

Nestlé Nutrition Workshop Series
Pediatric Program Volume 49

Obesity in Childhood and Adolescence

Editors

Chunming Chen
William H. Dietz



LIPPINCOTT WILLIAMS & WILKINS



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Obesity in Childhood and Adolescence

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Pediatric Program Volume 49

Editors

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Prevention
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Startling increases in the incidence of childhood obesity over the past two decades have presented pediatricians with a new set of challenges. This informative workshop addresses those challenges in detail with an emphasis on cultural and environmental causes. Chapters examine changes in the global food supply, the effect of fast food consumption, decreased levels of exercise among young people, and the impact of obesity-related health problems such as childhood diabetes. The workshop also reviews recent research highlighting family-based treatment methods aimed at reducing obesity through behavioral changes.

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Dear Nutrition World,

Obesity in Childhood and Adolescence

Obesity in Childhood and Adolescence

Editor

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William H. Dietz



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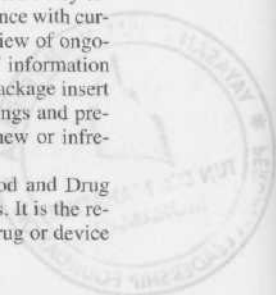
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Preface

Thirty years ago, severe childhood obesity was an unusual problem that confronted few pediatricians. Today, childhood obesity is epidemic. For example, in the United States between the completion of the second National Health and Examination Survey (NHANES) in 1980 and NHANES 3 in 1994, the prevalence of overweight children and adolescents doubled. Over the same time period, the prevalence of obesity in adults increased by 50%, indicating that the problem of excess weight in children and adolescents was deteriorating much more rapidly than in adults. Such increases are not limited to the USA. As this nutrition workshop and other publications have illustrated, every country that has collected longitudinal data has found an increased prevalence of childhood overweight. Countries undergoing a nutritional transition appear equally vulnerable, because children whose growth has been stunted are now becoming overweight. Although morbidity and mortality from obesity in childhood and adolescence are rare, the increase in type 2 diabetes among overweight adolescents in the USA, the high frequency of biochemical precursors of adult disease among overweight children, and the impact of childhood onset overweight on the severity of obesity in adults suggest that childhood obesity has already begun to affect health care costs directly.

The rapidity with which the prevalence of childhood and adolescent overweight has increased excludes genetic causes as a source of the obesity epidemic, and rightfully focuses attention on broad potential cultural and environmental causes. In both developed and developing countries, television has become widely available, and several countries have now reported data that link television viewing to childhood or adolescent overweight. The food supply has changed dramatically. Fast food has become global, and advertising promoting the consumption of fast food is pervasive. In the USA, soda and sugared beverage consumption now accounts for 6% of the average child's daily energy intake. The variety of foods available has increased dramatically, and experimental data suggest that increased variety increases consumption. Safe opportunities for physical activity have declined. In 1999, only 29% of American teens participated in daily physical education programs, a decrease of almost 30% since 1991. The frequency with which American children and teenagers include physical activity as part of their daily lives has also declined. Less than one third of children who live within one mile of their school walk to school, and although 25% of all the trips we make are less than one mile, 75% of those trips are by car. Urbanization may have begun to reduce physical activity levels among children and adolescents in the developing world. Improved water supplies, larger numbers of immunized children, reduced infectious diseases, and increased availability of low-cost cooking oils may be contributory factors in the developing world. Nonetheless, despite these trends, few longitudinal studies enable us to argue that any of these environmental trends are causal.

Identification of the causes and the development of effective prevention and treatment strategies will be essential to reduce the prevalence of obesity and its associated health care costs. Although good surveillance data are available to track the progression of the epidemic, we lack the longitudinal studies to link most of the food and activity behaviors outlined above to the development or persistence of obesity. Likewise, although the natural history of childhood obesity has become clearer, the environmental, behavioral, and physiologic factors that predispose children and adolescents to the development of obesity at critical periods remain uncertain. A reasonably sound scientific basis underlies the preventive strategies of breast feeding, reduced television time, and physical activity. However, how these strategies can be successfully implemented and what impact their implementation will have on the prevalence of childhood obesity requires further research. Elements of therapy that appear effective include a family-based approach, meetings with children and parents in separate groups, as well as meetings with the parent and child, a focus on reduced television viewing, reduction or elimination of high-energy-density foods, and behavior modification to reinforce these strategies. However, the effectiveness of these strategies in primary care settings has not yet been examined.

In the absence of a public health program that focuses on policy and environmental strategies to improve diet and activity levels and reduce television viewing, clinical approaches will not likely reduce the prevalence of obesity. How to mobilize the resources necessary to change the food and activity environment will provide the biggest challenge to the successful elimination of obesity.

Professor William H. Dietz, USA

Foreword

Obesity is increasing not only in the developed countries but recently also in some developing countries. It was therefore important to organize the 49th Nestlé Nutrition Workshop in China, where important clinical work in this field has been done by Professor Chunming Chen, one of the chairmen of this workshop.

As obesity has long been an issue in the industrialized countries, the scientific study of this problem has a longer tradition in those countries than in the developing countries. Thus many speakers at this workshop came from the USA and Europe.

We thank the two chairmen, Professor Chunming Chen and Professor William Dietz, who are outstanding experts in the field of obesity research and who undertook the task to select appropriate topics and find speakers for this workshop. Invited scientists from 26 countries contributed substantially to the discussions, which are printed at the end of each chapter. Mrs. KeLan Liu and her team from Nestlé China provided the logistical support and introduced the participants to Chinese hospitality. Dr. Anne-Lise Carrié-Fässler, from the Nutrition Strategic Business Division in Vevey, Switzerland, was responsible for the scientific coordination. Her cooperation with the chairmen was essential for the success of the workshop.

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