

Behind the Headlines: “Increased Physical Activity Associated with Less Weight Regain Six Years After “The Biggest Loser” Competition”

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Could exercise be the secret to keeping weight off long term? If you’ve been following the news recently, this is what the headlines would have us believe. However, the research study behind the headlines tells a somewhat different story than The New York Times proclamation: “Exercise Keeps Off the Weight.” Here is what the study by Kerns et al (2017) published this month in *Obesity* found.

The study examined 14 participants on “The Biggest Loser” television show prior to starting the weight loss competition (baseline), 6 weeks into the competition, 30 weeks into the competition, and 6 years following the end of the competition. Researchers assessed energy intake and expenditure using sophisticated techniques at each time point (for an explanation of calculations and procedure, please consult the original [research article](#)). Participants were divided into 2 groups based on how much weight they were able to keep off over the 6 year time period. If they maintained greater than 13% of weight lost (the median of the group), they were considered a “maintainer,” if they didn’t then they were considered a “regainer.” On average, the “maintainers” weighed 25% less than when they started the competition while the “regainers” weighed 1% more than when they started.

Results indicate that the amount of weight each participant lost during the competition did not correlate with the amount of weight regained 6 years later. Changes in energy intake (calories consumed) from baseline to 6-year follow-up also did not correlate with weight loss maintenance but changes in physical activity did. There was a significant inverse relationship between physical activity changes from baseline and weight loss maintenance 6-years later. In contrast, during the competition (at 6 weeks and 30 weeks) changes in weight were significantly correlated with changes in energy intake but not physical activity.

On average, participants in the “maintainer” group were exerting 12.2 kcal/k/day while the “regainers” were exerting 8.0 kcal/k/day. The authors use a threshold suggested by a different study (Schoeller et al, 1997) of 11 kcal/k/day, which is midway between the expenditure of the “maintainer” and “regainer” groups as the amount of exercise needed to maintain weight loss; this equates to 80 minutes of moderate or 35 minutes of vigorous exercise every day. It is important to note that the “regainers” were not sedentary; they were exercising 8 kcal/k/day which, based on my calculations using the 11 kcal/k/d=80 min moderate exercise formula given in the paper, adds up to almost one hour of moderate exercise every day. That amount of exercise was not enough to maintain the weight loss. These estimates are consistent with prior studies examining the overall physical activity requirements for long-term weight-loss maintenance and the authors do not think that “The Biggest Loser” contestants are unique in this regard. The study is limited by a small sample size of only 14 participants.

Since this study was widely covered in the media, it is likely that our patients have read about this. Eighty minutes of daily exercise is a lofty recommendation that is unrealistic—and perhaps not even healthy or advisable—for many people. It is important to help patients understand the value of joyful movement independent of weight loss. Viewing exercise as a way to control weight and compensate for energy intake (calories consumed) may represent eating disorder symptomology. Patients across the weight spectrum should be assessed on a case-by-case basis for compulsive exercise behaviors.

Reference: Kerns JC, Guo J, Fothergill E, et al. Increased Physical Activity Associated with Less Weight Regain Six Years After “The Biggest Loser” Competition. *Obesity*, 2017; 25, 1838-1843.