

Obesity Threatens to Cut U.S. Life Expectancy, New Analysis Suggests

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Over the next few decades, life expectancy for the average American could decline by as much as 5 years unless aggressive efforts are made to slow rising rates of obesity, according to a team of scientists supported in part by the National Institute on Aging (NIA), a component of the National Institutes of Health (NIH) of the Department of Health and Human Services (DHHS).

The U.S. could be facing its first sustained drop in life expectancy in the modern era, the researchers say, but this decline is not inevitable if Americans — particularly younger ones — trim their waists or if other improvements outweigh the impact of obesity. The new report in the March 17, 2005 issue of *The New England Journal of Medicine* appears little more than a year after the DHHS unveiled a new national education campaign and research strategy to combat obesity and excessive weight.

The new analysis, by S. Jay Olshansky, PhD, of the University of Illinois at Chicago, Leonard Hayflick, Ph.D., of the University of California, San Francisco, Robert N. Butler, M.D., of the International Longevity Center in New York, and others* suggests that the methods used to establish life expectancy projections, which have long been based on historic trends, need to be reassessed. This reevaluation is particularly important, they say, as obesity rates surge in today's children and young adults.

“Forecasting life expectancy by extrapolating from the past is like forecasting the weather on the basis of its history,” Olshansky and his colleagues write. “Looking out the window, we see a threatening storm — obesity — that will, if unchecked, have a negative effect on life expectancy.”

Unlike historic life expectancy forecasts, which rely on past mortality trends, the Olshansky group bases their projection on an analysis of body mass indexes and other factors that could potentially affect the health and well-being of the current generation of children and young adults, some of whom began having weight problems very early in life. The authors say that unless steps are taken to curb excessive weight gain, younger Americans will likely face a greater risk of mortality throughout life than previous generations.

“This work paints a disturbing portrait of the potential effect that life styles of baby boomers and the next generation could have on life expectancy,” says Richard M. Suzman, Ph.D., Associate Director of the NIA for Behavioral and Social Research. Indeed, Suzman notes, obesity may already have had an effect. The sharp increase of obesity among people now in their 60s, he suggests, may be one explanation why the gains in U.S. life expectancy at older ages have been less than those of other developed countries in recent years.

“But it is critical to note that the reduced life expectancy forecast by the study is not inevitable, and there is room for optimism,” Suzman says. “Government and private sector efforts are mobilizing against obesity, and increased education, improved medical treatments, and reduced smoking can tip the balance in favor of reduced mortality and continued improvements in life expectancy.”

For instance, smoking significantly reduces the life expectancy of the average smoker, Suzman says, so obesity is just one of many factors that will need to be accounted for, together or separately, in projecting how Americans will age. The NIA supports several projects on population demography that forecast life and health expectancy, research which is critically important to policy makers looking at the implications of an aging population.

According to the NEJM report, studies suggest that two-thirds of American adults are overweight (having a body mass index — BMI — of 25 or more) or obese (having a BMI of 30 or more)**. One study cited by the authors indicates that the prevalence of obesity in U.S. adults has increased about 50 percent per decade since 1980. Additional research has shown that people who are severely obese — with a BMI greater than 45 — live up to 20 years less than people who are not overweight. Some researchers have estimated that obesity causes about 300,000 deaths in the U.S. annually. In addition, obesity is fueling an epidemic of type 2 diabetes, which also reduces lifespan.

To estimate the overall effect of obesity on life expectancy in the U.S., Olshansky and his colleagues calculated the reduction in death rates that would occur if everyone who is currently obese were to achieve the difficult goal of losing enough weight to reach an “optimal” BMI of 24. The calculation was based, in part, on age, race, and sex-specific prevalence of obesity in the United States from the Third National Health and Nutrition Examination Survey. Based on these calculations, the researchers estimated that life expectancy at birth would be higher by 0.33 to 0.93 year for white men, 0.30 to 0.81 year for white women, 0.30 to 1.08 year for black men, and 0.21 to 0.73 year for black women if obesity did not exist.

The overall reduction in life expectancy of one-third to three-fourths of a year attributed to obesity in this analysis exceeds the negative effect of all accidental deaths combined, and could deteriorate over time, the researchers said.

“These trends suggest that the relative influence of obesity on the life expectancy of future generations could be markedly worse than it is for current generations,” Olshansky and

the authors conclude in their report. "In other words, the life-shortening effect of obesity could rise ...to two to five years, or more, in the coming decades, as the obese who are now at younger ages carry their elevated risk of death into middle and older ages."

The projected decline contrasts with estimates by other leading researchers, which predict a continuation of the historic trend of increasing life expectancy in America and Europe dating back to the 1850s, according to Dr. Suzman. In fact, he points out that the experience of other developed nations is instructive as a barometer of how much room might exist to increase U.S. life expectancy. More than 20 other developed nations, including France, Japan, Germany, Sweden, and the United Kingdom have a higher average life expectancy than the U.S. Women in Japan, for example, live about 5 years longer than women in the U.S. There is little evidence that life expectancy in these countries is approaching any kind of limit, Suzman says.

In March 2004, the DHHS launched public awareness campaign, entitled Healthy Lifestyles and Disease Prevention, to encourage American families to take small, manageable steps within their current lifestyle, such as using the stairs instead of the elevator, to ensure effective, long-term weight control. The campaign includes multi-media public service announcements (PSAs) and a new interactive website, www.smallstep.gov.
