

The Myth of Healthy Obesity

In this issue, Kramer and colleagues' meta-analysis provides strong evidence that "healthy obesity" is a myth (1). This evidence fuels the debate about the existence of a subset of obese persons who are unlikely to have long-term, negative health effects and should not be targeted for treatment (2). The review identified 8 studies that included a total of 61 386 persons followed long enough to investigate the associations of body mass index (BMI) and metabolic status with total mortality and cardiovascular events.

Not surprisingly, the evidence showed that metabolically healthy nonobese persons (the reference group) had the lowest risk for these outcomes and that being metabolically unhealthy, regardless of BMI, increased risk. The most interesting finding was that the metabolically healthy obese group was also at increased risk. However, this risk was observed only in studies with more than 10 years of follow-up. Metabolically healthy overweight persons had a risk similar to that of the reference group.

Kramer and colleagues conclude that being metabolically unhealthy at any weight confers health risks and that normal weight does not indicate cardiometabolic health. These findings cast doubt on the existence of metabolically healthy obesity. The authors speculate that persons who are metabolically healthy but obese probably have subclinical levels of risk factors that worsen over time. If so, the question is whether this change in risk is an inevitable consequence of obesity or is due to subsequent weight gain or behaviors. For obese persons to be truly healthy, must they have and maintain a healthy lifestyle?

Also of interest is that the metabolically unhealthy overweight group had an increased risk for total mortality and cardiovascular events over time, whereas the metabolically healthy overweight group did not. Controversy exists over the effect of overweight on total mortality, with some reports suggesting that overweight may be protective (3). It is essential to consider metabolic risk factors when examining the effect of overweight on mortality.

The meta-analysis has limitations. Most studies had inadequate information on participants' health behaviors, did not present data about weight gain, focused only on total mortality and cardiovascular events, and did not include older participants. By uncovering the limitations of the current evidence, this review will hopefully stimulate research to more thoroughly understand the interactions among weight status, metabolic status, and health outcomes. The results are consistent with the notion that obesity is a disease. In light of these findings, we consider common misperceptions about obesity.

First, the review casts doubt that any obese persons have no long-term risk for cardiometabolic disease. Obesity affects almost all aspects of human function and physiology. Although Kramer and colleagues focused on total mortality and cardiovascular events, obesity also increases

risk for type 2 diabetes, kidney disease, and some types of cancer (4). It is linked to orthopedic problems, reproductive problems, depression, asthma, sleep apnea, renal disease, back pain, skin infections, and cognitive decline (4). Obesity produces social stigma and overall reduced quality of life (5). It would be a mistake to label obese persons as healthy on the basis of only the presence or absence of risk factors for cardiometabolic disease.

A second common misperception is that we cannot afford to treat everyone with obesity, so we have to prioritize those with cardiometabolic risk. However, doing so would deny treatment to those who may later develop cardiometabolic disease. Although many health care providers argue that avoiding diabetes and cardiovascular disease is the most important reason to tackle obesity, many patients would probably prioritize other outcomes. We believe that there are many good reasons to lose weight. If we assume that we cannot afford to treat all obesity, denying treatment on the basis of cardiometabolic risk will be extremely difficult to justify.

A third misperception is that effective treatment for obesity is unavailable. Although we lack a simple algorithm or medication to eradicate this condition, clinically significant weight loss can be achieved with behavioral treatment, pharmacologic agents, and bariatric surgery (6). However, treatment of obesity brings real challenges.

Obesity is not cured even when the excessive body fat is successfully reduced. Patient adherence and long-term sustainability are just as challenging in treatment of obesity as they are in long-term treatment of any disease. Losing weight and maintaining a reduced body weight are different physiologic processes and therefore require different treatment strategies for maximum success (7). Just as in treatment of other chronic conditions, treatment of obesity needs to be evaluated and adjusted over time to maximize success. Health care providers may not have eagerly stepped up to tackle obesity partly because many practicing physicians today have had no formal training in treating this condition and do not feel confident that they have the tools, skills, and time needed to be successful.

A fourth misperception is that weight loss and reducing cardiometabolic risk are the highest-priority goals in obesity treatment. Yet, is a person who has lost enough weight to achieve normal metabolic measures but who has sleep problems, orthopedic issues, or difficulty managing stress really "healthy"? Perhaps we need a more comprehensive measurement of well-being to measure success. For example, decades of work from Blair and associates (8) has consistently shown that cardiorespiratory fitness is a very strong predictor of total and cardiovascular mortality independent of BMI. We must develop a means of assessing success in obesity treatment that considers overall well-

being and includes but is not limited to BMI and decreasing metabolic risk.

Fifth, some believe that overweight is not as much of a priority for intervention as obesity. As Kramer and colleagues found (1), metabolically unhealthy overweight persons have increased risk for cardiovascular events and total mortality and are candidates for obesity treatment. Metabolically healthy overweight persons are at risk for gaining more weight and becoming obese. The priority for them might involve prevention of weight gain. This is an important distinction because, although large behavioral changes are needed to produce and maintain weight loss, prevention of weight gain can be accomplished with much smaller, and perhaps more feasible, behavior changes (9).

Obesity is taking a toll on the health and well-being of Americans. Accepting that no level of obesity is healthy is an important step toward deciding how best to use our resources and our political will to develop and implement strategies to combat the obesity epidemic.

James O. Hill, PhD

Holly R. Wyatt, MD

Anschutz Health and Wellness Center, University of Colorado
Aurora, Colorado

Potential Conflicts of Interest: Disclosures can be viewed at www.acponline.org/authors/icmje/ConflictOfInterestForms.do?msNum=M13-2515.

Requests for Single Reprints: James O. Hill, PhD, Anschutz Health and Wellness Center, University of Colorado, Box C263, 12348 East Montview Boulevard, Aurora, CO 80045; e-mail, james.hill@ucdenver.edu.

Current author addresses are available at www.annals.org.

Ann Intern Med. 2013;159:789-790.

References

1. Kramer CK, Zinman B, Retnakaran R. Are metabolically healthy overweight and obesity benign conditions? A systematic review and meta-analysis. *Ann Intern Med.* 2013;159:758-69.
2. Sims EA. Are there persons who are obese, but metabolically healthy? *Metabolism.* 2001;50:1499-504. [PMID: 11735101]
3. Flegal KM, Kit BK, Orpana H, Graubard BI. Association of all-cause mortality with overweight and obesity using standard body mass index categories: a systematic review and meta-analysis. *JAMA.* 2013;309:71-82. [PMID: 23280227]
4. Bray GA. Medical consequences of obesity. *J Clin Endocrinol Metab.* 2004;89:2583-9. [PMID: 15181027]
5. Puhl RM, Heuer CA. Obesity stigma: important considerations for public health. *Am J Public Health.* 2010;100:1019-28. [PMID: 20075322]
6. Wyatt HR. Update on treatment strategies for obesity. *J Clin Endocrinol Metab.* 2013;98:1299-306. [PMID: 23443815]
7. Hill JO, Thompson H, Wyatt H. Weight maintenance: what's missing? *J Am Diet Assoc.* 2005;105:S63-6. [PMID: 15867898]
8. Ortega FB, Lee DC, Katzmarzyk PT, Ruiz JR, Sui X, Church TS, et al. The intriguing metabolically healthy but obese phenotype: cardiovascular prognosis and role of fitness. *Eur Heart J.* 2013;34:389-97. [PMID: 22947612]
9. Hill JO, Wyatt HR, Reed GW, Peters JC. Obesity and the environment: where do we go from here? *Science.* 2003;299:853-5. [PMID: 12574618]

Current Author Addresses: Drs. Hill and Wyatt: Anschutz Health and Wellness Center, University of Colorado, Box C263, 12348 East Montview Boulevard, Aurora, CO 80045.