

The obesity pandemic: growing fat in unison

global health at duke: part VII in a series

By: Philip Costanzo

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Obesity is an important focus of global health efforts today because it is a premorbid state that can be preventable with increases in our scientific understanding of the sources of its "spread."

How prevalent are overweight and obesity? What is the history of changes in their manifestation? In the United States today, 66 percent of all adults are overweight or obese, with 34 percent being obese. By the year 2012, it is widely estimated that more than 70 percent of all U.S. adults will be overweight or obese, with more than 40 percent being obese.

These are staggering statistics -- particularly so when one considers that since the 1970s these percentages have more than doubled.

And this apparent epidemic is evident for children as well as adults. In the United States the prevalence of children prone to obesity has increased from about 5 percent in the 1970s to more than 17 percent today. These rapid changes in American obesity prevalence are not unique-almost all of the nations of Western Europe have witnessed two- to threefold increases in obesity prevalence in both adults and children during the past three decades.

Beyond the developed nations of Western Europe and North America, there has been a sharp increase in obesity among children and adults in China, India and the Third World nations of Africa. In some of these nations, malnutrition and obesity seem to go hand-in-hand-sometimes occurring within the same household. In China, the threefold increase in childhood obesity over the past two decades is largely concentrated in urban areas, particularly Beijing. Obviously, there are unique aspects of the manifestation of the spread of obesity that are pertinent to different nations and regions of the world.

In a technical sense, obesity is not a communicable disease. In simple terms, it is a regulatory anomaly brought about by consuming more energy in food than one expends in activity. There is no apparent biological medium of transmission from person to person, nor is it an illness defined by lesions or insults to our biological systems.

So why refer to the alarming and sharp upswing in its worldwide prevalence as an epidemic or pandemic? These terms are typically reserved for communicable scourges such as bubonic plague, tuberculosis or AIDS-to cite a few painful examples from various eras in history.

In contrast, obesity seems on the surface to be the result of individual behavioral processes that create an imbalance of energy consumption and expenditure and the biogenetic and social phenomena that usher in that behaviorally determined imbalance. There are no "germs" or microbes that humans transmit to each other that make us obese.

In short, one might argue that obesity is an individually isolated phenomenon that follows from habits and their determinants. However, this argument is a tenuous one. As a nation and as an entire planet, we have been getting fat in unison during the past 30 to 40 years- as if the state of obesity has been spreading from person to person with remarkable speed.

The speed of the spread and the impact that this has on the formation of norms, habits and fixed preferences that are shared by many renders obesity an epidemic every bit as "contagious" as those transmitted by germs or toxins. Further, while obesity is not a disease in its own right, it is a correlate and harbinger of multiple diseases affecting multiple systems. The diseases with which it is associated, such as type 2 diabetes, cardiovascular diseases, stroke, some forms of cancer, etc., are compelling diseases that can result in serious disabilities and shortened life spans.

Indeed, some have forecast that owing to the high rates of obesity in Western nations, we are likely to see an unprecedented decline in the average lifespan in the next decades.

The study of an epidemic of worldwide proportions that has a nonbiological means of transmission in social collectives requires that we engage in cross-national comparisons to discover unique and common social pathways for its spread. Such study should not be confined by the premises of any single discipline. The solution of problems of worldwide obesity requires an understanding of economic, political, sociological, psychological, cultural, genetic and biological phenomena and their interaction.

The Global Health Institute at Duke would like to have the scientific study and the prevention of childhood obesity both locally and globally as one of its priorities. It is hoped that scholars from multiple disciplines and both graduate and undergraduate students will participate in the emergence of this focus at Duke.

Philip Costanzo is a professor of psychology in the Department of Psychology and Neuroscience. He is also an associate director of the Center for Child and Family Policy.