port Mann et al.'s position, but Van Strien et al. found that this weight gain was more closely associated with the tendency to overeat than with dietary restraint. Van Strien et al. suggested that clinicians should focus on combating the tendency to overeat (i.e., external and/or emotional eating) rather than on encouraging dietary restraint. That is, instead of trying to reinforce the fragile undereating approach, we should turn our attention to eradicating overeating by reducing overeating tendencies (through some form of behavioral therapy). This clinical approach would necessitate identifying which people are primarily external eaters and which are emotional eaters before any intervention is attempted (see Van Strien, 2002).

No one denies the benefits of exercise, for which Mann et al. (2007) are strong advocates. An exercise regimen, however, does not address overeating tendencies and therefore may be ineffective or even counterproductive (insofar as exercise may "justify" overeating). Further, we must acknowledge that exercise may improve health without necessarily lowering weight. Muscle weighs more than fat does, so losing fat is not necessarily the same as losing weight. The campaign against the obesity epidemic has tended to focus on weight instead of fat and health. Exercise, if it increases health and lean body mass without reducing weight, may discourage people who are obsessed (as is much of the medical community) with weight. In any case, insofar as obesity stems from overeating, the research agenda for dealing with the obesity epidemic cannot afford to ignore the "intake" side of the caloric equation. Developing interventions based on the specifics of the clients' overeating tendencies ought to find a place on the agenda.

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Focusing on Weight Is Not the Answer to America's Obesity Epidemic

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The two comments on our article, "Medicare's Search for Effective Obesity Treatments: Diets Are Not the Answer" (Mann et al., April 2007), state opposing views of the validity and novelty of our conclusions. In his comment, Applebaum (2008) claimed that our conclusion is "provocative and unproven" (p. 200), whereas Herman, Van Strien, and Polivy (2008) generally agreed with our findings but stated that "this conclusion is hardly new" (p. 202). Research on obesity treatment often leads to polarizing views, and our aim was to present a dispassionate analysis of the methodological issues in the long-term studies of diets. We believe we accomplished this goal, and the conclusions we presented were based on this analysis.

Applebaum (2008) disputed our conclusion about long-term weight regain by citing the laws of thermodynamics. We do not dispute these laws, and indeed, we provided support for them when we cited research showing that people initially lose 5%–10% of their starting weight on diets. However, short-term weight losses are not

a cure for obesity, so the intent of our review was to show what happens to individuals on diets in the long term. We found that the majority of dieters regained most or all of the weight they lost. We did not explore mechanisms of weight regain in our review, but it is likely that many of the dieters were unable to sustain the strict calorie reduction over a long period of time.

When Applebaum (2008) compared common calorie-restrictive diets to food rations in various concentration camps, he seemed to be suggesting that the levels of caloric restriction in dieting studies are extreme and that before we condemn dieting we must look at more realistic caloric restriction levels. Although we would not have made this point in the same way as Applebaum, we do think it is worth considering diets that involve less extreme caloric limits. Before we can accept his conclusion that this type of diet is effective, however, we must test these interventions in rigorous, unbiased long-term studies.

Both Applebaum (2008) and Herman et al. (2008) took issue with our comments recommending exercise. Applebaum argued that even overeating a tiny amount of food renders the weight-loss effect of exercise inconsequential, and Herman et al. noted that exercise tends to give individuals a justification for overeating. Regardless of whether either point has been empirically supported (Applebaum, for example, cited just one non-peer-reviewed source). we note (as did Herman et al.) that it has been shown that exercise confers direct health benefits even if it does not necessarily lead to weight loss. In contrast to Herman et al., we find this outcome to be reason enough to recommend exercise as a response to the obesity epidemic. It has been a source of much surprise to us that the medical community is, as Herman et al. pointed out, "obsessed . . . with weight" (p. 203) when it seems that the usual focus of the medical community during epidemics is squarely on health. We propose that the research community (including ourselves) shift the focus of obesity research toward direct measures of health, such as blood pressure or insulin resistance, and away from weight, which is an imperfect indicator of current or future health problems.

Herman et al. (2008) also noted that the calorie-restricting diets we reviewed are but one tactic to treat obesity, and they emphasized the potential utility of a different tactic, which is to eliminate overeating. Although this was not the focus of our review, the preliminary research Herman et al. cited indicates that this may be a promising path for an identifiable group of indi-

viduals. Because obesity has heterogeneous causes, different approaches to combat it are likely needed for different individuals, and we applaud efforts to match treatments to individual patients. We emphasize, however, that any interventions based on treatment matching or eliminating overeating *must* be tested in scientifically rigorous long-term studies that avoid the systematic biases we identified.

It is time to move beyond the debate of *whether* dieting works and to focus on two potentially more productive issues: *why* dieting does not work, and what we mean when we say that a diet "worked."

Diet failure is a biobehavioral phenomenon, so psychologists and the medical community together must work toward elucidating the processes involved in dieting and subsequent weight regain. Equally important, shifting the focus to health outcomes rather than weight change should enable us to make significant progress in improving the health of all Americans.

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