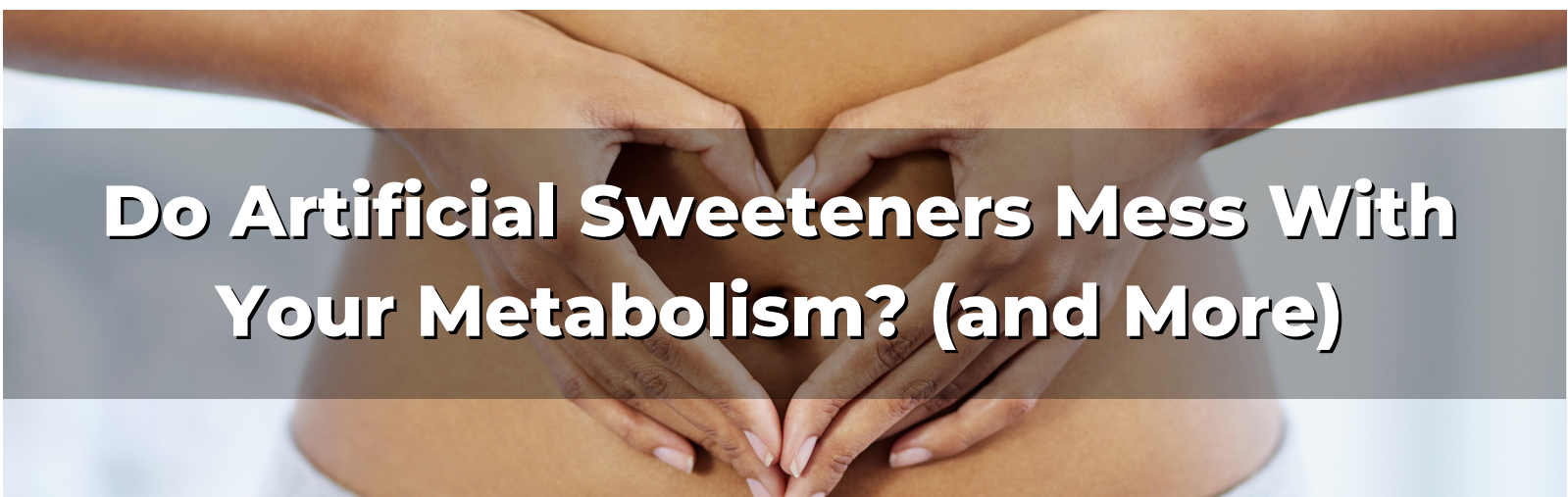




Do Artificial Sweeteners Mess With Your Metabolism? (and More)

Artificial sweeteners show up in more than just diet soda—they're in everything from cereal and yogurt to bread, soups, protein powders, and snack bars. They promise sweetness without the sugar, but they've also raised concerns about metabolic effects, cravings, and gut health. Some people swear by them as a weight loss tool, while others avoid them entirely, citing microbiome disruption and insulin spikes. The truth, as usual, lies somewhere in between.

Metabolic effects vary by sweetener—and by person

Artificial sweeteners don't raise blood sugar the same way regular sugar does. But that doesn't mean they have no effect on metabolism. In a 2022 study published in *Cell*, researchers found that some sweeteners—particularly saccharin and sucralose—impaired blood sugar control in certain individuals. Not everyone responded the same way, and the effects seemed to depend on a person's existing gut microbiome.

That same study showed that changes in the microbiome may be what's driving the shift in glucose response. In fact, when fecal samples from affected individuals were transplanted into germ-free mice, the mice also showed impaired glucose tolerance. This suggests that the sweeteners themselves aren't acting alone—the microbiome plays a key role in how the body reacts.

The gut microbiome may be especially sensitive to certain sweeteners

Emerging research suggests that some artificial sweeteners can alter the composition and function of gut bacteria, especially in large or frequent doses. Saccharin and sucralose have been studied the most, with evidence linking them to reduced microbial diversity and a drop in beneficial strains like *Lactobacillus* and *Bifidobacteria*. These shifts are concerning because a healthy, diverse microbiome is tied to better immune function, digestion, and metabolic health.

That said, not all sweeteners have the same effect. In the *Cell* study, stevia and aspartame did not cause significant microbiome changes or glucose issues. And in the real world, dose matters—most studies showing adverse effects used higher amounts than what most people typically consume.

Nonetheless, regular use of certain sweeteners—especially saccharin and sucralose—may disrupt the gut microbiome, whether it's already off balance or in good shape. Even a healthy gut can shift in ways that aren't beneficial over time.

What about cravings and weight?

There's also ongoing debate about whether artificial sweeteners reduce or increase sugar cravings. Some argue that hyper-sweet flavors, even those delivered calorie-free, can make it harder to enjoy less-sweet foods, reinforcing a preference for sweet tastes.

But controlled trials have shown that when people swap out real sugar for the fake stuff, they often consume fewer calories and may lose a small amount of weight. That effect tends to be strongest when the switch is part of a structured effort to reduce added sugar across the board. On the other hand, relying on diet soda and artificially sweetened snacks without changing other habits may not lead to the same benefit.

Bottom line

Artificial sweeteners affect people differently, and some may have more impact on gut health or metabolism than others. While the science is still evolving, sweeteners like saccharin and sucralose are more likely to disrupt the microbiome, especially with frequent or high intake.

In general, it's best to minimize their use, especially if your goal is to reduce cravings, support gut health, and shift your taste preferences over time. That said, if artificial sweeteners help you cut back on added sugar and stay on track with your health goals, stevia and monk fruit are better choices. They're plant-derived and, so far, appear less likely to affect blood sugar or gut bacteria, particularly in small amounts.

If you're using sweeteners as a tool, keep them occasional, pay attention to how your body responds, and focus on gradually lowering your overall desire for sweetness. The less you rely on intensely sweet flavors—real or artificial—the easier it becomes to enjoy food as it is, without needing to mask or mimic sugar.

Still, the bigger picture matters most. When your diet is centered around whole, nourishing foods and drinks, there's little room left for food chemicals—including artificial sweeteners. There's also less room for added sugar, which means that when you do want something sweet, you can enjoy the real thing in moderation—without overdoing it.

References:

- Suez J, et al. Personalized microbiome-driven effects of non-nutritive sweeteners on human glucose tolerance. *Cell* 2022;185(18):3307–3328.e19.
- Page KA. A gut reaction: Microbiome-driven glycemic effects of non-nutritive sweeteners. *Cell* 2022;185(18):3279–3281.
- Suez J, et al. Artificial sweeteners induce glucose intolerance by altering the gut microbiota. *Nature* 2014;514(7521):181–186.
- Ruiz-Ojeda FJ, et al. Effects of sweeteners on the gut microbiota: A review. *Nutrients* 2019;11(3):521.
- Lobach AR, et al. Low/no-calorie sweeteners and body weight and composition. *Adv Nutr* 2019;10(suppl_1):S47–S54.

Banana Bites with Peanut Butter and Cacao Nibs



This simple snack hits the sweet spot—no added sugar needed.

Ingredients:

- 1 ripe banana, sliced into rounds
- 1–2 tablespoons peanut or almond butter
- 1 tablespoon cacao nibs or finely chopped dark chocolate

Instructions:

Spread a little nut butter on each banana slice. Sprinkle with cacao nibs or chocolate. Place on a tray and freeze for 1–2 hours until firm. Store in a container in the freezer for a quick, satisfying treat.

