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Satiety

Imagine that you just finished eating a satisfying meal. You don't feel hungry nor are you craving food at the moment. But unexpectedly, a friend comes by with some _____ (insert one of your favorite high calorie foods here). Your friend offers you some of this tasty food. What do you do? Let's look at several influences in this situation, factors that were reviewed by Bruce King, PhD, a Clemson University psychologist, in a recent American Psychologist article.

Physiologically, our bodies have a number of mechanisms that are designed to limit food intake. These contribute to the experience of "satiety," that is, feeling full or satisfied. Also, there are research data supporting the notion that people have a "set point" for weight so that the body adjusts to keep the organism at its set point. To the extent that these physiological mechanisms are in control, you would politely decline your friend's offer in the example above, because your body doesn't need food at that time.

However, we are also genetically predisposed to eat highly palatable foods when such foods are available, even if we aren't hungry and even if one's weight is above one's set point. In most of human history, this pattern was important for survival because it is only a recent development that high calorie foods are readily available to us, at least in developed countries. This predisposition would suggest that in the example above, you will eat some (or perhaps a large amount) of your favorite food, even if you don't need it. Interestingly, Dr. King cites research suggesting that the physiological mechanisms designed to limit food intake account for only 14%

of the variability in human eating behavior. This means that environmental factors (e.g., readily available food, cues to eat, social pressures, advertising, etc.) predominantly influence what and how much we eat.

Let's assume that you go ahead and eat some of this favorite food, and now you are "stuffed." A short time later a different friend comes by and offers you some of another of your favorite high-calorie foods. Your body is clearly telling you that you don't need more to eat, but you are tempted to at least have a taste. Dr. King describes "sensory-specific satiety," which refers to the fact that consuming more and more of a particular palatable food in a single episode results in a gradual decline in the pleasure one obtains from that specific food. That is, the first few bites are typically more pleasurable than the last few. However, this satiety doesn't transfer to other foods. While your first friend's food may no longer be desirable at that moment, another food can be very compelling. Consider Thanksgiving dinner. We often eat a variety of satisfying foods beyond feeling full, but then still go ahead and enjoy an assortment of deserts.

There are some individual differences in the interactions between inborn tendencies and environmental cues. It is known that obese individuals seem to have more intense responses to external eating cues than do normal weight individuals. Furthermore, some people appear to be genetically blessed with more willpower than others, and willpower does play a role in responses to environmental eating cues. Fortunately, willpower is a resource that can be both replenished and further developed.

Managing our eating behavior has become a daunting challenge in an environment that has been described as "obesogenic." While understanding the multiple processes involved in eating doesn't directly affect what we consume, awareness is an important step toward management of some of the influences on what and how much we eat. Following are several behavioral suggestions:

- Where possible, minimize the number of tasty foods available at a given time (i.e., avoid buffets, smorgasbords, desert trays, etc).

- Similarly, minimize exposure to cues for highly palatable foods, when possible. Examples might include avoiding vending machines and/or certain aisles in the grocery store.
- When a flavorful food is about to be eaten, intentionally extend the time spent smelling and subsequently chewing the food. Both smelling and extended chewing are ways to experience pleasure and reach satiety for that specific food, and hopefully reduce the amount of food actually ingested.

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