

# New study confirms body weight influences risk of death among Asians

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A study of more than 1 million Asians found that those who were a normal weight were far less likely to die from any cause than individuals whose body-mass index (BMI) was too high or low. A similar association was seen between BMI and the risk of death from cancer, cardiovascular disease or other causes.

The study, led by Wei Zheng, M.D., Ph.D., M.P.H., Ingram Professor of Cancer Research at Vanderbilt-Ingram Cancer Center, Nashville, Tenn., Paolo Boffetta, M.D., M.P.H., professor, Mount Sinai School of Medicine, New York, N.Y., and John D. Potter, M.D., Ph.D., member and senior adviser, Public Health Sciences Division, Fred Hutchinson Cancer Research Center, Seattle, Wash., was published in this week's issue of The [New England Journal of Medicine](#).

"Previous studies that evaluated the association between BMI and the risk of death have been conducted primarily in populations of European descent, and the current definition of overweight and [obesity](#) is based essentially on criteria derived from those studies," said Zheng, director of the Vanderbilt Epidemiology Center. "The validity of these criteria in Asian populations has yet to be determined. A large proportion of Asians are very thin and the impact of a severely low BMI on the risk of death has not been well evaluated until now."

The World Health Organization estimates that more than 1 billion adults worldwide are overweight and at least 300 million are obese. Fat tissue has been recognized as an active endocrine organ, capable of releasing a

number of biologically active factors that may contribute to obesity-related diseases, including type 2 diabetes, hypertension, [coronary artery disease](#), stroke and several types of cancer.

The research, conducted as part of the Asia Cohort Consortium, included health status and mortality information on more than 1.1 million individuals from East and South Asia. In the cohorts of East Asians, including Chinese, Japanese and Koreans, the lowest risk of death was seen among individuals with a BMI in the range of 22.6 to 27.5, which is considered normal to slightly overweight (BMI is defined as weight in kilograms divided by the square of height in meters).

Chinese, Japanese and Korean populations were much like groups in other parts of the world. These East Asians with a raised BMI of 35.0 or higher had a 50 percent higher risk of death. The same was not true for Indians and Bangladeshis, indicating that a high BMI did not affect all ethnic groups in a similar way.

Being severely underweight was even more dangerous among all of the Asian populations studied. The risk of death was increased by a factor of 2.8 among those whose BMI was very low, that is, 15.0 or less.

"The most unexpected finding was that obesity among sub-continent Indians was not associated with excess mortality," said Potter. "This may be because many obese people in sub-continent India have a higher socioeconomic status and so have better access to health care."

"Our findings capture two different aspects of a rapidly evolving pattern; severe underweight was highly prevalent in Asia in the past, and we can still observe its important impact on mortality," explained Boffetta.

"Looking into the future, however, prevention of overweight and obesity deserves the highest priority."

The authors conclude that this study provides strong evidence supporting the biologic plausibility that excess weight contributes to a higher risk of death.

"This confirms that most people are at a higher risk for dying early if they are obese and is a clear message not to gain weight as we age," said Potter.

Nearly 50 researchers from seven countries contributed to this study. Data analysis for the project was conducted by the Asia Cohort Consortium Coordinating Center, which is supported, in part, by Fred Hutchinson Cancer Research Center and the National Cancer Institute.

Provided by Vanderbilt University Medical Center

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