

High sugar consumption linked to obesity, research finds

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People who eat more sugar are much more likely to be obese than those who eat less, according to a landmark finding by University of Reading scientists.

The new research suggests the strongest link yet between sugar and obesity, and may also explain why many previous studies have been unable to find such a link: [overweight people](#) are more likely to underestimate how much sugar they eat than those with a healthier weight.

Researchers from the University of Reading, the University of Cambridge, and Arizona State University compared [sugar intake](#) in 1,700 people in Norfolk, UK, using two different methods: self-reported sugar consumption and sugar levels in [urine samples](#) - a more accurate and objective test. After three years, the [study participants](#) had their [body mass index](#) (BMI) measured.

They found that those who actually consumed the most sugar, as measured with the [urine test](#), were 54% more likely to be overweight than those who

were objectively shown to be eating the least sugar in their diet. Yet obese individuals tended to misrepresent how much sugar they were eating. Those who said they were eating the most sugar were actually 44% less likely to be obese than those who claimed to be consuming the least sugar of all.

The findings highlight how previous studies on sugar and obesity, which have relied exclusively on self-reported diet questionnaires to estimate sugar intake, may have been compromised and led to a misrepresentation of the facts.

Dr Gunter Kuhnle, nutritional scientist at the University of Reading, said: "There have been heated discussions about the role of sugar in the war against obesity, with some claims that sugar doesn't have anything to do with putting on weight. These claims were based on research which showed that people who consume high amounts of sugar are not heavier than those who don't.

"However, these studies relied on the information about sugar consumption given by the participants. This turns out to be a big problem, as our study shows that people with a higher BMI tend to underreport the amount of sugar they consume.

"We don't know why this is the case, but it might be that overweight people just don't realise how much they are eating. This could be a contributing reason why they eat too much.

"This is the largest study conducted so far that has found such a clear link between sugar consumption and obesity. This suggests the strongest evidence yet that high sugar consumption should be seriously considered as a contributor to the obesity pandemic.

"It is also further evidence that among many overweight people there is a huge gap between the perception and reality of their diet."

The research appears in the journal *Public Health Nutrition* and was funded by the World Cancer Research Fund (WCRF), the Medical Research Council (MRC), and Cancer Research UK.

Dr Giota Mitrou, Head of Research Funding and Science Activities at WCRF, said: "This is an important piece of research. There are nine cancers that have been linked with obesity, so understanding the relationship between the amount of sugar people eat and obesity is important. This paper shows it may well be possible to use a measure of sugar intake in urine alongside what people report they have consumed so we can get a clearer picture of [sugar](#) consumption, whereas in the past we have relied solely on what people say they consume.

"Sugar is one of several things that can contribute to [obesity](#). This paper contributes to the wider search for objective measures that can help us understand underreporting issues in people who are overweight or obese and has significant implications in future research."

The study participants were all part of the long-running health study called EPIC (European Prospective Investigation into Cancer and Nutrition). EPIC Norfolk is a study of more than 25,000 people in Norfolk who were recruited between 1993 and 1995 to investigate associations between diet, cancer and other diseases.

More information: "Association between sucrose intake and risk of overweight and obesity in a prospective sub-cohort of the European Prospective Investigation into Cancer in Norfolk (EPIC-Norfolk)." DOI: [dx.doi.org/10.1017/S1368980015000300](https://doi.org/10.1017/S1368980015000300)

Provided by University of Reading

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