

The Looming Global Obesity Threat

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Obesity now shares top billing with chronic hunger in the annual accounting of the world's malnourished by various UN agencies. The State of Food Security and Nutrition in the World 2019 report reveals that the 2 billion people who don't have regular access to safe, nutritious, and sufficient food are now matched by the 2 billion people who are overweight and obese.¹

Introduction

Conquering *undernutrition* has long been a primary focus of global agriculture, health, development, and security practitioners. The free lunch and breakfast programs for American schoolchildren answered the military's concern that nutrient deficiency was disqualifying too many young men for service in World War II. The Green Revolution was agriculture's push to end famine globally. But a recent flood of reports puts the spotlight on the soaring worldwide prevalence of overweight and obesity—a tripling since 1975—and their escalating costs.²

As a risk factor for three of the four leading types of noncommunicable diseases worldwide—cardiovascular disease, diabetes, and cancer—excess body weight accounts for approximately 4 million deaths annually.³ The Lancet Commission on Obesity, a joint venture of the World Obesity Federation, Auckland University, George Washington University, and the medical journal *The Lancet*, estimates the current global costs of obesity at about US\$2 trillion from direct healthcare expenses and lost economic productivity. This is 2.8 percent of the world's gross domestic product and, as the commission

notes, roughly equivalent to the costs of smoking or armed violence and war.⁴

“This is an essential topic for all cities and all countries,” then Chicago mayor Rahm Emanuel declared at the US launch of Scaling Up Nutrition (SUN), a global movement led by 61 countries to end malnutrition in all its forms. Earlier that same day in the spring of 2012, in a remarkable confluence of international summits in Chicago, he had welcomed the annual gathering of the North Atlantic Treaty Organization (NATO), where heads of state, diplomats, and military commanders forged strategies for combating new threats emerging in the age of international terrorism—many of them coming from within. At the SUN summit, Emanuel insisted that malnutrition, particularly rising obesity, was as insidious as any security threat. “It is a problem that touches every part of every society, regardless of where it is in the world,” he said. It was certainly so in the United States, where obesity rates more than doubled for adults and children since the 1970s, and particularly in his gleaming city, where about 20 percent of children entering kindergarten in the Chicago public school system were already obese.⁵

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No country, no matter how rich or mighty, is immune to the impact of overweight and obesity. The Lancet Commission's report, *The Global Syndemic of Obesity, Undernutrition, and Climate Change*, confirms this. In the past 40 years, rapid increases in the prevalence of overweight and obesity, which began in high-income countries, have shifted the patterns of malnutrition.⁶ Indeed, in the 34 member countries of the Organization for Economic Co-operation and Development (OECD), generally considered the world's wealthiest nations,

More than 400 retired generals, admirals, and other American military brass raised a screaming security alarm with their claim that more than 70 percent of 17- to 24-year-olds in America are unfit to serve in the military, threatening our national security. The leading disqualifier now is overweight and obesity. The report is titled *Too Fat to Fight*.

more than 50 percent of adults and 17 percent of children are overweight or obese.⁷

Yet no NATO-like alliance has emerged to repel the threat of obesity. While expert bodies such as the World Health Organization and the NCD Alliance have developed strategies to combat obesity, and some local and national initiatives have been implemented (see pages 10–11), so far policy responses from national governments have been slow and inadequate. According to the Lancet Commission report: “The enormous health and economic burdens caused by obesity are not seen as urgent enough to generate the public demand or political will to implement the recommendations of expert bodies for effective action.”⁸

Obesity is not an isolated challenge

As the Lancet Commission report notes, obesity has historically been considered in isolation from other major global challenges. However, obesity often goes hand in hand with undernutrition. The emerging phenomenon known as the double burden of malnutrition is a devastating combination of high prevalence of both undernutrition and overweight/obesity in the same country—sometimes even in the same human body. A 2019 World Bank report warning of a “ticking time-bomb,” *Obesity: Health and Economic Consequences of an Impending Global Challenge*,⁹ notes that more than 70 percent of the world's





countries face this double burden, most of them low- and middle-income countries.

Many people in these countries have adopted elements of the western diet that triggered the obesity epidemic, particularly an increase in ultraprocessed foods high in fat, sugar, and salt. At the same time, a decrease in dependence on a manual labor force has led to increasingly sedentary lifestyles. Discarded bags of snacks and the abandoned cans and plastic bottles of sugar-sweetened drinks litter landscapes everywhere. Even deep in the African bush and on the steep foothills of the Himalayas, there is no escaping these modern-day tumbleweeds.

Wherever researchers look while studying this trend, they find an increasing dependency on ready-made foods consumed on the run and a proliferation of convenience stores and fast-food outlets. They estimate that middle-income families in eastern and southern Africa in both urban and rural areas devote about two-thirds of their food expenditures to processed, packaged food.

Countries with rapidly expanding national economies boasting a newly rising middle class are being crippled by the dual impact of food insecurity and obesity. India, which still has the highest number of undernourished children in the world, now also has one of the fast-

est-growing obesity rates.¹⁰ In China, a country once plagued by famine and vast hunger, the economic costs of obesity are projected to more than double, from about 4 percent of gross national product in 2000 to 9 percent in 2025.¹¹ Brazil, which waged a determined campaign to reduce its poverty and hunger crises, is now bracing for a doubling in obesity-related annual healthcare costs to \$10 billion by 2050.¹² Chile, which just a few decades ago was haunted by widespread malnutrition, now counts three-quarters of its adult population as overweight or obese, an epidemic that costs the country about \$800 million in 2016, or 2.4 percent of all healthcare expenses.¹³

Globally, over 670 million adults and 120 million children between five and 19 years of age are obese, and over 40 million children under five are overweight. At the same time, more than 820 million people suffer from chronic hunger, according to the UN's Food and Agriculture Organization, a lead author of the report *The State of Food Security and Nutrition in the World*.¹⁴

The World Bank report points out the unfolding irony: "Continued economic growth among the world's low- and middle-income countries will only intensify the magnitude of the devastating impacts of obesity on health, well-being, and productivity."¹⁵

The importance of the first 1,000 days

The first 1,000 days—the time from the beginning of a mother’s pregnancy to the second birthday of her child—has become a central focus of the Scaling Up Nutrition movement and a vital front in the global fight against obesity. In this crucial time period, malnutrition has its most pernicious impact, setting the stage for lifelong problems from stunting to obesity, as I reported in my book, *The First 1,000 Days*.¹⁶

Restricted growth in the womb due to maternal malnutrition is estimated to be responsible for more than a quarter of all newborn deaths. For those who survive, the consequences are devastating. The fetus of a poorly nourished mother protects itself by adapting to the harsh, resource-scarce environment. Its body size may be reduced or its metabolism altered. Certain genes may also be turned on or off, leading to changes in the growth and operation of organs like the kidneys, liver, and pancreas. Genes may be altered to preserve fat and sugar and conserve calories and energy to help the baby survive a shortage of food and nutrients after birth.

A doula working with pregnant mothers in Chicago walks house to house toting a bag full of fruits and vegetables and preaching the message of how a mom’s healthy eating is vital for her child’s strong development and future success in school and life. At the same time, a music video by a group called Y.N. Rich Kids hailing the virtues of “Flamin’ Hot Cheetos” and a tortilla snack called “Takis” goes viral with nearly 17 million views.



This adaptation can backfire if a child conditioned in the womb for a life of nutrition scarcity grows up in an environment of food surplus or an environment of high-sugar, high-fat, high-calorie diets. This phenomenon, tracked by the Global Alliance for Improved Nutrition (GAIN) and other researchers, now plays out in the modern paradox of low-weight babies and stunted children having a higher propensity to be overweight or obese as teenagers and adults. Further, research has found that women who are overweight or obese before and during pregnancy are also more likely to have birth complications and put their children at higher risk of birth defects, obesity, and chronic diseases later in life.¹⁷ A mother's eating habits during pregnancy and while breastfeeding also influence her baby's tastes. High-sugar diets can create sugar cravings in offspring. Healthy eating habits, like preferences for vegetables and fruit, can also develop in the womb.

In Guatemala, a World Food Program study found that about 50 percent of women of reproductive age were overweight or obese, even though most of them were stunted as children.¹⁸ In the years between the women's infancy and adulthood, Guatemala's fast-food industry boomed and diets changed. It was in Guatemala where McDonald's Happy Meal originated as well as Pollo Campero, the popular purveyor of fried chicken. This lends a generational aspect to stunting and obesity trends.

The first 1,000 days are also crucial in the development of the brain. The brain grows more rapidly and expansively during this time than during any other period of life. Researchers estimate that approximately 80 percent of brain development happens in the first three years, establishing the basic cognitive architecture that provides a foundation for all future learning, behavior, and health.¹⁹ As with good physical growth, proper nutrition is the main driver of all this cognitive development.

In our world today about one in four children under five years of age are stunted either physically or cognitively or both due to malnutrition in the first 1,000 days. A long-term study of children in eastern Guatemala shows that stunted children spend several years fewer in school and learn less when they are in class.²⁰ Because stunted children become stunted adults, their workplace productivity is lower and their income is 20 to 40 percent less. Also, as adults they have higher incidence of obesity and related chronic diseases. The cost ripples from the individual to the family to the community to the nation to

the region to the world as a whole. Stunting is a life sentence of underachievement. The rolling toll of childhood malnutrition and stunting cripples economies around the world: an estimated 16 percent of gross domestic product annually in Ethiopia, 11 percent of gross domestic product annually in Sub-Saharan Africa and South Asia, and US\$3.5 trillion annually from the global economy.²¹

Those are big numbers. But the greatest cost is the opportunity cost. What might a child have accomplished were he or she not malnourished and stunted? A lost chance at greatness for one child becomes a lost chance at greatness for us all.

Rallying attention to the obesity epidemic

In an effort to rally attention, urgency, and a common will to create a global strategy for reversing the obesity epidemic, the Lancet Commission has bundled obesity with undernutrition and climate change, calling them a global "syndemic" that affects people in every country and region worldwide.²² The report describes a syndemic as a "synergy of epidemics, because they co-occur in time and place, interact with each other, and share common underlying societal drivers."²³





The commission asserts that because obesity, undernutrition, and climate change have multiple common causes and mitigating actions, progress can be made on all three threats by tackling them together: “Linking obesity with undernutrition and climate change into a single Global Syndemic framework focuses attention on the scale and urgency of addressing these combined challenges and emphasizes the need for common solutions.”²⁴

For example, the commission’s policy brief on the report notes that food systems “not only drive the obesity and undernutrition pandemics but also generate 25 to 30 percent of greenhouse gas emissions.” Car-dominated transportation systems, which generate 14 to 15 percent of emissions, also support sedentary lifestyles.²⁵ On the flip side, “Climate change will increase undernutrition through increased food insecurity from extreme weather events, droughts, and shifts in agriculture.”²⁶ Fetal and infant undernutrition then increases the risk of adult obesity.

Together, the report argues, the three elements of this global syndemic create a cumulative urgency and common cause that could potentially rally united support and move the needle on change like past campaigns against tobacco and drug use and for seat belt use.

Moving the needle on obesity

Any attack on obesity will require a concerted effort locally, nationally, and globally to reorient food and agriculture away from heavily processed food and toward incentives that encourage more production and consumption of fruits, vegetables, and other healthier foods. Until now, legislation and commercial practices have done exactly the opposite. Over the years, global agriculture has focused on the production of calories rather than nutrients. Staple crops like corn, wheat, and soybeans have received the bulk of research attention and subsidies, while fruits and vegetables have received a much smaller share.

Dietary change through taxes: Mexico and the United States

On the taxation front, the experiences of Mexico and the United States are the most cited and studied. In Mexico a coalition of civil society organizations known as the Alliance for Healthy Food led the push for policy change that resulted in a national tax on sugary drinks. It raised a public clamor on the risks of sugary drinks that prompted debate with members of Congress and the Ministry of Finance.

Despite fierce opposition from the food and beverage industry, Mexico's government passed a sales tax on sugary drinks in 2013, which went into effect in 2014. The sales tax raised the cost of sugary drinks by 10 percent. The tax was part of broader anti-obesity measures, including healthy school meal standards, front-of-pack nutrition labels on packaged foods, and a ban on certain snack-food ads aimed at children.

An early evaluation of the impact of the sugary drinks tax found that consumers reduced their sugar drinks purchases by 7.6 percent, and low-income households reduced their purchases by 11.7 percent.* While most evaluations of tax initiatives track the purchases, the World Bank's report says emerging evidence indicates the Mexico tax may reduce obesity by 2.5 percent by 2024 and prevent about 100,000 new cases of type 2 diabetes with fewer cases of strokes and heart disease.

North of the border in the United States, a number of cities have implemented soda taxes as a way to combat obesity while also raising revenue. Berkeley, Boulder, New York City, Philadelphia, San Francisco, Santa Fe, and Seattle are some of the cities that have either considered or implemented such taxes with varying degrees of success. While institutions such as the American Academy of Pediatrics have supported these sugar-sweetened beverage taxes, industry lobbyists and consumer groups have waged strong opposition. In some municipalities, consumers outmaneuvered the tax by simply shopping in neighboring jurisdictions that hadn't imposed the tax. In Cook County, Illinois, the home of Chicago, a soda tax of one cent per ounce was repealed just two months after being enacted following legal challenges and public antitax outcry.

*M. Arantxa Colchero et al., "In Mexico, Evidence of Sustained Consumer Response Two Years After Implementing a Sugar-Sweetened Beverage Tax," *Health Affairs* 36, no. 3 (March 2017), <https://doi.org/10.1377/hlthaff.2016.1231>.



These production dynamics exert a heavy influence on commodity availability and prices and, thus, on consumer choices. In many countries, prices for more nutritious foods have generally soared, while the cost of processed foods and junk foods have become cheaper. Recent analysis of global food prices by the International Food Policy Research Institute has found that in lower-income countries, the most nutritious foods are expensive.²⁷ Fats and sugar are the cheapest calories available, and most fruit and vegetables, along with milk and eggs, are moderately to extremely expensive.

Efforts to reorient these major systems also battle powerful commercial and cultural currents, siren songs that promote processed foods and celebrate the fast-food, junk-food lifestyle. This is what the Chicago doula confronted when her efforts to promote oranges and kiwis were overwhelmed by the viral praise of Flamin' Hot Cheetos and Takis.

In addition to food systems change, conquering the obesity epidemic also depends on new transport, urban design, and land use strategies that will disrupt sedentary lifestyles and promote exercise. Diet and lifestyle transformations are dependent on individual behaviors, which are notoriously difficult to change. The alarm over rising obesity rates has prompted a proliferation of education campaigns that promote these changes as beneficial for the health of individuals and for the planet as a whole.

The World Bank report includes a sweeping review of early efforts—and early pitfalls to success—on the obesity front. In particular, it suggests: “Governments have a key role to play in addressing these challenges through a comprehensive approach to policy formulation and intervention, including in agriculture, environment, transport, education, finance and treasury, and health care sectors.”

The report found that “while fiscal policies linked mainly to taxation on sugar-sweetened beverages have dominated as the key interventions . . . many other regulatory options are being used by countries to achieve improved diet quality. These include front-of-package labeling, nutrient profiling, school-based food regulations and education, market and retail solutions and marketing controls/regulations.”

Summoning political will

Ending malnutrition in all its forms, be it stunting or obesity, and particularly in the first 1,000 days, is no longer just the right thing to do. It is clearly the smart thing to do. It is not an isolated problem that is just about individuals and the choices they make. It is an epidemic whose causes are deeply rooted in the economic, social, and political systems of our time and whose costs are growing. The Lancet Commission on Obesity is blunt in its assessment: “The prevalence of obesity is increasing in every region of the world. No country has successfully reversed its epidemic because the systemic and institutional drivers of obesity remain largely unabated.”

We must summon the collective political will to call the obesity epidemic what it is: an economic, moral, and security crisis for our world on par with undernutrition and climate change—and inextricably linked with them. Ending malnutrition in all its forms is indeed the highest global public good and accordingly should prompt the loudest public clamor and most determined, urgent response from policymakers and opinion leaders throughout society. Every global gathering, from NATO summits to Sustainable Development Goals reviews to Nutrition for Growth conferences to the 2020 Tokyo Olympics—whether gatherings to plot security strategy, conjure cures, or celebrate human potential and achievement—is an opportunity to forge alliances to conquer this most insidious threat to health, peace, and prosperity.

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Approaches to address obesity around the world²⁸

Australia and New Zealand



Rated product nutrition using a “Health Star Rating” labeling system



Encouraged healthy eating and exercise through free resources like recipes and meal and activity planners

Denmark and Norway



Helped customers choose healthier foods using a “keyhole logo” on the label



Implemented self-regulation programs to limit marketing of unhealthy products to children

Canada



Committed \$134 million to improve community access to healthy food



Launched compulsory food labeling



Restricted marketing of unhealthy food to children



Initiated a national school food program

France



Required labels that summarize nutritional health of a product with a five-color scale



Used mass media to promote fruit and vegetable consumption

Ireland



Planned to prepare legislation on calorie labeling



Initiated campaign to promote healthy eating to combat childhood weight gain



Planned to publish a voluntary code of practice on food advertising, promotion, and marketing when children are watching

Chile



Imposed taxes on high-sugar beverages



Prohibited the sale of junk food in schools



Required warning labels on unhealthy food



- Forced companies to redesign processed food packaging
- Required removal of cartoon characters from sugary cereal boxes
- Banned the sale of candy with trinkets that lure young consumers
- Restricted marketing campaigns for junk food targeted to children on television, radio, and websites and in movie theaters
- Banned marketing of infant formula to encourage breastfeeding

Japan



Charged companies hefty fees for not meeting targets set by the government



• Conducted annual nationwide health check-ups



Provided nutritional education and healthy lunches in schools

• Sent citizens who exceeded waistline targets dietary and lifestyle guidance

Key categories



Taxes/fiscal policy



Labeling/nutrition profiling



Marketing regulations



Reformulation/change in products

Mexico



Placed a national tax on sugary drinks that increased the cost by 10%



Started front-of-pack nutrition labeling



Started healthy school meal standards



Banned certain snack food ads aimed at children

The Netherlands



Provided nutritional counseling for pregnant women and new mothers



Promoted tap water as a substitute for sugary drinks in Amsterdam through the “Healthy Weight” program



- Banned sugary drinks from schools in favor of milk and water
- Encouraged exercise during after-school activities

- Provided dietary advice discouraging fast-food consumption

South Korea



Required packaging for snacks, processed food, and beverages to list sugar and nutrients

Turkey



Distributed 275,000 bicycles to schools, universities, municipalities, and NGOs



Initiated “Move for Health” and “Reducing Portion Size” campaigns

United Kingdom



Passed levy to reduce the sugar content of soft drinks



Introduced a front-of-pack “traffic light” labeling system



Challenged the industry to take 20% of sugar out of food most commonly eaten by children and to reduce calories of these foods by 20%



Provided website with nutritional information and a “Be Food Smart” app through the “Change4Life” campaign



- Planned to ban price promotions for unhealthy food
- Planned to ban the promotion of unhealthy food and drink in high-traffic areas of stores



- Planned to reduce sugar content and improve nutritional quality of school meals
- Planned to require 30 minutes of physical activity each day for schoolchildren and encourage “daily mile” initiatives

United States



A number of cities have either considered or implemented taxes on sugar-sweetened beverages to varying degrees of success.



Healthcare interventions



School-based and worksite interventions



Education



Exercise incentives

Endnotes

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