

Popular artificial sweetener not so sweet

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One of the active ingredients in a popular artificial sweetener could have the potential to limit the impact of therapeutic drugs, reduce the number and balance of beneficial bacteria in the gut and alter hormone secretion, according to an article published in *Journal of Toxicology and Environmental Health, Part A: Current Issues*.

Authored by Susan Schiffman and her colleagues, the article details an experiment involving a popular artificial sweetener, which is comprised of the high-potency sucralose (1.1%) and the fillers maltodextrin and glucose.

The study involved an experiment using Sprague-Dawley rats that were administered the artificial sweetener over a 12-week period. Following a bacterial analysis of the rats' fecal samples and measurement of fecal pH, the article concluded that artificial sweetener resulted in various adverse effects in the rats, including:

- Reduction in beneficial fecal microflora
- Increased fecal pH
- Enhanced expression levels of P-gp, CYP3A4, and CYP2D1, which are known to limit the bioavailability of orally administered drugs

"At concentrations typically used in foods and drinks, sucralose suppresses [beneficial bacteria](#) in the gastrointestinal tract with less effect on pathogenic bacteria," article co-author Susan Schiffman, Ph.D said.

"Most consumers are unaware of these effects because no warning label

appears on products containing sucralose." Schiffman also said went onto say that the change in balance of gastrointestinal bacteria has been associated with weight gain and obesity. At elevated levels, sucralose also damages DNA. These biological effects occur at the levels of sucralose currently approved by regulatory agencies for use in the food supply.

More information: Paper: www.tandfonline.com/doi/full/10.1080/152873908023286

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