

# Preface

The new millennium is well underway and many parts of the world are appreciating arguably the most advanced prosperity in modern history—profound technological advances, housing explosions, transport systems that facilitate global travel in hours, ample food supplies, and medical advances that have both eradicated and controlled many diseases that once killed millions. Simultaneously, there are a significant number of families that live in poverty, adversely affecting their health status. These very riches and health disparities have compromised the most important ones of all—our youngest generation’s health. In this millennium, these splendid advances should serve to increase average life expectancy by many years, yet it will not—unless the current trajectory for childhood nutrition is altered.

In just under three decades, the world has realized an unparalleled rise in overweight and obesity. Recent studies report an association between childhood obesity and the development of a cluster of cardiometabolic disease risk factors characterized by variable combinations of insulin resistance, dyslipidemia, and hypertension, known as the metabolic syndrome. In just under three decades, the world has unfortunately learned that this clustering of risk factors is associated with the early onset of both type 2 diabetes and atherosclerotic cardiovascular complications—conditions previously unheard of in children and adolescents. Yet in three decades, we have little knowledge of the global and cumulative detrimental health effects of childhood obesity—virtually no organ or system is left unscathed. As obese children age, not only will their health be negatively affected, but infertility and pregnancy complications associated with the metabolic syndrome will affect generations to come. The work force will undoubtedly be affected because of increased sick days and decreased work productivity. It may conceivably result in lower armed services recruits due to failing weight qualifications.

Identifying children and adolescents at the earliest stages of chronic disease onset should be the goal of clinical practice, yet there are no clear guidelines for defining the risk of metabolic syndrome or appropriate risk-factor thresholds among children and adolescents. If children are identified early in the disease process, lifestyle and clinical interventions can be instituted when they are potentially more effective.

This book approaches the pediatric metabolic syndrome in two dimensions: by elucidating its effects on specific organ systems and by considering the problem more holistically through understanding the social, psychological, and economic consequences of it. We have included an invited group of esteemed experts in the field to help provide the most timely and informative approaches on how to deal with this health crisis in our nation's youth. Through educating our practitioners, our future researchers, our health and community organizations, our legislators, and our families and children, we have the best chance at improving the health trajectory of the next generation.

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