

Low-calorie cheesecake? Why we have trouble estimating calories

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When it comes to estimating calorie counts, Americans aren't really on the ball. According to a new study in the *Journal of Consumer Research*, this may be because of the order in which we encounter the food.

"The sequence in which items are considered often influences our evaluations of these items," writes author Alexander Chernev (Northwestern University). "The focus on sequential estimation is important because many meals are ordered and consumed sequentially rather than at once. Moreover, to control their daily calorie intake, people often estimate not only the amount of calories contained in each meal but also the total calories consumed during the day."

In one of Chernev's studies, he found that a group of participants' impressions of how many calories a cheeseburger had depended on whether they were first shown a salad or the cheeseburger. The people who saw the cheeseburger first thought it had 570 calories, whereas the participants who first estimated the calories of the salad thought the cheeseburger had 787 calories—a 38 percent difference.

"Simply switching the order in which our respondents evaluated the two meals resulted in significant changes in their perceived calorie content," Chernev writes. Reversing the order in which the respondents considered the items also increased the overall calorie estimation from 757 to 1,097 calories.

When the foods are quite dissimilar (a "virtuous" salad versus an

"indulgent" slice of cheesecake), people get even more confused about calories. Even though participants knew a fruit salad had fewer calories than a piece of cheesecake, they perceived a salad/cheeseburger sequence to have more calories than a cheesecake/cheeseburger combo.

"These findings shed light on how consumers estimate the calorie content of meals comprising multiple items," Chernev writes. "This research identifies strategies for managing individuals' [perception](#) of the calorie content of the consumed meals. Thus, if individuals tend to overestimate the calorie content of healthy/indulgent sequences of items, they are also likely to exercise greater self-regulation in consumption."

More information: Alexander Chernev. "Semantic Anchoring in Sequential Evaluations of Vices and Virtues." *Journal of Consumer Research*: February 2011. A preprint of this article (to be officially published online soon) can be found at journals.uchicago.edu/jcr

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