

# Sweeteners may affect your gut biome and raise blood sugar levels

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It's well-known that "full fat" fizzy drinks such as colas, lemonades and energy drinks raise the risk of obesity, heart disease and diabetes. People who have one can or more a day have a 26% increased risk of

developing type 2 diabetes. Sugary drinks rapidly increase blood sugar levels and this can lead to tiredness and increased hunger even in people without diabetes.

Until now, their sugar-free diet equivalents have been regarded as the healthier alternative. While [sugary drinks](#) are generally off-limits for Britain's 4.3 million registered diabetics (except in emergencies when their [blood sugar](#) levels need to rise rapidly), it's not been thought that diet drinks pose a risk for diabetics or anyone trying to lose weight.

However, a leading medical expert says there is now strong evidence that many types of artificial sweeteners used in diet drinks (and some foods) affect our blood sugar levels, worsen insulin resistance and alter our [gut flora](#).

Dr. Avinash Hari Narayanan (MBCChB), Clinical Lead at London Medical Laboratory, says, "The fact that many so-called 'diet' drinks could be exacerbating symptoms for known diabetics, as well as severely affecting those who remain undiagnosed, is bad news.

"London Medical Laboratory's latest analysis reveals one million people in the U.K. are likely to have undiagnosed type 2 diabetes. This invisible killer shortens lives by up to 10 years. That's why we launched our 'Give the finger to diabetes' campaign to identify undiagnosed cases with a simple fingerprick blood test. In 2019, there were almost 14,000 diabetes-related deaths in the U.K. The earlier people are diagnosed, the better the outcome.

"Increasingly, diabetics and health-conscious people have turned to sugar-free versions of their favorite drinks. However, our analysis of the latest research finds that saccharin and sucralose are likely to increase blood sugar or [glucose levels](#) and adversely impact the [gut microbiome](#) (the collection of organisms that live in our digestive tracts). Researchers at

John Hopkins University [tested](#) random groups of healthy, non-diabetic people and found that participants taking saccharin and sucralose had noticeable spikes in their [blood sugar levels](#).

"The researchers discovered that these sweeteners were influencing changes in bacteria in the gut and mouth. Changes were also identified in their blood samples. In fact, the blood metabolite changes in those people consuming saccharin and sucralose were so marked they were similar to those in people with diabetes or vascular diseases.

"The researchers concluded that some commonly consumed non-nutritive sweeteners may not be physiologically inert in humans as previously contemplated. Gut microbiome changes can cause spikes in blood glucose, impairing the body's ability to effectively regulate glucose levels.

"This finding has been strongly supported by [a 2022 paper](#) published in the journal *Microorganisms*, which concludes sucralose consumption can induce gut dysbiosis (imbalance) and altered glucose and insulin levels in healthy young adults.

"Concerningly, it's not just saccharin and sucralose-based sweeteners that are under investigation. Two recent trials [reported](#) in *Nutrition Reviews* have shown that consumption of another popular sweetener, aspartame, may affect our body's concentrations of glucose, insulin and a hormone that reduces appetite and releases insulin called glucagon-like peptide 1.

"The root cause of some of these results is still being debated. Intriguing [research](#) published in the *Journal of Family Medicine and Primary Care* in 2020 investigated the possibility that ingestion of artificial sweeteners results in the erroneous release of insulin from the pancreas (due to their sweet taste). This increases the levels of insulin in our blood, eventually

leading to decreased receptor activity due to [insulin resistance](#).

"Alarming discoveries like these latest artificial sweetener findings emphasize why Britain's 4.3 million diabetics need regular, accurate blood testing. While old-school traditional fingerprick tests using meters and strips are worthwhile, the next-gen HbA1c fingerprick tests are so sensitive that they could replace diabetics' annual visits to their surgery for a full HbA1c blood test.

"London Medical Laboratory's fingerprick HbA1c Diabetes—Diagnosis and Monitoring test is considered the gold standard in regular testing. It is used to measure the average level of [blood glucose](#) over the past two to three months and both accurately monitor and diagnose diabetes. It can be taken at home through the post, or at one of the many drop-in clinics that offer these tests across London and nationwide in over 95 selected pharmacies and health stores."

Provided by London Medical Laboratory

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