Quill & Scope

Volume 1 *Volume I* Article 13

2008

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Overweight and obesity and the co-morbidities associated with these conditions are very expensive to treat. In 1998, it is estimated that medical care expenditures linked to overweight and obesity totaled $78.5 billion, representing 9.1 percent of all medical expenditures.[1] These diseases have contributed significantly to the increased healthcare expenditures in the last three decades and this trend is predicted to continue.[2] In fact, increased spending to care for the obese is estimated to account for 27 percent of the increase in healthcare expenditures between 1987 and 2001.[3] It therefore seems prudent to control overweight and obesity in children in order to reduce future overall healthcare costs. Unfortunately, the United States does not appear to be successful in accomplishing this task. The 2003-2004 National Health and Nutrition Examination Survey (NHANES) estimated that roughly 17 percent of children and adolescents ages 12-19 years were overweight and nearly 19 percent of children ages 6-11 were overweight. These numbers are significantly higher than in the period from 1988-1994.[4]

Aside from the healthcare costs, improving the immediate and long-term health of today's children is very important. Overweight and obese children have an increased risk of obesity later in life; some studies have shown that as much as 80% of obese children will be obese as adults.[5] Obesity is linked to type 2 diabetes, multiple types of cancer, cardiovascular disease, sleep apnea, musculoskeletal disorders, and gallbladder disease.[6] Excess adiposity is also associated with higher all-cause mortality.[7]

Overweight and obesity are multifactorial conditions, caused by an interaction of genetic, environmental, and behavioral factors. Dietary habits and physical activity level play a strong role in the development of overweight and obesity.[8] Because of the large amount of time children spend in school, it therefore seems logical that schools should assist children in making wise food choices and as well as increasing their physical activity. This should mean more than simply changing the food that is in the vending machines or cafeteria, but should include education on nutrition and healthy living, as well as increases in exercise during the day. There must obviously be significant responsibility placed on the parents to ensure their children's health, but the research indicates that school-based health interventions are effective.

In a study completed in 2005, Carrel et. al. demonstrated that a 9 month program involving increased physical activity at school, combined with nutritional education resulted in a loss of body fat, an increase in cardiovascular fitness, and improved fasting insulin levels in overweight middle school children.[9] Other studies demonstrate that school-based behavioral/dietary interventions can produce favorable changes in bodyweight, body mass index (BMI), body fat percentage, and fitness in preschool-aged children.[10] The education during the school day may carry over into leisure time as well. Taylor et. al. demonstrated that school children educated about the importance physical activity spent less time in sedentary activity outside of school and managed to decrease their average BMI during the one year study.[11] Importantly, these results may prove to be long-lasting which is quite encouraging. A recent study showed an intervention involving nutrition education and increased physical activity during school resulted in a decrease in the prevalence of overweight by 26.3% and obesity by 32.5% during a three year study.[12]

These studies represent just some of the data that demonstrate the efficacy of the school-based health interventions. Although there would be significant costs associated with the widespread implementation of these programs, the author feels this would be cost effective for

the long run given the anticipated reduction in healthcare expenditures. Even more important than mitigating rising healthcare costs is the fact that the youth in this country will be healthier now and as adults.

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