

Flavor and texture alter how full we expect a food to makes us feel

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Low calorie foods may help people lose weight but there is often a problem that people using them do not feel full. New research published in BioMed Central's open access journal *Flavour* shows that subtle manipulations of texture and creamy flavour can increase the expectation that a fruit yoghurt drink will be filling and suppress hunger regardless of actual calorific content.

There is a currently a debate about satiety, how full low calorie foods and drinks make people feel and for how long, and whether or not they actually make people eat or drink more because the body is expecting more calories than are actually provided. Researchers from the University of Sussex designed an experiment to first see whether or not adding a thickening agent (tara gum) increased the sensation of thickness, stickiness and creaminess of a yoghurt drink, and then looked at how these affected expected fullness and expected satiety.

The results showed that even people who are not trained in food tasting were able to accurately pick up subtle differences in drink texture even though the taste remained the same.

In the second phase of the experiment subjects rated how filling they expected a drink to be by selecting a portion of pasta that they thought would have the same effect on their hunger as drinking a bottle of yoghurt. On average the thick drinks and the creamy drinks were expected to be more filling than the thin or non-creamy versions, and enhancing the creamy flavour of a thick drink further increased

expected fullness. However their contributions to expected satiety were not equal - only thickness (and not creaminess) had an effect on the expectation that a drink would suppress hunger over time.

Keri McCrickerd, who led this study, explained, "Hunger and fullness are complicated issues because it is not just the calories in a food or drink that make it filling. Signals from the stomach are important but so too is how the drink feels in the mouth. In our study both creamy flavour and texture affected expected fullness, but only thickness seemed to affect whether [hunger](#) was expected to be satisfied. This may be because thick texture is a characteristic of food that we associate with being full. Consumer expectations are important and our study shows that consumers are sensitive to subtle changes in oral sensory characteristics of a drink, and that thick [texture](#) and creamy flavour can be manipulated to enhance expectations of fullness and satiety regardless of calories."

Provided by BioMed Central

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