Can Diet Soda Really Cause Type 2 Diabetes? What New Research Shows Transcript

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Diet Soda and Diabetes Risk

Do diet drinks increase your risk of type 2 diabetes? What if taking the sugar out of soda and replacing it with non-sugar sweeteners increases your risks of diabetes.

For decades, millions of people have made what seems like a logical trade. Instead of drinking a regular soda containing 35 to 40 grams of sugar, a whopping amount, They choose the diet version with essentially no sugar and very few calories.

Now the reasoning seems straightforward. High intake of sugar sweetened beverages has been associated with weight gain, insulin resistance and type 2 diabetes.

So if you remove the sugar, and replace it with a non-caloric sweetener, an artificial sweeteners, you expect the beverage to be much better for your metabolic health.

Well at least this is what has propagated in conventional medicine, but not in nutritional and integrative medicine. And a growing body of research suggests that this doesn't seem to be the case.

A fascinating new study published in the European Journal of Nutrition in 2026 followed more than 2,600 adults in Amsterdam for about seven years. In the primary analysis, researchers compared people consuming non-sugar sweetened beverages, artificially sweeten beverages with people who reported consuming none.

2026 Amsterdam Cohort Findings

The researchers divided consumption into three categories, zero servings per day, up to one serving per and more than one per serving. Importantly, Zero Servings Per Day was the reference group.

After adjustment for multiple risk factors, participants consuming more that one non-sugar sweetened beverage per had a 2.26 times higher incidence rate of type 2 diabetes compared with those consuming none.

The association was particularly notable in several groups. Among people with a body mass index of 25 or greater, those consuming more than one non-sugar sweetened beverage per day had a 2.19 times higher incidence rate of type 2 diabetes compared with those consume none.

Among participants of non Dutch origin, Those consuming one more non sugar sweeten beverage a day, had about a 3 times high incidence of Type 2 Diabetes compared to those who consume None.

There was also an interesting finding among younger adults. Among participants ages 18 to 49, those consuming up to one non-sugar sweetened beverage per day had a 2.25 times higher incidence rate of type 2 diabetes compared with those consumed none.

But the researchers then performed another analysis that I think may be even more interesting. And the researchers asked a very practical question. Does simply removing sugar and replacing it with a non-sugar sweetener, like an artificial sweetner, automatically make a beverage metabolically healthy?

To answer that, it helps to understand what these sweeteners actually are.

Types of Artificial Sweeteners

Some of the most common artificial sweeteners used in foods and beverages include ones I'm sure most of you are familiar with include aspartame, sucralose, astosulfame potassium and saccharin.

Aspartane is approximately 200 times sweeter than table sugar. It's broken down the digestive system primarily into phenylalanine and asparic acid along with a small amount of methanol.

Sucralose, often associated with the brand Splenda, is approximately 600 times sweeter than table sugar. It's made by chemically modifying the sucrose molecule.

A salsa-fame potassium commonly called Ace K is about 200 times sweet than sugar and is frequently combined with other sweeteners such as aspartame or sucralase.

Saccharin is one of the oldest artificial sweetener and it's several hundred times There's also non-sugar sweeteners derived from natural sources, including steviol, glycosides from the stevia plant, and monk fruit extracts.

But here's an important point about the 2026 study. The researchers did not identify the individual sweetener that participants were consuming. No, they classified beverages broadly as either sugar sweetened beverages or non sugar, sweet beverages.

The beverage categories included syrup-based drinks, soft drinks ice teas, and energy and sport drinks which were distinguished according to whether they contained sugar or non-nutritive sweeteners like artificial sweetener.

But as a problem, this study cannot tell us that aspartame caused the increased incidence. It cannot us tell that sucralose caused it. it cannot tells that any of the artificial sweeteners or say like stevia extract caused.

In other words, the results apply to the broad category of non-sugar sweetened beverages consumed by this population, not to any individual sweetener.

Observational Studies on Diabetes Risk

And that's an important distinction because these compounds are chemically different and may have different effects in the human body. However, this isn't the first study to raise concerns about artificial sweeteners and type 2 diabetes.

A large prospective study published in Diabetes Care in 2023 followed more than 105,000 French adults in the NutriNet-Sante cohort. Unlike the new beverage study, these researchers were able to estimate intake of individual artificial sweetness from foods and beverages.

Higher overall artificial sweetener consumption was associated with a 69% higher risk of developing type 2 diabetes compared with non-consumption. And when the investigators examined the specific sweeteners, higher consumption of aspartame was associate with 63% high risk.

Acesulfame, potassium had a 70% risk and sucralose had 34% highest risk Again, these were associations from an observational study. They don't prove sweeteners cause diabetes, but again, you do see the association.

And now the authors of this new 2026 study discussed that French study I just mentioned, and note that total artificial sweetener consumption, as well as aspartame, sucralose and the other ones, were associated with a higher type of type 2 diabetes risk.

Another important study was published in Diabetes Care in 2019, and it used data from three major American cohorts, the Nurses' Health Study, Nursers' health study 2, Health Professionals Fall-up Study.

Together, this study included more than 190,000 men and women and documented almost 12,00 cases of type 2 diabetes.

Microbiome and Metabolic Mechanisms

People who increased their consumption of artificially sweetened beverages by at least half a serving per day over a four-year period of time had an 18% higher risk of developing type 2 diabetes.

And the 2026 paper I mentioned in this video also cites that finding. But what's also interesting is that when you look at research where they replace a sugary beverage with water, coffee, or tea, of course, as you may expect, there was a lower risk of diabetes.

Another prospective European investigation, the EPIC Norfolk study, also found an initial association between artificially sweetened beverage intake and type 2 diabetes Now the authors of this new study do point out the possibility that people who are overweight, obese, have pre-diabetes, may preferentially choose.

Therefore, some of the associations could reflect underlying metabolic risk rather than a direct harmful effect from the beverages themselves. But there's another part of story.

We know the mechanistic activities that occur with these non-nutritive sweeteners. For example, we have some good studies in regard to the gut microbiome.

A randomized controlled study published in the journal Cell in 2022 examined 120 healthy adults who normally consume very little artificial sweetener.

and the participants then received saccharin sucralosus spartame or stevia for two weeks at amounts below their acceptable daily intake. The researchers found that the different sweeteners produced distinct changes in the oral and intestinal microbiomes, but the effects on glucose regulation were not identical.

For example, saccharin and sucralose significantly impaired glycemic response, whereas the same significant group level impairment was not demonstrated with aspartame or stevia.

And that's a very important point because it suggests that we should not lump every non-sugar sweetener together and assume they all have exactly the Same metabolic effects.

The authors of the new 2026 study also discuss the microbiome as one of potential mechanisms for the detrimental effects. They note that the artificial sweeteners may affect gut microbial composition and function, insulin resistance, inflammatory responses, and appetite regulation.

Another proposed mechanism why you get the blood sugar dysregulation involves sweet taste receptors in the gastrointestinal tract. Now, most people think that sweet tastes receptors exist only on the tongue.

Well, they don't. They actually occur in intestines. And when they're activated, that could disrupt certain types of metabolic signaling.

Healthier Beverage Alternatives

which can cause the secretion of hormones and substances like GLP-1 for example, insulin, glucagon, and this can disrupt normal blood sugar regulation.

Researchers have also proposed effects involving inflammation and oxidative stress. Chronic low-grade inflammation can interfere with insulin signaling.

So when muscle, liver, and fat cells become less responsive to insulin, the pancreas compensates by producing increasing amounts of insulin. Over time, this insulin resistance combined with the greater demands on the Pancreatic cells can contribute to the development of type 2 diabetes.

So these are some of the mechanisms how these artificial sweeteners can disrupt blood. So I do not recommend

my patients consume these Artificial sweetener at all.

If you do, it should be very sporadic. Obviously focus on purified water, you can have carbonated water. There's certainly many good products out now where you have naturally flavored waters, where they're mildly flavored and you don't have problems with calories and sugar or artificial sweetness.

You know tea, organic coffee is great. Of course we have several studies showing that the intake of coffee actually decreases the risk of type 2 diabetes.

So be very careful in terms of your intake. of artificial sweeteners. Well I hope this video was helpful. Make sure you hit the like button and subscribe to the channel if you haven't subscribed yet.

I look forward to meeting you in future health videos.