

Weight-Loss Myths Refuted in New Review

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Some of the most firmly held beliefs about weight loss are unproven or downright untrue, according to an analysis comparing concepts promoted in the popular media with data from the scientific literature.

The findings were [published online](#) January 31 in a special article in the *New England Journal of Medicine*.

"False and scientifically unsupported beliefs about obesity are pervasive in both scientific literature and the popular press," write Krista Casazza, PhD, RD, from the Department of Nutrition Sciences, University of Alabama at Birmingham, and colleagues.

The authors discuss a total of 7 myths, along with refuting evidence. Here are some examples:

- *Small changes in food intake and/or exercise will produce large, long term weight changes* — This idea was based on the old idea that 3500 kcal equals 1 pound of weight. But it does not take into account the fact that energy requirements change as body mass changes over time. So, as weight is lost, it takes increasingly more exercise and reduced intake to perpetuate the loss.
- *Realistic weight-loss goals will keep people motivated* — This idea seems reasonable, but it is not supported by evidence. In fact, several studies have shown that people with very ambitious goals lose more weight (eg, TV's *The Biggest Loser*).
- *Slow, gradual weight loss is best for long-term success* — Actually, a [meta-analysis of randomized, controlled weight-loss trials](#) found that rapid weight loss via very-low-calorie diets resulted in significantly more weight loss (16% vs 10% of body weight) at 6 months, and differences in weight loss persisted up to 18 months (*Int J Behav Med*. 2010;17:161-167).
- *A bout of sexual activity burns 100 to 300 kcal per person* — With intense sexual activity, a 154-pound man burns approximately 3.5 kcal per minute. However, given that the average amount of time spent during one stimulation and orgasm session is about 6 minutes, this man might expend about 21 kcal total. But, he would burn about 7 kcal per minute just lying on the couch, so that amount has to be subtracted, which gives a grand total of 14 kcals of energy expended.

The article also explores 6 "presumptions," or widely accepted beliefs that are neither proven nor disproven. Among them:

- *Eating breakfast prevents obesity* — Actually, 2 studies showed no effect of eating vs skipping breakfast.
- *Adding fruits and vegetables to the diet results in weight loss* — Adding more calories of any type without making any other changes is likely to cause weight gain. Eating fruits and vegetables is healthful, however.

- *Weight cycling, aka "yo-yo dieting," increases mortality* — The data are from observational studies and likely confounded by health status.

Finally, the authors offer 9 facts about obesity and weight loss that are supported by data, among them:

- Moderate environmental changes can promote as much weight loss as even the best weight-loss drugs.
- Diets do produce weight loss, but attempting to diet and telling someone to diet are not necessarily the same thing.
- Physical activity does help in promoting weight loss and has health benefits even in the absence of weight loss.
- For overweight children, involving the family and home environment in weight-loss efforts is ideal.
- Providing actual meals or meal replacements works better for weight loss than does general advice about food choices.
- Both weight-loss drugs and bariatric surgery can help achieve long-term weight loss in some individuals.

According to Dr. Casazza and colleagues, "The myths and presumptions about obesity that we have discussed are just a sampling of the numerous unsupported beliefs held by many people, including academics, regulators, and journalists, as well as the general public. Yet there are facts about obesity of which we may be reasonably certain — facts that are useful today."

And they conclude, "While we work to generate additional useful knowledge, we may in some cases justifiably move forward with hypothesized, but not proven, strategies. However, as a scientific community, we must always be open and honest with the public about the state of our knowledge and should rigorously evaluate unproved strategies."

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