



MESSAGE FROM THE EDITOR

The Third Factor in Weight Management

In this issue of the *AMAA Journal* we publish a well-referenced, comprehensive review article on the subject of "Preventing Relapse After Weight Loss," by Wells and Wells (p. 5). A variety of explanations have been offered for this widespread problem. I'd like to consider briefly one that has been around as a hypothesis for quite some time, a hypothesis for which possibly supporting evidence has recently come to light. It is what I call the "Third Factor Hypothesis."

The conventional wisdom in weight gain/loss has long been based on the "calories in/calories out" concept. While some observers have felt that it does not fully explain the weight gain/loss phenomenon, it is surely much more accurate than hypotheses based on types of foods, order of eating, and food combinations, for example. Each of us does require a given number of calories each day to maintain body weight. Each of us does expend a certain number of calories per day in performing our normal physical activity and, if we are regular exercisers, physical activity above the norm. Excess calories are stored as body fat, and excess dietary fat does contribute to stored body fat at a much higher rate than do excess carbohydrate and protein. Thus the standard formula for weight maintenance and weight loss has been built around the "in/out" construct.

For some time now, however, there have been some observers who have postulated that *how* a given body processes the intake of calories is a critical third factor in weight gain/loss. The "glycemic index/insulin resistance" approach serves as an example. But

even that still tends to group everyone together and in many of its uses comes up with a "one size fits all" approach similar to that found in many programs based on the "in/out" construct. Some observers (e.g., Jonas) have postulated that there are wide variations in metabolism in the population which could account, at least in part, for the wide variations in the observed weight gain/maintenance/loss experience. And now comes a study that gives some support for that supposition (Turnbaugh, et al). It showed that obese persons have different types of bacteria in their intestines than persons of normal weight. These obese-person type bacteria are more efficient in extracting calories from food than those found in normal-weight persons, and apparently make those excess calories readily available for intestinal absorption and cellular conversion to fat.

The "Third Factor" hypothesis has postulated that the metabolic differences would be found within the cells. It is known, for example, that sudden calorie-restriction dieting produces what is called the "Starvation Response." That is, the resting metabolic rate (RMR) drops as the body experiences something akin to what happened millennia ago when the hunt failed and in order to improve its chances for survival the body would drop its RMR over a relatively long period of time. In short-term dieting followed by a return to pre-diet eating habits (which occurs in many dieters, unfortunately), the body, unable to read the "second signal"—"I was only dieting, plenty of food, and I'm eating it again"—gains the weight back. That may still be the case for some people. But now we have another avenue of research to explore, and I am certain that more than one team will be on the case.

The paper by Dr. Al Morris also published in this issue, "Burning Fat During Long-Term Running," adds another dimension to the discussion. From the evidence that Dr. Morris presents, it is quite apparent that different runners, participating in different kinds of events, burn fat and carbohydrates in quite different proportions during their physical activity. This adds weight (ah, how difficult it is to avoid the use of such terms when dealing with matters of obesity, weight gain, and weight loss) to the argument that there are factors in addition to "calories in, calories out" that play an important role in the dynamic of body weight. Following this avenue—examining one or more "third factors" that may well be in play—will hopefully lead to a much better understanding of the causes of weight gain and of the difficulties of weight loss maintenance. Then it will hopefully lead to improved interventions for dealing with the major 21st century epidemic of obesity.

Respectfully yours,
Steven Jonas

REFERENCES

Jonas S. *Take Control of Your Weight*. Yonkers, NY: Consumer Reports Books, 1993.

Turnbaugh PJ, et al. An obesity-associated gut microbiome with increased capacity for energy harvest. *Nature*. Dec 21, 2006:1027.