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Olfactory dysfunction in IgG4-related disease
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IgG4-related disease (RD) is a newly recognized systemic disease characterized by high serum IgG4 levels that affects multiple organs including salivary glands and the nasal and paranasal sinuses. Accordingly, many IgG4-RD patients complain about olfactory dysfunction. Yagi-Nakanishi et al have now investigated olfactory function in these patients. More than 50% of the patients suffered from olfactory dysfunction for non-obvious reasons whereas they did not differ from the other patients in clinical features. Biopsies from the inferior turbinate revealed no correlation between olfactory score and number of IgG4-positive cells. This finding obscures the mechanism linking olfactory dysfunction to IgG4-RD. Out of six patients studied one recovered from hyposmia to normal spontaneously as the IgG4 levels normalized. Five did so after medication with corticosteroid. Thus, whereas olfactory dysfunction appears to be a frequent and important manifestation of IgG4-RD it can be reversed.

Genetic covariation of perceived sweetness and bitterness
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Genetically determined variation in taste sensitivity could impact on food choice and diet and in turn influence health and risk of nutrition-related diseases. It is well established that subjects differ in their sensitivities for sweet and in particular bitter compounds. Moreover, perceived intensities of sweetness and bitterness are correlated with one another. Hwang et al now investigated in a large mainly adolescent sample including numerous monozygotic and dizygotic twins the extent to which these correlations share common genetic variation. To this end they estimated the covariance among the perceived intensities of four bitter and four sweet compounds. Overall the authors found that the mean rating for the four sweeteners are moderately correlated with the ratings for the bitter substances. Correlation is due to a shared genetic factor that accounts for up to 8% of the variance in general sweetness ratings and up to 37% of the variance in bitterness ratings. The authors argue that most likely genes commonly involved in sweet and bitter transduction downstream of the receptors are responsible for this effect.

Sweet taste receptor independent detection of glucose oligomers in humans
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Gustatory detection of starch in humans would be highly beneficial given its outstanding importance as primary energy source. However, they cannot recognize longer chain saccharides. Lapis et al now report that human can perceive solutions of glucose oligomers with average chain lengths of 7 and 14 units, respectively, as starchy in the absence of other sensorial cues. Subjects failed to detect glucose preparation with a polymerization degree of 44. Perception of glucose oligomers was insensitive to the sweet taste inhibitor lactisole suggesting that the sweet taste receptor is not involved in the reception of glucose oligomers. These finding are in line with similar data previously obtained with glucose oligomers in rodents pointing to a common chemosensory ability of mammalian species.

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