

# Dementia takes away the meaning of flavors

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Flavour is literally the spice of life and for many people life without the pleasures of the table would be unthinkable. Yet just this aspect of everyday life is vulnerable in certain degenerative dementias, with patients developing abnormal eating behaviours including changes in food preferences, faddism and pathological sweet tooth. New research has revealed evidence that these behaviours are linked to a loss of meaning for flavours, as reported in the June 2010 issue of Elsevier's *Cortex*.

Dr Katherine Piwnica-Worms from Washington University in St Louis, Missouri, together with Dr Jason Warren and colleagues from University College London, investigated the processing of flavour information in patients with semantic [dementia](#), a [degenerative disease](#) affecting the [temporal lobes](#) of the brain. Patients with this condition suffer a profound loss of the meaning of words and, ultimately, of things in the world at large; in addition, many develop a preference for unusual foods or food combinations.

The researchers tested patients' flavour processing using jelly beans: a convenient and widely available stimulus covering a broad spectrum of flavours. The abilities of patients to discriminate and identify flavours and to assess flavour combinations according to their appropriateness and pleasantness were compared with healthy people of the same age and cultural background. Patients were able to discriminate different flavours normally and to indicate whether they found certain combinations pleasant or not, but they had difficulty identifying individual flavours or assessing the appropriateness of particular flavour

combinations (for example, vanilla and pickle).

These findings provide the first evidence that the meaning of flavours, like other things in the world, becomes affected in semantic dementia: this is a truly 'pan-modal' deficiency of knowledge. The research gives clues to the brain basis for the abnormal eating behaviours and the altered valuation of foods shown by many patients with dementia. More broadly, the results offer a perspective on how the brain organises and evaluates those commonplace flavours that enrich our daily lives.

**More information:** Cortex is available online at [www.sciencedirect.com/science/journal/00109452](http://www.sciencedirect.com/science/journal/00109452)

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