Calories draw people to food, like it or not

People like food because it contains calories they need to survive. However, researchers from The John B Pierce Laboratory and Yale have discovered an interesting twist to the basic biolo story: Calories trigger responses in areas of the brain that control eating behavior independentl of how much the subject likes the flavor.

By Bill Hathaway 7 May 2013

"The implication is that calories don't need to increase liking to influence our eating," said Dana Small, associate professor of psychiatry, associate fellow of the Pierce Laboratory, and senior author of the stud to be published in the 20 May edition of the journal Current Biology.

The findings shed light on how food cues trigger eating, insights that can help explain overeating and obesity, say the researchers.

The Yale team was interested in teasing out the signals that allow the brain to assess the nutritional value o the food.

Fourteen subjects were tested for preferences for flavors of novel drinks without calories. Later, calories were added to one of the drinks by adding an undetectable carbohydrate.

The subjects consumed this flavored beverage and one without calories repeatedly over three weeks. The effect of consuming these drinks on blood glucose was also measured. Following this conditioning, subjects' brains were then scanned as they sampled non-caloric versions of both flavored drinks. As predicted, participants liked the calorie-paired flavor. The team found that a change in blood glucose produced by drinking the flavor that had once contained calories strongly predicted responses in regions o the brain known to guide feeding.

"What was striking was that this happened completely independently from changes in liking," Small said.

This helps explain why eating - and over-eating - are often unrelated to how much a person likes the food, say the researchers. It also suggests that individuals with altered glucose metabolism, like people with diabetes, will be more susceptible to food cues because they have increased glucose responses to food

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