

Are Artificial Sweeteners Really Safe?

Artificially sweetened foods and drinks can be helpful for overweight individuals, with or without diabetes, trying to cut back on calories to achieve weight loss. However [new research just published in Nature](#) suggests that artificial sweeteners might in fact increase the risk of developing diabetes.

An interesting series of studies in mice has shown that adding the artificial sweeteners saccharin, sucralose and aspartame to the normal diets of mice significantly increases their blood glucose levels when compared with mice fed a normal diet with sugar added. The same effect was also shown when the mice were fed high fat diets supplemented with either artificial sweeteners or sugars.

Further investigations found that the artificial sweeteners altered the composition and function of gut bacteria populations (microbiome) in the mice leading to adverse metabolic effects. Subsequent investigations in a small group of people showed that consumption of artificial sweeteners resulted in impaired glycaemic responses and altered microbiomes in four out of seven of the subjects. Furthermore data from a study of 381 non-diabetic adults showed that consumption of artificial sweeteners was associated with risk factors for diabetes and fatty liver disease and was correlated with distinctive families of gut bacteria.

Further research including larger, longer and well controlled trials in humans are essential before offering new advice regarding the use of non-caloric artificial sweeteners. The human trial reported in this research involved seven individuals followed for just seven days and did not include an appropriate control group. The volunteers consumed the maximum acceptable daily intake of saccharin, far in excess of amounts likely to be used by the great majority of consumers.

We do not believe that the present data provide evidence that the use of products containing artificial sweeteners should be abandoned nor do they provide any evidence that advice to reduce free sugars is inappropriate. Sugar sweetened beverages are best replaced by water, milk or occasionally diluted fruit juice. Cutting down on manufactured foods such as cakes biscuits and chocolates, which do not typically include artificial sweeteners, is a further means of reducing sugars. Until more information regarding the effects of artificial sweeteners in humans is available we can see no reason why those who find these products useful in achieving and maintaining body weight should not continue to use them in moderation.

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