The attraction to fast food restaurants, where foods typically have 45% to 55% of their calories from fat, must be broken (Delany, 1998 as cited in Roberts, 2000). Only then can nutritious eating habits develop among all members of the family.

#### *Physical activity.*

As government cutbacks continue to increase within the education system, Canadian schools are placing a lower priority on physical education programs ("Doctors, Teachers," 2002). As a result, energy expenditure is 25% lower than the current recommendation for energy intake in young children (Brown, 1997 as cited in Vessey & MacKenzie, 2000). The lack of community recreational programs, the scarcity of playgrounds, and the increased safety concerns among parents is cause for a decrease in the number of children playing outdoors (Vessey & MacKenzie, 2000). As Roberts (2000) discovered, the quality of life for children is being drastically reduced by the severe effects of physical inactivity.

## ***Consequences***

The consequences of obesity last a lifetime, harming children both physically and emotionally. Accordingly, more and more physicians and health care workers are being required to dedicate their time and energy to help fight this battle. As the number of young children receiving bypass surgeries increases, so does the sum of money Canadians will pump into an already destitute health care system.

### *Physical dangers.*

Obesity is more than just a cosmetic problem. It can lead to a lifetime of serious health complications (Pescatore, 1998). Children are starting to develop conditions previously seen in only adults. Some of these include: hypertension, hyperlipidemia, non-insulin dependent diabetes, cholelithiasis, certain types of adult onset cancer, dermatological disorders, pulmonary and orthopedic conditions, menstrual abnormalities, gall bladder disease, and pancreatitis (Myers & Vargas, 2000; Vessey & MacKenzie, 2000). Other noticeable side effects consist of longer suffering during illness and a greater susceptibility to complications from surgery and infection (Piscatella, 1997). Furthermore, childhood obesity leads directly to overweight status in adulthood (Charney, Chamblee-Goodman, McBride, Lyon & Pratt, 1976; Guo, Roche, Chumlea, Gardner & Siervogel, 1994, as cited in Morrissette & Taylor, 2002).

### *Self-image and self-esteem.*

Our society associates body size with beauty, intelligence, and self-worth (Piscatella, 1997). As a result, at a crucial point in their lives when acceptance is critical to the development of their social skills, obese children are rejected by their peers, experiencing isolation, humiliation, and hostility (Harkaway, 1989 as cited in Morrissette & Taylor, 2002). Obese children then have few options but to train themselves to accept this negative treatment and as a

defense mechanism, make themselves the butt of the jokes (Piscatella, 1997). Negative body image perceptions that are developed throughout childhood promote low self-esteem, social withdrawal, and depression which can lead to continued overeating (Jablow, 1992).

### ***Treatment and Prevention***

Obesity's grave problems are quite treatable in children, less treatable in youth, and almost untreatable in adults (Morrissette & Taylor, 2002). To ensure appropriate nutritional behaviour, modification must occur immediately at the onset of obesity to intervene before poor habits are established. Treatment usually involves an attempt to alter the child's attitude towards food through ongoing family support, dietary changes, and increased exercise (Buiten & Metzger, 2000; Myers & Vargas, 2000).

#### *Family involvement.*

The support of family members is imperative for successful weight loss reduction (Brownell, Kelman & Stunkard, 1983 as cited in Morrissette & Taylor, 2002). Parents need to incorporate effective strategies to help their children achieve and sustain weight loss. Proven methods include not using food as a reward, avoiding severe restriction of sweets, and providing children with nutritious family meals. All these can be reinforced by eating together at the family table, not in front of the television (Vessey & MacKenzie, 2000).

#### *Dietary changes.*

Buiten & Metzger (2000) found that the Traffic Light Diet is one effective method to modify unhealthy eating behaviours. Food is placed into three categories in this diet: green light, yellow light, and red light foods. Green light foods may be eaten freely, yellow light foods with some limitation, and red light foods are eaten sparingly. As a result, high-fat convenience foods are avoided, fruit and vegetable consumption is increased, and high energy sweets and snacks are

controlled (Vessey & MacKenzie, 2000). Establishing positive eating habits early is vital because “a healthy relationship with food begins in childhood; it’s the ability to be around food without the constant urge to eat” (Klein, 1999, p.17). This is a principle which must be fostered by parents on a continual basis.

### *Exercise.*

The benefits of exercise are immeasurable. Regular physical activity decreases body fat, increases metabolism, enhances cardiac health, improves emotional health, boosts energy, stamina and strength, and increases self-esteem (Piscatella, 1997). Energy output must exceed energy intake to lose weight. Therefore, exercise alone or in combination with a proper diet generates the greatest long-term weight loss results (Roberts, 2000). Accordingly, it is integral to motivate children to become involved in sport activities at an early age to obtain the variety of benefits that physical activity offers. This task is simplified when fitness is enjoyable for children, making physical activity a lifetime pursuit (Roberts, 2000).

### ***A Stressed Health Care System***

The Canadian health care system will be put to the test as the number of childhood obesity medical cases increases. The estimated total cost of obesity in Canada in 1997 was \$1.8 billion, accounting for 2.4% of the total health care system (Wood, 2002). That will only continue to rise. The Ontario government recently stated its plans to grant \$2 million over the next three years toward a preventative program to promote healthy eating and an active lifestyle (“Ontario Fights Child Obesity,” 2002). Fixing the obesity epidemic will necessitate a major change in lifestyle, requiring a combined effort on all levels of government and society. Implementing aggressive public health campaigns must occur to save children from the devastating effects of childhood obesity.

Canadian youth are being victimized. Their obesity issues are preventable. It is an adult-controlled problem. With collaboration and dedication on everyone's part and understanding the seriousness of this dilemma, the risks of obesity can be minimized, thereby decreasing the consequences and reducing the need for treatment. In doing so, the future generation has everything to gain and the extra burdens being placed on the health care system would be alleviated. As Piscatella (1997, p.24) aptly phrased it, 'The ability to lengthen one's life depends first on the capacity not to shorten it.' By being proactive with health and 'eating an apple a day', future generations will be able to 'keep the doctor away'.

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