Why do we love to eat rich, fatty foods?

Rich, high-fat foods such as ice cream are loved not only for their taste, but also for the physical sensations they produce in the mouth — their ‘mouthfeel’. Now scientists have identified a brain area that both responds to the smooth texture of fatty foods and uses that information to rate the morsel’s allure, guiding eating behaviour.

These findings, published on 16 October in *The Journal of Neuroscience*, “add a new dimension” of the eating experience to scientists’ understanding of what motivates people to choose certain foods, says [neuroscientist] Ivan de Araujo.

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After tasting each milkshake, participants placed bids on how much they would spend to drink a full glass of it after the experiment.

Accompanying brain scans showed that activity patterns in an area called the orbitofrontal cortex (OFC), which is involved in reward processing, reflected the shakes’ texture. The scans also identified OFC activity patterns that reflected participants’ bids, suggesting that this brain region links mouthfeel to the value placed on that food.

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To find out whether this finding extends to food intake, the researchers invited the participants to return to the laboratory for a free lunch of several curry dishes with varying fat contents. Unbeknown to the participants, the researchers measured how much of each curry the participants ate. They found that those whose OFCs were most sensitive to fatty texture were more likely to eat more of the high-fat curry compared with those who weren’t as sensitive to fatty texture.

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