

Over consumption of sugary drinks dulls taste buds

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(Medical Xpress) -- A study into taste preference suggests children who are thirsty should be encouraged to drink water.

The research by academics at the universities of Bristol and Bangor has shown for the first time that overweight and obese people have a dulled sensitivity to the sweetness of soft drinks but an enhanced subconscious liking of sweet food.

The findings also found that even if people are not overweight, drinking two sugary drinks a day for just four weeks is sufficient to both dull sensitivity to the [taste sensation](#), and increase preference for sweeter tastes, particularly in people who did not already have a 'sweet tooth'.

There are health implications from the study for people who have a

sweet tooth. As the sweet ‘treat’ becomes less rewarding, so people tend to look for more sweet food or drink and a vicious circle of eating sweet and calorie-laden food is established.

When discussing [soft drinks](#) people are not considering the worst examples of sugar-laden carbonated drinks. Levels of sugar found in fruit cordial or ‘squash’ and natural fruit juice as well as carbonated drinks are all too high in sugar and too sweet.

Dr Hans-Peter Kubis at the University of Bangor’s School of Sport, Health & Exercise Sciences, who led the study, said: “This has serious implications for public health. This research shows how little sweet food stuffs are required to actually change your taste perceptions and how powerful sweet tasting products are.

“We are heading for a multi-level health disaster with rising obesity levels and the increasing incidence of type 2 diabetes. From our research it is clear to see how this situation may have created a cycle of sweet food and drink consumption. As taste satisfaction levels drop; the more sweet foods are consumed, contributing to these problems.”

Dr Lucy Donaldson at the University of Bristol's School of Physiology and Pharmacology, said: “We have known for some time that the way that we perceive different tastes can change under different circumstances. This finding, that a couple of sweet drinks a day over a short time can dramatically change taste, was a real surprise.”

Dr Kubis’ opinion is that this problem needs addressing at a national level, adding: “My reaction would be to encourage the government to consider taxing sugar that is added to foodstuffs and have that tax ring fenced for the health budget.”

The results were based on experiments carried out at Bangor University’s

School of Sport, Health and Exercise Science in collaboration with the University of Bristol's School of Physiology and Pharmacology.

In the trial, lean and obese people were asked to rate their perception of and enjoyment of sweet and salty tastes. The initial trial showed that overweight and obese participants actually rated identical drinks as being less sweet in their perception, than that of the lean participants. In further experiments they tested the subconscious preference for sweet food with a computer based test finding that overweight and obese participants had a stronger preference for sweet than lean. The conclusion was that overweight and obese participants had a reduced sensitivity to sweetness but an enhanced subconscious preference for sweet food.

Dr Kubis explained: “Our subconscious drive plays a huge role in what food choices we make, and as overweight people feel hungrier they are more affected by their subconscious drive for sweet high calorie foods.”

To test whether sweet food consumption may be responsible for these findings and to understand if it was possible to recreate the taste perception of obese people in normal weight [people](#), those who do not usually consume sugary drinks were recruited for a second experiment. The researchers found that in as little as four weeks it was possible to replicate the dulling of the ‘sweetness’ of [sugary drinks](#) and lessen the enjoyment just by repeated consumption.

More information: Taste perception and implicit attitude toward sweet related to body mass index and soft drink supplementation; Francesco Sartor, Lucy F Donaldson, David A Markland, Helina Loveday, Matthew J Jackson, Hans-Peter Kubis, *Appetite* (2011), [doi:10.1016/j.appet.2011.05.107](https://doi.org/10.1016/j.appet.2011.05.107)

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