Medical Xpress

Sugar substitutes may cut calories, but no health benefits for individuals with obesity

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Artificial sweeteners help individuals with obesity to cut calories and lose weight but may have negative health effects, according to researchers at York University's Faculty of Health.

"Our study shows that individuals with obesity who consume artificial sweeteners, particularly aspartame, may have worse glucose management than those who don't take sugar substitutes," says Professor Jennifer Kuk, obesity researcher in the School of Kinesiology and Health Science.

Normally, weight loss is associated with several improvements in health. Artificial sweeteners are often used to help individuals cut calories and manage their weight as they are not digested by the body. However, the recent study suggests that the bacteria in the gut may be able to break down artificial sweeteners, resulting in negative health effects.

"We didn't find this adverse effect in those consuming saccharin or natural sugars," says Kuk. "We will need to do future studies to determine whether any potentially negative health effects of artificial sweeteners outweigh the benefits for obesity reduction."

Currently, there are many new sugar substitutes that are used in foods. The researchers note that further investigation is needed to determine if there are any health effects of using these sweeteners.

For the study, data from 2856 U.S. adults from the Third National

Health and Nutrition Survey (NHANES III) was used. Individuals reported their diet over the past 24 hours and were categorized as consumers of artificial sweeteners (aspartame or saccharin), or high or low consumers of natural sugars (sugar or fructose). Diabetes risk was measured as the ability to manage blood sugars using an oral glucose tolerance test.

The Canadian Institutes of Health Research funded study, "Aspartame intake is associated with greater glucose intolerance in individuals with obesity," was published today in *Applied Physiology, Nutrition and Metabolism*.

More information: Jennifer L. Kuk et al. Aspartame intake is associated with greater glucose intolerance in individuals with obesity, *Applied Physiology, Nutrition, and Metabolism* (2016). DOI: 10.1139/apnm-2015-0675

Provided by York University