SHORT REPORT

Obesity in adults and children: a call for action

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Obesity in adults and children: a call for action

Obesity/overweight in adults and children is a worldwide health problem associated with substantial economic burden as measured by paid sick leave, life and disability insurance rates, and obesity-related physician visits and hospital stays. Overweight/obese people experience hypertension, elevated cholesterol, and type 2 diabetes and suffer more joint and mobility problems than people within the normal weight for height range. While there is need to understand individual behaviors that can be modified to promote weight loss and weight maintenance, there is as great a need to consider contextual factors at the societal level that can impede or even sabotage weight control efforts. In every country with improved living standards people will continue to eat too much and engage in too little physical activity. The call for action is for all modernized societies to alter environments and attitudes to support, rather than hinder, healthy dietary intake and being physically active.

Keywords: overweight, obesity, public policy, nursing

Introduction

Obesity in the United States of America (USA), Europe and throughout the world has increased markedly over the past decade (Heart, Lung and Blood Institute [HLBI] 1999, Khaodhiar *et al.* 1999, Sorensen 2000, DesJarlais & Jones 2001). The World Health Organization now recognizes obesity as a global epidemic (World Health Organization 1997) with a substantial economic burden that includes expenditures for paid sick leave, life insurance, disability

insurance and obesity-related physician visits and hospital stays (Thompson *et al.* 1998, Oster *et al.* 1999, Fontaine *et al.* 2000).

Currently the estimate is that 97 million or 55% of the USA adult population is overweight or obese (Eckel & Krauss 1998, Martin *et al.* 2000). This is despite an estimated 50 million Americans who attempt weight loss each year (McInnis 2000). While both men and women gain weight as they age, women may gain weight many years before their male counterparts (Manson *et al.* 1995, HLBI 1999). In Britain, the prevalence of obesity is more pronounced in women than in men, one explanation is that more women than men are socially disadvantaged, that is fat, female and poor (Carpenter *et al.* 1994). This is in contrast to the obvious signs of increasing obesity in countries such as Kuwait, where officials describe Kuwaiti citizens as among the most obese in the world (Kandela 1999). In Kuwait, during adolescence and up to the age of 25, it is the males who are obese, but by the age of 40 years, obesity rates are comparable in both Kuwaiti men and women (Kandela 1999).

Overweight is defined by a body mass index of 25–29 and obesity by a body mass index of 30 and above (Abernathy 1991). In those with a body mass index of 28 or greater, the relative risk of death from all causes at least doubles. Overweight individuals experience more hypertension, elevated cholesterol, and type 2 diabetes (Grundy *et al.* 1999). Overweight individuals also experience more arthritis and joint and mobility problems (Khaodhiar *et al.* 1999). There are now indications that excess body weight may alter the immune system, thus making obese people more susceptible to infection and disease (Visser *et al.* 2001).

Overweight/obesity statistics for children worldwide are correspondingly alarming. Studies have shown that half of overweight children become overweight adults (Dietz 1998, Kinra *et al.* 2000) and that children of obese parents may become obese adults (Whitaker *et al.* 1997). Data from a nationally representative sample of English children indicate that the frequency of overweight ranged from 22% at age 6 years to 31% at age 15 years; that of obesity ranged from 10% at age 6 to 17% at age 15 years (Reilly & Dorosty 1999). Childhood obesity is associated with elevated serum lipids, hypertension and abnormal glucose tolerance (Khaodhiar *et al.* 1999). There is question if obesity in childhood carries a greater risk of morbidity and mortality than adult onset obesity. Recently, investigators demonstrated that overweight in adolescence has greater utility in predicting short- and long-term morbidity than obesity in earlier childhood, offering as explanation a link between not being fed breast milk as infants and an increased risk of obesity in adolescence, 9–14 years later (Gillman *et al.* 2001).

Overweight/obese children are usually sedentary, spend too many hours sitting rather than being physical active and/or participating in sports during leisure (Andersen *et al.* 1998). Psychosocially, it is known that children incorporate a preference for thinness at a young age and that overweight children are ranked lowest as potential friends (Thompson & Tantleff-Dunn 1998, Erickson *et al.* 2000). One study noted that as early as 5 years of age, higher body weight is associated with lower self-concept and that parental concern about a child's weight reinforced the child's negative self-evaluation (Davison & Birch 2001). Overweight adolescents can also develop a negative self-image, persisting into adulthood, and likely to impact decision-making and interactions with peers (Whitaker *et al.* 1997).

In rudimentary terms, to maintain a specific body weight, energy intake must be balanced with energy expenditure (Gunnell *et al.* 1999, Oster *et al.* 1999), a function of resting metabolic rate, the thermal effect of food, and the energy expended in physical activity (Henstrud *et al.* 1994). Energy utilization is kept to a minimum when people are sedentary. This combined with high calorie and high fat foods disrupt attempts to achieve a normal weight. There have been campaigns to remedy this situation by stressing that people must increase physical activity to improve health and limit saturated fat intake to 10% and overall fat intake to no more than 30% of total calories (Eckel & Krauss 1998, Lowry *et al.* 2000). These recommendations have been difficult to translate into action at both individual and population levels.

One reason is that better living standards have contributed to the rise in obesity throughout the world (Sorensen 2000). In China, the changes in diet, activity patterns and nutritional status have been marked over the past 10 years (McKinlay & Marceau 2000). This has been accompanied by increases in obesity rates, particularly in wealthy men and middle-income women. This is also true in Europe in countries where the economy has markedly improved. In the Republic of Ireland (Shelley *et al.* 1991), for example, with improvements in living standards, there is more expensive high fat food available and obesity is on the rise. Research has shown that animals gain weight and increase percentage body fat in proportion to the fat intake. This has been repeated in human studies where it has been noted that higher rates of fat deposition occur when a majority of calories are from fat (Hill & Peters 1998).

Health care providers involved in primary and secondary prevention must be cognizant of contextual factors beyond individual control that can impede or even sabotage weight control efforts. In every country with better living standards, people will continue to eat too much and engage in too little physical activity, despite public health and media attempts to

counteract the problem. The fact is it is easy to be physically inactive in today's world. People will seldom walk even the shortest distances, and will correspondingly rely on fast, high fat foods. These are difficult patterns to break. For nurses, why not encourage stair climbing in schools and in public buildings; why not engage the fast food and restaurant industries in discussions concerning the implications of high fat foods and of too-large portions which encourage overeating; why not ask that restaurants increase the availability of low calorie, low fat foods; why not stress the need for eating patterns to be in synchrony with energy expenditure; and why not use opportunities such as school lunch and physical education programmes to influence children, adolescents and young adults at elementary, secondary and collegiate levels to establish long-term eating habits and physical activity patterns?

Emphasis must be reframed. School and work environments must be re-created as places where people can practice healthy behaviours and be more physically active. Small interventions, as for example, limiting elevator stops to the third floor and beyond will ensure that people climb stairs. The fast food and restaurant industries must understand that they too can assume responsibility for insuring that people of all ages limit high fat food choices and are not tempted to overeat.

Understanding of the many factors discouraging people from losing or maintaining weight must extend beyond the simplistic 'calories in, calories out' paradigm, and focus on societal factors that create, promote, and maintain obesity in adults and children. Stressing diet and physical activity without considering context or economic, social, psychological, and cultural factors will likely have limited success (Dietz 1998). Finally, simply instructing people to be physically active and to follow healthy diet plans will likely fall upon deaf ears when being sedentary is easy and high fat, high calorie foods are readily available (Marmot 1984, Andersen *et al.* 1998). Because the problem of obesity extends well beyond the individual into a world that promotes overeating and an inactive lifestyle, preventing obesity must be a primary societal concern for nations worldwide.

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