

Editor's Note

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The high prevalence of overweight and obesity remains a major public health issue throughout many developed and underdeveloped countries. Ongoing efforts to reverse the trend have included greater public awareness of the adverse effects of abnormal weight and greater emphasis on lifestyle changes to enhance healthy eating and increased physical activity.

Some concerned researchers and parents have questioned whether the enormous focus on obesity prevention would have an unintended consequence of increasing the incidence of disordered eating such as anorexia nervosa and anorexia bulimia.

Although most will agree that weight management requires balancing caloric input and caloric output, numerous studies have demonstrated that the prevalence of overweight and obesity suggests that complex social phenomena also contribute to the problem. The reversal of the obesity epidemic will require solutions that incorporate prevention/corrective strategies that are implemented in places where we live, work, study, play and worship.

Reversing the obesity epidemic will demand greater societal and personal responsibility. The role of legal mandates is still being debated. In US, states contemplate the passage of laws to monitor food ingredients and provide guidelines for appropriate food labels regarding caloric content and nutritional value. We have even witnessed the occurrence of class action lawsuits against fast food entities as obese plaintiffs allege that the defendants were negligent in producing/selling foods which cause obesity and other diseases.

Obesity results in well-documented short- and long-term medical and psychological complications as well as escalating direct and indirect financial costs. Issue 1 of Volume 2 of *Obesity and Control Therapies: Open Access* includes four articles focused on unique aspects of obesity and disordered eating: "Anthropometric and Metabolic Characteristics of Overweight and Normal Weight Preschoolers: a Cross-Sectional Study" by Bethin et al.; "Retrospective Observations Made by Parents of Children with Anorexia Nervosa about Early Food Selection-A Qualitative Study" by Solnick et al.; "Participation and Motivation in Obesity Treatment-A Qualitative Study of Teenagers' and Parents' Perceptions" by Sparud-Lundin and Andersson; and "Changes in Self-esteem in Participants Associated with Weight-loss and Maintenance of Commercial Weight Management

Programme" by Stubbs et al. These articles are relevant to the discussion of obesity and its tracking from childhood into adulthood and disordered eating. It is anticipated that as a result of these articles more extensive research will be forthcoming.

I would like to provide a detailed review of one of the articles, "Anthropometric and Metabolic Characteristics of Overweight and Normal Weight Preschoolers: a Cross-Sectional Study" by Bethin et al. The authors examined the metabolic characteristics of normal and overweight 2-5 year old children and collected information on their energy intake. The study population consisted of 2-5 year old children with "poor dental health, requiring general anesthesia for full mouth rehabilitation." The authors chose this convenient population because "little is known about the effects of obesity on the metabolic parameters of young children." The primary aim was relate anthropometric parameters to cardiovascular risk markers. The secondary aim was to examine a possible association between energy/macronutrient intake and lipid profiles and Homeostatic Model Assessment-Insulin Resistance.

The metabolic and anthropometric measures studied included height, weight, and fasting low density lipoprotein cholesterol, total cholesterol, high density lipoprotein cholesterol, glucose, insulin and C-reactive protein as well as body mass index, Waist Circumference (WC), Waist Circumference-to-Height Ratio (WCHtR), and Homeostatic Model Assessment-Insulin Resistance. An assessment of dental health was obtained using the Decayed Missing Filled Teeth (dmft) score. Approximately one third of the participants were overweight or obese. The study demonstrated several anticipated results:

1. The mean WC and WCHtR were significantly higher in overweight or obese children compared to normal weight children.
2. The dmft score for the overall study population was higher (i.e., poor dental health) than in preschoolers in the general population or in populations of children with known dental decay.
3. Total daily kilocalories, daily intake of cholesterol, total carbohydrate, fructose, dairy, and 100% juice consumed were positively associated with the dmft score.

However, the study could have provided more details

regarding the following issues:

1. Dental health did not show a correlation with BMI z-score, anthropometric or laboratory measurements.
2. Total cholesterol was above 170 mg/dl in 19% of normal weight children and 30% of the overweight or obese children. The LDL-cholesterol was above 110 mg/dl in 14% of normal weight and 36% of overweight or obese children.
3. Total and LDL-cholesterol were significantly higher among overweight/obese compared to normal weight children.
4. There was no difference in daily energy intake between normal weight and overweight or obese children.
5. Overall, 51% of the total sample consumed more than American Heart Association's recommendation of 1400 kilocalories per day for 5 year old males.

Comments: The study involved one of the youngest populations studied to date and stresses the value of cardiovascular risk markers in tracking obesity. The observed

increased total kilocalories consumed by the children may reflect the demographics of the study population. The study consisted of 96 children (51% male); average age of 4.1 years (SD 1.1); 66% were normal weight (56% male); 34% of the children were overweight/obese (42% male). It would have been beneficial if the authors had provided a measure of daily caloric expenditure and provided an estimate of total calories consumed for normal weight children compared to overweight/obese children. Although the total and LDL-cholesterol levels were in the "acceptable" range for school age children and adolescents additional studies in younger children would be warranted to determine if adjustments are needed for younger children. I concur with their assessment and their recommendation that further investigations utilizing more diverse populations is warranted.

Overall, the questions stimulated by each of the articles in this issue are provocative and should lead to additional research that will develop strategies to reduce the enormous medical, psychological, and financial burdens resulting from obesity.