Obesity in Childhood and Adolescence
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Obesity in Childhood and Adolescence

Editors

Chunming Chen  Chinese Center for Disease Control and Prevention, Beijing, China

William H. Dietz  Division of Nutrition and Physical Activity, Centers for Disease Control and Prevention, Atlanta, Georgia, USA
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Some drugs and medical devices presented in this publication have Food and Drug Administration (FDA) clearance for limited use in restricted research settings. It is the responsibility of the health care provider to ascertain the FDA status of each drug or device planned for use in their clinical practice.
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.

PROFESSOR WOLF ENDRES, M.D.
Nestec Ltd.
Vevey, Switzerland
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Contributing Authors

Speakers

Linda G. Bandini  
Massachusetts Institute of Technology  
Cambridge, Massachusetts  
USA

Mary C. Bellizzi  
Health Promotions  
Aberdeen, Scotland  
United Kingdom

Leann L. Birch  
Department of Human Development and Family Studies  
The Pennsylvania State University  
University Park, Pennsylvania  
USA

Chunming Chen  
Chinese Center for Disease Control and Prevention  
Beijing, China

Timothy J. Cole  
Center for Pediatric Epidemiology and Biostatistics  
Institute of Child Health  
London, England  
United Kingdom

William H. Dietz  
Division of Nutrition and Physical Activity  
Centers for Disease Control and Prevention  
Atlanta, Georgia  
USA

Abdul G. Dulloo  
Department of Medicine  
Institute of Physiology  
University of Fribourg  
Fribourg, Switzerland

David S. Freedman  
Division of Nutrition and Physical Activity  
Centers for Disease Control and Prevention  
Atlanta, Georgia  
USA

Steven L. Gortmaker  
Department of Health and Social Behavior  
Harvard School of Public Health  
Boston, Massachusetts  
USA

Anna Jacob  
Food and Nutrition Specialists Pte Ltd.  
Singapore, China

Juliana Kain  
Institute of Nutrition and Food Technology (INTA)  
University of Chile  
Santiago, Chile

Guansheng Ma  
Institute of Nutrition and Food Hygiene  
Chinese Academy of Preventive Medicine  
Beijing, China

Claudio Maffei  
Department of Pediatrics  
University of Verona-Polyclinic  
Verona, Italy

Thomas N. Robinson  
Department of General Pediatrics  
Department of Pediatrics and Center for Research in Disease Prevention  
Stanford University School of Medicine  
Palo Alto, California  
USA

Marie F. Rolland-Cachera  
National Institute of Health and Medical Research
CONTRIBUTING AUTHORS

INSEERM Group
Paris, France

Atul Singhal
MRC Childhood Nutrition Research Centre
Institute of Child Health
London, England
United Kingdom

Kate S. Steinbeck
Departments of Endocrinology and Adolescent Medicine
Royal Prince Alfred Hospital and
University of Sydney
Sydney, Australia

Jack A. Yanovski
Unit on Growth and Obesity
Developmental Endocrinology Branch
National Institute of Child Health and Human Development
National Institutes of Health
Bethesda, Maryland
USA

Session Chairmen

W. Cai / China
S.B. Ning / China
W.P. Wang / China
X. G. Yang / China

Invited Attendees

David Moore / Australia
Manzoor Hussain / Bangladesh
Sergio Augusto Cabral / Brazil
Jose Augusto Taddei / Brazil
Oded Bar-Or / Canada
Eduardo Atalah / Chile
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Pier Luigi Duvina / Italy
Dong Hwan Lee / Korea
Eun Kyung Lee / Korea
Olga Zimanaite / Lithuania
Zulfiqri Ismail / Malaysia
Selva Kumar A/L Selvipunniam / Malaysia
Norzila Mohamed Zainudin / Malaysia
Leticia Buenaluz / Philippines
Maria Susana Campos / Philippines
CONTRIBUTING AUTHORS

Sylvia Estrada / Philippines
Ruby Go / Philippines
Constança Maria Lima Bentes
   Olkkola / Portugal
Adrian Ion Georgescu / Romania
Mei Lin Fong / Singapore
Kah Yin Loke / Singapore
Jacobs C. Van Dyk / South Africa
Kurt Baerlocher / Switzerland

Marie-Thérèse (Mai) Nguyen Howles
   / Switzerland
Michel Roulet / Switzerland
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