

# Overweight adolescents projected to have more heart disease in young adulthood

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A new study investigating the health effects of being overweight during adolescence projects alarming increases in the rates of heart disease and premature death by the time today's teenagers reach young adulthood.

Findings of the study are reported in the Dec. 6, 2007 issue of the "New England Journal of Medicine."

A team of researchers at the University of California, San Francisco and Columbia University Medical Center used a computer-based statistical modeling system known as the Coronary Heart Disease (CHD) Policy Model to estimate the potential impact of an increasingly overweight U.S. adolescent population on future adult health nationwide.

Based on the numbers of overweight adolescents in 2000, the study found that up to 37 percent of males and 44 percent of females will be obese when these teenagers turn 35 years old in 2020. As a consequence of this obesity, these young adults are expected to have more heart attacks, more chronic chest pain and more deaths before they reach age 50.

The model also estimated more than 100,000 extra cases of heart disease by 2035, which is a 16 percent increase over today's figures, and a rise in obesity-related CHD deaths by as much as 19 percent.

"Today's adolescents are the young adults of tomorrow – young adults who would ordinarily be working, raising their families, and not worried

about heart disease until they are much older. Our study suggests that more of these young adults will have heart disease when they are 35-50 years old, resulting in more hospitalizations, medical procedures, need for chronic medications, missed work days and shortened life expectancy,” said Kirsten Bibbins-Domingo, PhD, MD, lead author on the study and assistant professor in medicine, epidemiology and biostatistics at UCSF.

“This study highlights the importance of preventing obesity before it starts in children. The current high rate of overweight is not just a problem for adolescents and their parents, it’s something that will affect all of us well into the future,” she added.

The National Center for Health Statistics (NCHS) of the Centers for Disease Control and Prevention reports that nine million adolescents in the United States are considered overweight, and that childhood obesity rates have tripled since 1970. Eighty percent of overweight adolescents become obese adults, according to other studies.

“We must recall that we all tend to gain weight as we age, so overweight in adolescents means even higher weights later on,” said Lee Goldman, MD, MPH, the senior author and an original developer of the Coronary Heart Disease Policy Model used in the study. Goldman is executive vice president for health and biomedical sciences at Columbia University Medical Center and dean of the medical school there. “Although the general findings of our analysis are not surprising, we were struck by the sheer magnitude of the impact of adolescent obesity and, as a result, how important it is as a public health priority,” he added.

Projections were based on the analysis of data from the U.S. Census Bureau, Medicare program, National Hospital Discharge Survey, NCHS National Health and Nutrition Examination Survey, and other major epidemiological studies of heart disease risk.

The team also investigated whether the negative health impact of obesity could be reversed by treating obesity-related complications like elevated blood pressure and cholesterol levels. Findings indicate that controlling these factors at a young age will help, but heart disease rates could still rise due to the persistent risk of diabetes associated with obesity.

“One of the major health risks for an obese person is becoming diabetic because diabetes increases the risk of heart disease and many other health complications. Unfortunately, it is currently very difficult to lower the likelihood of getting diabetes once a person is obese,” said Bibbins-Domingo.

Source: University of California - San Francisco

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