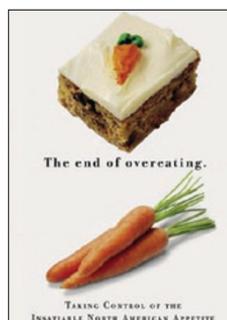


## Breaking the spell of food



### The End of Overeating: Taking Control of the Insatiable North American Appetite

David Kessler

Rodale Books, 2009

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Reviewed by Stephen O’Rahilly

According to David Kessler, the author of *The End of Overeating*, the book “reveals how the food industry has hijacked the brains of millions of Americans” and “explains for the first time why it is exceptionally difficult to resist certain foods and why it’s so easy to indulge.” We are offered “new insights and useful tools to help us find a solution.” As Kessler is a former commissioner of the US Food and Drug Administration who has also led major US medical schools, one expects a sober and scholarly tome. When he reveals that he has waged a lifelong struggle against a propensity to overconsume calories and has recently found a way of controlling this, one wonders to what extent the book will be a more personal work—perhaps even a self-help manual. The book encompasses, somewhat uneasily, elements of both genres.

Kessler is convincing in his arguments that increased food intake (rather than reduced energy expenditure) is likely to be the principal driver of the recent worldwide increase in obesity. He also makes a strong case that contemporary food production, distribution and advertising powerfully promote overconsumption. Indeed, highly palatable food is cheap, readily available and served in large portions. A substantial section of the book is devoted to graphic examples of how the food industry encourages excessive eating. Although the lurid descriptions of the likes of Monster Thickburgers and Chocolate Motherlode Cakes and the mantra of “Fat; Sugar; Salt!” are all attention grabbing, they are repeated (rather too literally) *ad nauseam*. Such an effect is undoubtedly intended and provides an early signal of the book’s tone. That said, the section that describes the behavior of at least some parts of the food industry and its role in creating an increasingly obesogenic environment is, for me, the most compelling part of the book.

Throughout the narrative, Kessler interweaves explorations of the possible neurobiological reasons why highly palatable food is so hard to resist. From his explorations, he has become convinced that “conditioned hypereating” is a state akin to food addiction, whereby the ingestion of highly palatable food induces a demand for ever increasing amounts of its consumption. Drawing analogies with drug addiction, he firmly places the anatomical site of this eating behavior in the ventral striatum and orbito-

frontal cortex of the brain, areas of key importance for pleasure, reward and incentive. He mentions, in passing, the existence of a “homeostatic system” with some influence on energy intake and expenditure but dismisses the possibility that it could be of any real consequence for habitual overeating or obesity. Kessler’s lack of interest in the recent science of energy homeostasis is striking and results in a book that largely could have been written in the 1970s.

Kessler portrays an almost complete disconnection between the higher brain, which makes decisions about the ingestion of food, and what he seems to consider as a primitive “homeostatic system” throbbing away monotonously, functioning identically in all individuals, concerned only with basic survival and metabolism. Such a view could not be further from the truth revealed by contemporary research. It is increasingly clear that outputs from lower brain centers such as the hypothalamus and brain stem integrate nutritional signals from fat tissue, gut and elsewhere and have a powerful, even dominant, influence on higher brain centers concerned with eating. If you read this book from cover to cover, you will be blissfully unaware that over the past 15 years scientists have discovered the molecular nature of much of the hypothalamic control of energy balance, that these mechanisms concern the control of appetite and satiety, not just metabolism, that millions of people around the world are obese because they have quantifiable inherited disruptions of those pathways, and that all such defects cause obesity by increasing spontaneous food intake.

These findings are key because they begin to reveal why some people are susceptible to the obesogenic environment, whereas others are not. Kessler occasionally raises this question but concludes “my sense is that eating behavior is not genetically determined.” Recent science is proving this assertion to be incorrect, with several of the recently described common alleles unequivocally associated with human obesity now being shown to influence appetite and food consumption. Humans vary enormously and inherently in the intensity of the primal drive to eat, and the effort required of an obese person to lose weight and keep it off is much greater than that required by a naturally lean person to remain so. Such knowledge should eventually inculcate a more humane attitude toward the obese individual.

Kessler is to be applauded for his candor in describing his long-standing personal problem with overeating. It is likely that others will find his suggestions regarding “planned eating” helpful. However, it would be premature to assume that his approach will be more broadly applicable and effective than other behavioral programs that have been touted as panaceas for obesity. Given Kessler’s reputation as a fierce opponent of the tobacco industry and its role in human addiction and his indictment of the food industry as a major culprit in the obesity epidemic, it is surprising to see the book end with a focus on how individuals might change their personal behavior rather than a cogent analysis of how legislative and fiscal tools might be used to promote a less unhealthy food environment.

The science of human obesity has never been more exciting, with replicable and compelling data at last replacing what in the past was too frequently contaminated by conjecture, conviction and bombast. Unfortunately, that is difficult to discern from reading *The End of Overeating*, which would have benefited from a greater appreciation of how the homeostatic and hedonic systems influencing human food ingestion are inextricably linked.

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