

# THIS IS YOUR BODY ON... SUGAR

Your body needs some sugar to function, but Canadians, who consume the equivalent of 26 teaspoons of the sweet stuff every day, are probably overdoing it. We break down what too much sugar does to your body, and how you can cut back.

BY YUKI HAYASHI



PHOTOGRAPHY, GETTY IMAGES

## Good news for those with sweet teeth:

Glucose is our main source of fuel, so, yes, we actually do need sugar in our diets. But don't get too excited—they're not all alike.

"All carbohydrate-containing foods, whether candy, pop, fruit, vegetables or grain products, break down into glucose in our bloodstream," says Patricia Chuey, a Vancouver-based registered dietitian. "But our bodies respond differently when we get sugar from nutrient-dense, fibre-rich foods, eaten as part of a balanced meal that contains protein, compared to 'empty' calories from zero-nutrient, fibre-less foods."

Those carb-heavy, low-nutrient foods cause our blood-sugar, or glucose, levels to spike, triggering the release of insulin in response. One of insulin's jobs is to move glucose from the blood to our liver, muscle and fat cells for storage, and when there's more in our bloodstream than what our bodies need for energy, it can end up as stored fat—"even though fat, per se, wasn't consumed," says Chuey. That's partially why excess sugar consumption is linked to fatty liver disease, as well as Type 2 diabetes and heart disease. Fibre-rich, nutrient-dense foods, on the other hand, break down more slowly, so they don't cause as much of a blood-sugar spike, or the resulting weight gain.

That doesn't mean you have to skip your favourite sweet indulgences entirely. What we know today is that moderation is key—a little sugar won't hurt you.

But, for the most part, Canadians are not consuming a little sugar. According to Statistics Canada, on average, 22 to 26 percent of our total daily caloric intake consists of sugar. Put another way, that's an average of 110 grams, or 26 teaspoons, per day. And it's not just how much; experts are also concerned about where it comes from.

"Whole foods that are sweet, like fruit, can be good sources of vitamins, minerals and fibre, which can contribute to overall health," says Gita Singh, a research assistant professor at the Friedman School of Nutrition Science and Policy at Boston's Tufts University.

It's added sugar, regardless of the source, that's the problem. You'll find it in processed foods, such as many breads, soups, salad dressings and pasta sauces. And then there's pop, sports drinks and fruit drinks, which experts collectively refer to as sugar-sweetened beverages (SSBs). These drinks are among the top causes of obesity and its attendant ailments, which include heart disease, Type 2 diabetes, certain types of cancer and other chronic diseases. In fact, Singh coauthored a report published in the medical journal *Circulation* that estimates SSB consumption is partially responsible for the diabetes-, cancer- and cardiovascular disease-related deaths of 1,600 Canadians each year.

The fact that SSBs are a leading source of excess sugar in our diets is galling but encouraging. That's because the solution is straightforward: Stop, or at least cut back on, drinking them.

Chuey says you can further reduce the added sugar in your diet by avoiding convenience foods that list sugar (or maltose, corn syrup, cane sugar or honey) among the first three ingredients; swap your caramel macchiato for a latte; and top plain yogurt with fresh fruit. The less sugar you consume, the less you'll end up craving.

But when you do indulge, go all in. "Apply the pleasure maximization principle," says Chuey. "Make it really worth it! Not in terms of quantity, but the kind of quality that will really satisfy." So skip the soda fountain. But those homemade cookies? Enjoy! ●

**FIND OUT HOW TO BEAT YOUR SWEET ADDICTION AT [canadianliving.com/sugardetox](http://canadianliving.com/sugardetox).**

- Brain food**  
Our brains run on glucose. But it's a delicate balance: too little and we can't focus; too much and we may have memory and cognitive problems.
- Heart hazard**  
If 17 to 21 percent of your daily calories come from added sugar, you have a 38 percent higher risk of dying from cardiovascular disease than someone on a low-added-sugar diet, according to a study in *JAMA: Internal Medicine*.
- Liver disease**  
A sugar-heavy diet contributes to fatty liver, a condition that can eventually progress to diseases such as cirrhosis or liver cancer.
- Energy frenemy**  
A quick hit of energy is associated with a sugary snack. But that energy slump afterward? #thestruggleisreal
- Obesity**  
One U.S. study found that for each 12-ounce can of soda consumed a day, a child's odds of becoming obese rose 60 percent within a 1½-year followup period.
- Cancer contributor**  
One study found that sugar consumption increased the development and metastasis of breast tumours in mice.
- Skin ager**  
High sugar consumption may damage collagen and elastin molecules, leading to wrinkles and sagging skin. Limit your intake for an anti-aging boost.
- Asthma trigger**  
A 2008 study suggested high sugar consumption may be linked to allergic inflammation of the airway in mice.

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## SWEET ESCAPE

There are lots of table sugar subs on the market, but how do they stack up, health-wise?

**ZERO CALORIES per teaspoon**  
Stevia is a zero-calorie, fructose-free option.

**11 CALORIES per teaspoon**  
Date sugar contains all the fibre and nutrients found in the dried fruit.

**15 CALORIES per teaspoon**  
Made from the sap of coconut-tree flowers, coconut sugar has the same calorie count as table sugar, but it's lower on the glycemic index.

**15 CALORIES per teaspoon**  
Agave nectar is about 1½ times sweeter than refined sugar, so you can use less. But it's high in fructose (hello, blood-sugar spikes!).

**17 CALORIES per teaspoon**  
Bad news: Brown sugar is no healthier than granulated white sugar.  
— Sarah Dziedzic