Artificial Sweeteners Can Harm Gut Bacteria and May Lead To Diabetes, Obesity, and Cardiovascular Disease

U.S. consumption of artificial sweeteners has risen substantially in the last 20 years. Soda likely comes to mind, but aspartame and sucralose are being put into more and more products from bread to toothpaste. As more studies are being done, artificial sweeteners seem to be connected to more and more negative health consequences. That's probably because they're poison.

Artificial Sweeteners May Harm Gut Bacteria

Ariel Kushmaro is a professor of microbial biotechnology at Ben-Gurion University. He told Business Insider, "My recommendation is to not use artificial sweeteners." Kushmaro and his team performed a study with common artificial sweeteners and E. coli bacteria. Don't confuse this bacteria with the kind that makes us sick; E. coli is a beneficial bacteria in healthy human intestines.

Factory farming is how we get the "superbug" variety of E. coli. The "superbug" variety of E. Coli can happen when a cow is fed a very acidic, glyphosate-heavy grain diet while being pumped full of antibiotics. Whatever doesn't kill you…

Researchers exposed the E. coli to six artificial sweeteners including aspartame (Equal, NutraSweet), sucralose (Splenda), and saccharin (Sweet'N Low). They also subjected the bacteria to various protein powders and flavoring packets that use

artificial sweeteners.

> *After dosing the E. coli bacteria with artificial sweeteners 'hundreds of times,' Kushmaro concluded the sweeteners had a toxic, stressing effect, making it difficult for gut microbes to grow and reproduce. The researchers think that a couple of artificially sweetened sodas or coffees a day could be enough to have an influence on gut health –and could even make it tougher for the body to process regular sugar and other carbohydrates." – Business Insider*

Obviously, we need more testing. Fortunately, Kushmaro plans to run more of these kinds of experiments to see how artificial sweeteners alter the human gut microbiome.

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Artificial Sweeteners Won't Reduce Appetite, or Satisfy Sugar Cravings

Sugar-sweetened foods trigger hormones throughout the body and chemicals in the brain that leaves us feeling satisfied after eating. The phenomenon, how it works, is similar to what happens with addiction to drugs. The satisfaction is short-lived, but it's there. But artificial sweeteners don't provide the sugar, or any calories for that matter, so scientists say the "food reward" system is never activated. This is probably why artificial sweeteners are shown to increase appetite, and sugar cravings as well.

> *Some researchers believe that artificial sweeteners do not satisfy our biological sugar cravings in the same manner as sugar, and could therefore lead to increased food intake. However, the evidence is mixed." – Healthline*

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Artificial Sweeteners May Promote Obesity

In addition to promoting overeating, there are other mechanisms with which artificial sweeteners may promote weight gain. Sweet taste receptors are found not just in the mouth, but also in the bladder, the lungs, and our bones. Recent research looked at how artificial sweeteners affect our cells that make up our fat stores.

> *The new research, results of which were presented at ENDO 2018, the 100th annual meeting of the Endocrine Society in Chicago, looks at the effect that artificial sweeteners have on the cells that make up our fat stores. These cells have a glucose transporter (a protein that helps glucose get into a cell) called GLUT4 on their surface and, when we eat more sugar, the cells take up more glucose, accumulate more fat and become larger. The researchers in this latest study found that the artificial sweetener, sucralose, commonly found in diet foods and drinks, increases GLUT4 in these cells and promotes the accumulation of fat. These changes are associated with an increased risk of becoming obese." – The Conversation*

Artificial Sweeteners May Lead To Diabetes

Dr. Brian Hoffman, George Ronan, and Dhanush Haspula are the authors of a new study that found a link between consuming artificial sweeteners and changes in the blood that increases the prevalence of type 2 diabetes. Researchers found that acesulfame potassium, a sugar substitute, accumulated in the blood of rats tested. This accumulation of potassium harmed

the cells that line blood vessels. The study indicates that artificial sweeteners can alter how the body processes fat and how we use energy at a cellular level. According to the authors, this vascular impairment may lead to diabetes (and obesity).

Gut ecology plays a huge role in disease, including diabetes, and medical science is at the forefront of realizing this. A potential new treatment hailed to be a likely medical breakthrough removed the mucous membrane of the small intestine to cure type 2 diabetes. The treatment inserts a balloon into the small intestine and inflates the balloon with hot water, hot enough to kill the gut's mucous membrane. Within two weeks, if the patients eat well enough, a healthier membrane develops.

> *By destroying the mucous membrane in the small intestine and causing a new one to develop, scientists stabilized the blood sugar levels of people with type 2 diabetes. The results have been described as 'spectacular' – albeit unexpected – by the chief researchers involved. In the hourlong procedure, trialled on 50 patients in Amsterdam, a tube with a small balloon in its end is inserted through the mouth of the patient down to the small intestine.*
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> *"Even a year after the treatment, the disease was found to be stable in 90% of those treated. It is believed there is a link between nutrient absorption by the mucous membrane in the small intestine and the development of insulin resistance among people with type 2 diabetes." – The Guardian*

It stands to reason that if foods and chemicals like artificial sweeteners negatively influence our gut ecosystem, this damage may promote diabetes, as well as a host of other chronic illness.

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Artificial Sweeteners May Contribute to Cardiovascular Disease and More

Researchers from the University of Manitoba's George & Fay Yee Centre for Healthcare Innovation reviewed 37 trials that followed a total of more than 400,000 people for an average of 10 years. The study showed a link between artificial sweetener consumption and increased risk of obesity, high blood pressure, diabetes, heart disease, and other health issues.

Artificial Sweeteners Are Likely To Promote Candida

Modern health loves to compartmentalize everything. Natural health practitioners generally have a more holistic outlook. Our belief is and has been, that toxic chemicals do damage to the body in a myriad of ways, including damage to the gut microbiome. Damaging the gut's ecosystem has long-lasting, far-reaching consequences to virtually every facet of health.

Damage feeds candida and other pathogens. Cells in the body are made up of sugars and starches. When these cells are damaged they can feed pathogens. A healthy gut feeds the body with healthy, beneficial bacteria (it's a misnomer that all bacteria is supposed to stay in the gut). An unhealthy gut with pathogens feeds the whole body pathogens.

Toxic chemicals damage the gut's ecosystem and they also do damage all over the body in various ways. This promotes pathogenic proliferation. Candida is a normal part of a healthy gut colony, but if beneficial bacteria is damaged enough candida is very likely to take over. If not candida,

other another fungus is likely there ready and waiting. It’s nearly impossible to kill fungal spores. Once they proliferate it’s a challenge to get them under control, especially with our modern sugar and toxin-laden diets.

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