

The Art and Science of Obesity Management

Preface

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Most of us can remember a time when the Marlboro Man was an admirable image of the romantic, rugged individualist. Despite the fact that cigarette smoking was known to increase health risks as early as the 1940s, smoking was widely advertised to adults and children alike, beginning in the 1950s. Amid growing evidence of tobacco's link to morbidity and mortality, this practice continued into the 1990s before any marketing limits were enforced. In fact, in 1992, the most recognizable Marlboro Man, Wayne McLaren, appeared at the annual shareholders meeting of the Phillip Morris Corporation and requested that the company voluntarily limit its advertising, especially to children. McLaren, like thousands of smokers before him, was dying of lung cancer.

For decades, the tobacco industry spent billions of dollars to glamorize smoking, a behavior that is now almost universally accepted as a dangerous and in some cases deadly habit. In recent years, public and political support has increasingly favored limitations on the marketing and consumption of tobacco products. These limits have been hard won against the argument that smoking should be a personal choice, and smokers should accept the consequences of their own actions. However, as evidence mounted that tobacco was detrimental not only to smokers, but also to society at large, public opinion was swayed, and policy reform occurred. Limitations on tobacco marketing and smoking were initiated only after decades of commitment on the part of scientists, politicians, and public policy advocates working together.

Today, we face an alarming epidemic of obesity. The etiology of this

epidemic is complex and is affected by economic, psychosocial, and physiological factors, all of which are addressed in this *Diabetes Spectrum* From Research to Practice section and elsewhere within this issue of the journal.

In this From Research to Practice section, we focus on obesity and how we, as health care professionals, can best address this critical health issue. For obese patients with type 2 diabetes, weight loss is often prescribed as the most effective treatment for the disease. This issue's timely editorial by my co-guest editor Marion J. Franz, MS, RD, LD, CDE (p. 133), provides an objective review of the benefits of weight loss for people with type 2 diabetes. This thorough review of existing data challenges the popular belief that weight loss inevitably leads to an improvement in glycemic control. Although weight loss and increased physical activity have been demonstrated to be critically important in diabetes prevention, beneficial results from modest weight loss in people with preexisting diabetes have been mixed and are substantially dependent on how far the disease has progressed.

Obesity develops as a result of an imbalance between the amount of energy consumed and the amount of energy expended. The reasons for this excessive energy intake are multifactorial; however, few would argue that we do not give enough thought to the food we eat. In fact, messages about food are so ubiquitous that, as a culture, Americans might be described as being obsessed with food. This overemphasis on food is equaled by an obsession with achieving or maintaining a slender physique. The relationship between psychology,

attitudes toward food, and eating behavior is thoughtfully explored in the first of our research section articles by Raquel Franzini Pereira, MS, RD, and Marle Alvarenga, MS, PhD (p. 141). These authors provide some practical strategies for the identification and management of disordered eating.

The increase in childhood obesity is perhaps the most alarming health problem of our time. As stated in our second article (p. 147) by Stephen W. Ponder, MD, FAAP, CDE, and Meaghan A. Anderson, MS, RD, LD, CDE, the prevalence of obesity in children is expected to reach 20% by 2010. Ponder and Anderson outline practical guidelines on screening children for overweight and obesity, as well as helpful strategies for counseling families on obesity prevention and guidelines for prescribing appropriate treatments for this population.

One interesting paradox of the obesity epidemic is that diet and exercise messages abound, yet the prevalence of obesity continues to rise. As Jackie L. Boucher, MS, RD, CDE, et al. point out in their review of lifestyle interventions for overweight and obesity (p. 152), the advice of health care professionals often competes with the media and popular press. These authors provide a careful analysis of data from studies that have investigated a variety of different diet and exercise interventions. An understanding of these data will assist health care providers in dispelling myths and misperceptions related to purported benefits of fad diets and specific macronutrient compositions.

In addition to nonpharmacological interventions for weight loss, there are also several anti-obesity medications on the market. Moreover, some medications currently in use for the treatment of type 2 diabetes have either a positive or negative impact on body weight. In our next article (p. 158), Priscilla Hollander, MD, provides a comprehensive review of the weight-related effects of antidiabetic medications, as well as the current anti-obesity medications and their effectiveness in people with diabetes.

The physiological adaptations that make weight loss so difficult to achieve and maintain are, in part, a result of our evolution as a species. Over the

millennia, our bodies have adapted to optimize our survival. The review that I have co-authored with Tsu-Shuen Tsao, PhD (p. 166), describes the complex system of body weight regulation and the physiology behind the difficult nature of weight loss and especially the maintenance of lost weight. Physiologically, the argument can be made that, in order to survive, we have evolved to defend the highest weight we achieve.

These phenomena underscore the critical goal of preventing weight gain before it develops, especially in children. Perhaps as a society, our intellectual, financial, and political resources should be shifted from a focus on weight loss to one on the prevention of weight gain. Slowing the obesity epidemic may lead to the prevention of a substantial burden of type 2 diabetes and other obesity-related chronic illnesses. Virtually all existing evidence related to weight loss reinforces the point that once obesity develops, there is a low probability of reestablishing and maintaining a normal body weight.

Although there are obvious differences between the behaviors of smoking and unhealthful eating, our early approach as a society has been comparable in both instances. For decades, our collective knowledge of the causative relationship between smoking and lung cancer was subjugated to our cultural philosophy of personal choice and acceptance of the consequences of those choices. Public policy changes that could have dramatically reduced death and disability from smoking were dismissed as an invasion of privacy and an insult to personal choice and responsibility. Companies were making huge profits by marketing unhealthful products to children. Children adopted early habits that contributed to a lifetime of chronic illness and, ultimately, early death.

In the 1970s, an editorial in the journal *Lancet* identified obesity as “the most important nutritional disease . . . in the world,”¹ yet we are all too aware of the skyrocketing incidence of this disease since that time. As a society, we hold individuals responsible for developing many chronic diseases, including obesity, for which personal choice is only one

of many causes. Today, we know that there are genetic, physiological, cultural, psychological, economic, and societal, as well as behavioral, causes of obesity. Yet, we continue to focus virtually all of our efforts on changing the behavior of individuals.

In 2000, Public Health Reports, supported by the Center for Science in the Public Interest, produced a comprehensive report outlining the societal barriers to obesity prevention and offering specific policy recommendations to reduce these barriers.² These recommendations included the expected educational interventions, as well as incentives for increased physical activity. The report suggested that our neighborhoods should have sidewalks and bike paths and should include attractive, automobile-free zones; that our children should participate in physical education programs in schools; and that developers should not be able to profit from building suburban sprawl out of the reach of efficient public transportation systems.

Additional recommendations included economic incentives and penalties. The report recommended that the government should subsidize the costs of low-calorie nutritious foods to make them more affordable for lower-income families, tax soft drinks and other foods and beverages that are high in calories and low in nutrition to fund campaigns that promote healthful habits, and limit the marketing of soft drinks and fast food to children.

We are embarking on a journey that will have an enormous impact on the physical, psychosocial, and economic outcomes of our society. Policies that we support today may become reality . . . in a few decades. Of course, we will encounter strong resistance, especially from those who will experience an economic downturn from our society's adoption of a healthier lifestyle. Should we persevere? Just ask the Marlboro Man.

References

¹Editors: Infant and adult obesity. *Lancet* 303:17–18,1974

²Nestle M, Jacobson MF: Halting the obesity epidemic: a public health policy approach. *Public Health Reps* 115:12–24, 2000