Obese children have less sensitive taste-buds than those of normal weight

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Obese kids have less sensitive taste-buds than kids of normal weight, indicates research published online in the *Archives of Disease in Childhood*.

This blunted ability to distinguish all five tastes of bitter, sweet, salty, sour, and umami (savoury) may prompt them to eat larger quantities of food in a bid to register the same taste sensation, suggest the authors.

They base their findings on 94 normal weight and 99 obese children aged between 6 and 18, who were in good health and not taking any medications known to affect taste and smell.

The taste sensitivity of every child was tested using 22 "taste strips" placed on the tongue, to include each of the five taste sensations, at four different levels of intensity, plus two blank strips.

Each child was asked to refrain from eating or drinking anything other than water and not to chew gum for at least an hour before they took the two tests, which involved identifying the different tastes and their intensity.

The sum of all five taste sensations at the four different intensities allowed for a maximum score of 20, with scores ranging from two to 19.

Girls and older children were better at picking out the right tastes.

Overall, the children were best able to differentiate between sweet and salty, but found it hardest to distinguish between salty and sour, and between salty and umami.

And obese children found it significantly more difficult to identify the different taste sensations, scoring an average of 12.6 compared with an average of just over 14 clocked up by children of normal weight.

Obese children were significantly less likely to identify the individual taste sensations correctly, particularly salty, umami, and bitter.

And while both obese and normal weight children correctly identified all the differing levels of sweetness, obese kids rated three out of the four intensity levels lower than kids of normal weight.

Similarly, children of normal weight were better able to distinguish the different taste sensations, the older they were, but this trend was not seen among the obese children.

Exactly why people have differing taste perceptions is unclear, but genes, hormones, acculturation and exposure to different tastes early in life are all thought to play a part, say the authors.

But previous research indicates that heightened sensitivity to different taste sensations may help to reduce the amount of food eaten as less is required to get the same "taste hit."

More information: Differences in taste sensitivity between obese and non-obese children and adolescents, doi 10.1136/archdischild-2011-301189

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