UC SANTA BARBARA

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A Flawed Measure

Fit or fat? How about both?

In what could be the death knell for that once-vaunted measure of health known as BMI (body mass index), new research out of UC Santa Barbara and UCLA reveals that millions of Americans labeled overweight or obese based on their BMI are, in fact, “perfectly healthy.”

Their findings, which appear in the International Journal of Obesity, suggest that 34.4 million Americans considered overweight by virtue of BMI are actually healthy, as are 19.8 million who are considered obese.

According to Jeffrey Hunger, a doctoral student in the Department of Psychological & Brain Sciences, and a co-author of the paper, BMI is a deeply flawed measure of health. “In the overweight BMI category, 47 percent are perfectly healthy,” he said. “So to be using BMI as a health proxy — particularly for everyone within that category — is simply incorrect. Our study should be the final nail in the coffin for BMI.”

Using data from the most recent National Health and Nutrition Examination Survey, the scientists analyzed the link between BMI — calculated by dividing a person’s weight in kilograms by the square of the person’s height in meters — and several health markers, including blood pressure, blood sugar and cholesterol. The results showed that more than 2 million people identified as “very obese” by virtue of having a BMI of 35 or higher are, in reality, healthy; that's about 15 percent of

Americans so classified. The research also revealed that more than 30 percent of those with BMIs in the “normal” range — about 20.7 million people — are actually unhealthy based on their other markers.

“Not only does BMI mislabel 54 million heavier individuals as unhealthy, it actually overlooks a large group of individuals considered to have a ‘healthy’ BMI who are actually unhealthy when you look at underlying clinical indicators,” said Hunger. “We used a fairly strict definition of health. You had to be at clinically healthy levels on four out of the five health indicators assessed.”

Many U.S. companies use employees’ BMI as a factor in determining their health insurance costs. And if a rule proposed by the Equal Employment Opportunity Commission (EEOC) is adopted, people with a BMI higher than 25 (the “healthy” range is 18.5 to 24.99) could find themselves paying higher health insurance premiums.

“We need to move away from trying to find a single metric on which to penalize or incentivize people and instead focus on finding effective ways to improve behaviors known to have positive outcomes over time,” Hunger argued.

Lead author Janet Tomiyama, an assistant professor of psychology at UCLA, noted that healthy people with BMIs above 24.99 would be no more likely to incur higher medical expenses than those with lower BMIs, so requiring those individuals to pay out more in health insurance premiums would not be justified.

Previous research by Tomiyama’s Dieting, Stress and Health (DiSH) laboratory at UCLA found no clear connection between weight loss and health improvements related to hypertension, cholesterol and diabetes and blood glucose levels. The new study recommends that people focus on a healthy diet and regular exercise, rather than placing emphasis on their weight.

Others contributing to the research include Jolene Nguyen-Cuu and Christine Wells of UCLA. The research was funded by the Hellman Fellows Fund.

About UC Santa Barbara

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