Long-term morbidity and mortality of overweight adolescents. A follow-up of the Harvard Growth Study of 1922 to 1935

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Abstract

BACKGROUND. Overweight in adults is associated with increased morbidity and mortality. In contrast, the long-term effect of overweight in adolescence on morbidity and mortality is not known. METHODS. We studied the relation between overweight and morbidity and mortality in 508 lean or overweight adolescents 13 to 18 years old who participated in the Harvard Growth Study of 1922 to 1935. Overweight adolescents were defined as those with a body-mass index that on two occasions was greater than the 75th percentile in subjects of the same age and sex in a large national survey. Lean adolescents were defined as those with a body-mass index between the 25th and 50th percentiles. Subjects who were still alive were interviewed in 1988 to obtain information about their medical history, weight, functional capacity, and other risk factors. For those who had died, information on the cause of death was obtained from death certificates. **RESULTS**. **Overweight in adolescent subjects was associated with an increased risk of mortality from all causes** and disease-specific mortality among men, but not among women. The relative risks among men were 1.8 (95 percent confidence interval, 1.2 to 2.7; P = 0.004) for mortality from all causes and 2.3 (95 percent confidence interval, 1.4 to 4.1; P = 0.002) for mortality from coronary heart disease. The risk of morbidity from coronary heart disease and atherosclerosis was increased among men and women who had been overweight in adolescence. The risk of colorectal cancer and gout was increased among men and the risk of arthritis was increased among women who had been overweight in adolescence. Overweight in adolescence was a more powerful predictor of these risks than overweight in adulthood. **CONCLUSIONS. Overweight in adolescence predicted a broad range of adverse health effects that were independent of adult weight after 55 years of follow-up.**