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Maintaining 'Biggest Loser' Success is Harder than Attaining It

By Ruth Kava — May 3, 2016

Many, if not most of us at some point in the recent past, have tuned into NBC's reality show, "The Biggest Loser," which depicts the struggles and victories of extremely obese individuals to lose weight. While there have been many victories over the course of the show, with people losing massive amounts of weight, followup studies have demonstrated that much of this weight is often regained. For example, as discussed [1] in the *New York Times*, the man who lost the most weight — 239 pounds in seven months — has put about 100 pounds back on in the six years since that accomplishment.

The good-news part of this somewhat depressing scenario is that by studying such individuals scientists are learning more about the physiology of weight loss and obesity — information that may be helpful for future weight losers.

A major insight was that after weight loss, the contestants' metabolic rates slowed. But what was new was that after a six-year period the rates did not normalize, but stayed low — and in some cases decreased even further. What this means is that the reduced obese can't eat the number of calories that a person of the same size who had not lost weight can eat. In the case of the biggest loser above, to keep his new body weight constant he would have to reduce his calorie intake to 800 calories less than a non-loser of the same size. It's as though the reduced person is fighting his or her own biology; so far there are no proven ways to change that.

However, research is ongoing to find something that can interfere with this situation. For example, the hormone leptin, which is produced by fat cells, signals the body that it has had enough to eat. When a person loses fat, though, leptin levels fall, and he or she becomes hungry. In fact, once the participants had lost their weight, they produced hardly any leptin at all. It might be possible for a drug to mimic the action of leptin so that the person doesn't feel ravenous all the time.

While the results of the followup study were not encouraging for those with a lot of weight to lose,

they don't necessarily apply to those with more moderate weight-loss goals. Yes, the metabolism might well slow somewhat, but it's unlikely that losing 10 pounds would slow it as much as losing 100. Obviously, the most reasonable way to deal with the issue is to avoid obesity in the first place, and thus to keep metabolism on an even keel.
