

The Body Mass-Mortality Association in the United States: A Reassessment of Secular Trends

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Abstract

Three recent studies, all using the National Health and Nutrition Examination Surveys (NHANES), reached three different conclusions regarding the changing association between body mass index (BMI) and mortality in the US. Analysing two NHANES samples, we found that male and female BMI-related mortality differences are fairly similar in 1971-87, but diverge substantially afterwards. Relative to the normal-weight, mortality for almost all overweight and obese categories increases from 1971-87 to 1988-2006 among women. Relative mortality decreases over time among older men, but the decrease is substantial and significant for the class I obese only. Among younger men, relative mortality decreases significantly for the overweight, and increases non-significantly but substantially for the class I obese. These results caution against sweeping statements about BMI and mortality, and deserve the attention of those interested in the processes underlying the association and its implications for mortality trends.