Food Addition/Emotional/Binge Eating & Over-Eating? Causes & Solutions

Trigger Warning: Some people may be sensitive to the contents of this document. whichis intended for educational purposes only. Anyone who believes they may be struggling with any form of addiction, be that food or other substances should always seek the help of their medical doctor.

Addiction and the Brain

Drugs, alcohol, nicotine, even caffeine alter how we feel, and like all feelings, they generate in the brain. While different substances spark their own unique interaction with neurotransmitters — stimulants like cocaine make us feel more alert; alcohol, a depressant, tends to relax and disinhibit — all trigger the release of dopamine, which ultimately makes us feel good (at least temporarily). But more important, that hit of dopamine makes us want *more*.

Plenty of things generate a rewarding neurochemical response but don't lead to addiction. A 2011 study showed that simply stroking a dog can boost oxytocin, yet few people become compulsive pooch petters.

Drugs and other addictive substances are different because their impact on the brain extends beyond momentary bliss by forging structural changes in our neurochemistry. The brain naturally generates dopamine and other feel-good chemicals; drugs essentially open the floodgates. The constant rush of dopamine causes the brain to produce fewer dopamine receptors on its own, leaving the user with a deficit when the drug surge subsides. In time, the brain requires greater and greater amounts of the substance to make up the difference. This is what's known as tolerance.

Not only does the addicted individual need to use more of a substance to reap the same reward, they're likely to feel depressed, irritable, or — depending on the frequency and intensity of their addiction — in physical pain when they aren't using. This is withdrawal.

Tolerance and withdrawal act as complementary levers of reinforcement in the brain's reward center, making it difficult or even dangerous for addicts to stop using once they've passed a certain threshold of dependency.

A Toxic Relationship

Over time, excessive substance use can cause significant harm to both brain and body. But the toll addiction takes on a user's family, friendships, and other aspects of life can be just as consequential.

Here's where the psychological component of addiction comes in. Aimee Murray, PsyD, an assistant professor of psychiatry at the University of Minnesota who works with individuals struggling with addiction, likens the condition to a toxic relationship in which the individual with addiction becomes preoccupied with his or her "partner" to an unhealthy degree.

"That relationship becomes the center of everything," Murray explains. "Someone who's addicted to alcohol might spend inordinate amounts of time throughout their day agonizing over their hangover from last night's binge, while at the same time obsessing about when they'll be able to have their next drink and where they'll go to get it."

In other words, it's not just the consequences of using a substance but the outsized role it plays in a person's life that can lead to problems. The addiction overshadows work, hobbies, health, and family. Relationships, in particular, are liable to fray in the face of addiction. "Support systems deteriorate." Murray says. "The substance use interferes with the individual's ability to stay connected with other people."

Addiction to Habits

For decades, addiction research, treatments, and general awareness have centered on substance use. But it's also possible to become addicted to a behavior.

Gambling is currently the only behavioral addiction recognized by the American Psychological Association. The DSM-5 criteria for Gambling Disorder doesn't look that

different from substance-use disorders, characterized by preoccupation, repeated unsuccessful attempts to quit or cut back, continued use despite negative consequences, and tolerance.

Experts are beginning to explore whether other behaviors can lead to a similar pattern.

Of particular interest is technology use. Recent studies have demonstrated that our phones' electronic notifications trigger dopamine hits similar to those associated with cocaine and other addictive substances, and some have suggested that Facebook, Twitter, and other social-media sites were purposely designed to encourage compulsive use. (In fact, former Facebook vice president Chamath Palihapitiya publicly apologized for creating these addictive "dopamine-driven feedback loops").

What's more, there's growing evidence that we can develop a toxic relationship with tech not unlike that of substance addicts. South Korean researchers found that roughly one-third of the 1,824 middle-school students who participated in a study on smartphone use demonstrated an addictive relationship to their device, endorsing questionnaire items such as "My school grades dropped due to excessive smartphone use," "Family or friends complain that I use my smartphone too much," and "I panic when I cannot use my smartphone."

Other behaviors that are normal or even healthy in moderation may also become problematic after a point. Even exercise. What might start as a healthy habit can morph into an obsessive fixation on calories burned or miles logged. A compulsive exerciser may skip out on social or family obligations in order to get their fitness fix, or force themselves to hit the gym even when they're suffering from a strained muscle. Exercise becomes the "toxic partner," taking precedence over everything else.

Ultimately, notes Murray, it's still not clear whether all behavioral addictions operate with the same underlying mechanisms as substance addictions. But there's a growing push to ground theories in hard data, and Murray expects more research to emerge. "I think we'll have a lot more conclusive evidence around how those types of addictions work in the years ahead," she says.

In the meantime, it's worth taking an honest inventory of your relationship with substances or behaviors that run the risk of turning addictive.

Do you have an addiction problem?

The checklist below is based on substance-use-disorder criteria from the DSM-5. If you check three or more of these boxes, you may have an unhealthy relationship with a substance or behavior.

- You frequently use or do more than intended.
- You have attempted many times to cut back or quit but haven't been able to stick with it.
- Even when you aren't doing or using it, the substance or behavior is on your mind (this could include recovering from the last time or planning the next time).
- Your use or behavior has had negative consequences on work, school, relationships, or other important parts of your life.
- You continue to do or use despite those negative consequences.
- You have given up or de-prioritized things that used to be important to you in order to do or use.
- You need more of the substance or behavior than you used to in order to feel good.
- You feel depressed, irritable, or otherwise bad when you aren't doing or using the behavior or substance.

This originally appeared as "Understanding Addiction" in the July/August 2019 print issue of Experience Life.

Why Good People Make Bad Decisions

For starters, there's no such thing as a "pure" decision based on cold logic and empirical information. Instead, every choice we make is filtered through the context of our senses and acquired biases. And those decisions are reinforced every time one of them results in instant gratification.

"Those [instantly gratifying] decisions become habit, and habits are hard to break," says MIT behavioral economist Dan Ariely, author of *Predictably Irrational: The Hidden Forces That Shape Our Decisions* .
It also can be scary to break with the familiar, says psychologist Rom Brafman, PhD, coauthor with brother Ori Brafman of *Sway: The Irresistible Pull of Irrational Behavior*. So

we'll stick with unsuitable partners and jobs in repeated episodes of "loss aversion" — times when we make every effort to avoid losing an "investment" of years spent, even if they were bad years.
And what fuels our perception that the occasional cigarette or delayed medical test won't ever affect us? Harvard legal scholar Cass Sunstein and University of Chicago economist Richard Thaler, coauthors of *Nudge: Improving Decisions About Health, Wealth, and Happiness*, suggest that it is "unrealistic optimism," or our tendency to see ourselves as immune from common problems. ("Other people might suffer a heart attack or have a drinking problem or get divorced — but not me!") We perceive ourselves as having a "free pass," and in that frame of mind, it's easy to justify irrational decisions.

Choice Architecture

You can help yourself make smarter choices by becoming a "choice architect," say Thaler and Sunstein. Choice architecture is the practice of reorganizing the context in which you make decisions — in other words, making a change in your physical surroundings or daily processes to promote better decision-making. A simple example: If the fridge is stocked with fresh fruits and veggies, and the frozen toaster tarts are conspicuously missing, you're set up to make the healthier choice.

It's critical that we institute our own choice architecture, because our world is teeming with sneaky choice architects who work to influence our decisions to benefit them — often to our detriment. Credit-card companies cleverly place the enticing "minimum amount due" box right next to that huge depressing total — and we take the bait despite knowing we'll pay much more in interest (while they rake in even bigger profits). Advertisers employ clever psychological devices to trigger the brain's reward center and encourage us to buy items we don't need (and sometimes don't even want).

But with a little planning and rearranging, we can help ourselves make smarter choices about the things that matter most.

Small Changes, Better Choices

When staff at a large school cafeteria altered the layout of food — carrots at eye level, French fries further out of reach and desserts in a remote line — children chose healthier foods, report Sunstein and Thaler. The manipulation was designed by a supermarket consultant skilled in grocery layout tricks that get us to choose processed, expensive junk (the junk-makers pay for prime placement) over fresh, whole foods. Obviously you

can't rearrange your grocery store, but always bringing a list when you shop will help you ignore the purchase persuaders.

Try the following strategies to create healthier choices:

- **At home,** cut fruit and veggies into snack-friendly sizes and keep them front and center in the fridge; sequester unhealthy treats in the back of a high cupboard or buried in the freezer (or don't bring them home at all).
- **Keep exercise gear front and center.** Park your workout shoes right by the bed if you want to go to the gym first thing in the morning. Leave your bike near the garage door so you can access it easily when you want to ride.
- **At restaurants,** be aware that peer pressure can lure you into ordering and eating more than you otherwise might. "We know from studies that people really want to be similar — if others order appetizers, or drinks, or dessert, we'll get them, too. And we tend to get similar entrées," says Ariely. We'll also cave to what the waiter is pushing, he notes. **Smart tactic:** Make your decision before the waiter comes and order before others. You can even look at the restaurant menu online and make your decision before you go. Restaurant portions also tend to be on the large side, so ask for a to-go box right away and stash a portion before you start.
- **Use cash.** Sunstein and Thaler cite multiple studies showing that people spend more when paying by credit instead of cash. Try withdrawing the amount of money you need for weekly expenses and leaving your credit cards at home. If you still feel plastic's siren song, try making them even less accessable: put your card in a lockbox in the basement and stash the key in a drawer on the upper floor. Then, when you get the urge to spend, you will have several flights of stairs and extra effort to think through whether the item in question is really worth it.

These are just a few examples of how to help yourself make smarter, healthier choices — and to nudge yourself toward a happier, more fulfilling life. With these types of small changes, says Ariely, you'll soon be on the road to "behaving like the person you want to be."

Make the Smart Choice

Have a goal you want to reach but struggle making the choices that will get you there? Here is some smart architecture for specific goals:

- **If you want to eat more whole foods,** buy a subscription to a CSA (community supported agriculture). CSA farmers deliver fresh, seasonal produce to your door each week. The amounts are often quite generous, as well. You'll be hard-pressed to *not* eat your veggies when they're delivered directly to you in their seasonal prime.
- **If you want to be more active,** always park your car a healthy distance from your destination (the far end of the parking lot or the opposite end of the block). Also make a commitment to take the stairs when you have a choice. You'll work more steps into your day without having to work in the time needed for a traditional workout.
- **If you want to save money,** pick one small spending habit and pay yourself *not* to do it anymore. For every morning you make coffee at home and forgo the pricey coffeehouse, put a dollar in a jar. You'll have a nice kitty at the end of the month to add to savings.
- **If you want to choose *any* better option** (stop smoking, clean your garage, you name it), sign up with www.stickk.com. You sign a binding contract to carry out your goal, commit some cash, and then if you don't do what you say, your dough goes to charity — or, even better, an anti-contribution (think donation to cigarette-maker Philip Morris). Or negotiate a Stickk with a friend who'll resist your excuses and make you pay up.

ALL ABOUT SUGAR

Blood Sugar Basics

The body wants to maintain a relatively narrow range of sugar — or glucose — in the bloodstream. Significant medical problems, up to coma and death, can arise when sugar concentrations swing too far outside of these ranges. Luckily, for most of us, there is a complex web of systems in place to prevent those fluctuations from being lethal.

However, even minor swings outside of these ranges can have negative health consequences. Here's an overview of how blood sugar works:

- Sugar in the blood comes either from the foods we eat or is produced by the liver.
- When blood sugar rises, our cells can use it for energy (when we're active), and the pancreas releases a hormone called insulin. The insulin release lowers blood

sugar by either putting it into storage as glycogen (in the liver or muscles) or into fat tissue. Our glycogen stores are limited, but unfortunately, our fat storage is not.

- Carbohydrates, especially those that are refined and low in fiber (such as sugary foods and most bread, cereals, and pasta) can cause a rapid spike in blood sugar, much more so than proteins, fats, and high-fiber foods.

- If blood sugar goes too low or if too much time passes between meals, a hormone called glucagon breaks down the stored form of carbohydrate in the liver to boost blood sugar until the next meal.

This spike in blood sugar from the liver — called gluconeogenesis, or formation of new glucose — can also happen in response to growth hormone, epinephrine (adrenaline), and cortisol, our body's stress hormone.

Common Issues With Blood Sugar

Think of health and disease on a spectrum: If optimal blood-sugar control is on one side, a diabetes diagnosis (especially type 2 diabetes) is on the other. It can take months, years, or even decades to move along this path. With every step of the way, health risks and complications mount.

There are a few primary categories of blood-sugar issues:

Hypoglycemia

This is dangerously low blood sugar. It can happen when the body produces too much insulin (such as after a meal very high in sugar or carbohydrate), after drinking alcohol, after going too long without eating, or with certain medications and conditions. In those with diabetes, it can occur when too much medication and/or insulin is given.

Prediabetes

This is when blood sugar is higher than normal, but not high enough to be diagnosed as type 2 diabetes. There's a good chance of eventually getting diagnosed if lifestyle and nutrition interventions are not implemented.

Type 2 diabetes

This is the more common form of diabetes and is most often linked to controllable lifestyle factors, although genetics can also increase your risk.

In this form of diabetes, the pancreas produces insulin (which lowers blood sugar), but the body does not use it properly, causing levels of blood sugar to rise. This poor response

is referred to as *insulin resistance*. Progressively worsening insulin resistance leads to a diabetes diagnosis.
Type 2 diabetes used to be called "adult-onset" diabetes, but it is now impacting children and younger adults at alarming rates. Oral medications — or even extra insulin — might be needed to control it.

Gestational diabetes

This is when diabetes is identified for the first time during pregnancy. It can cause complications for both the mother and the baby. While there are various proposed causes, such as hormone changes that happen during pregnancy, it sometimes can result from blood-sugar issues that existed before pregnancy that are first *identified* from screenings done during pregnancy.
Often, blood sugars go back to normal after delivery, but the risk of developing type 2 diabetes in the next decade is 10-fold higher for moms who had gestational diabetes during pregnancy.

Type 1 diabetes

This condition is rare in comparison to type 2 diabetes. It's often — but not always — triggered in childhood, and so sometimes is referred to as "juvenile diabetes." It's considered an autoimmune condition and causes the pancreas to secrete little to no insulin. Therefore, taking insulin daily is required to survive.
Each of these blood-sugar issues can contribute to chronic inflammation and come with a host of associated health risks.

How Do I Know If I Have Blood Sugar Issues?

Subjective symptoms sometimes, but not always, can provide clues that blood sugars are unstable. When blood sugar first starts going wonky, you may notice:

- Significant energy swings after eating, including either a noticeable boost in energy or fatigue after meals
- Cravings for sugar, starch, and carbohydrates
- Trouble staying asleep
- Feeling "hangry," including irritability, shakiness, or headaches between meals
- Extreme thirst, excess urination, and blurred vision in more severe cases

Objectively, lab testing is the gold standard in identifying issues:

- **Blood-sugar trends:** General medical cutoffs for blood sugar are 70 mg/dL on the low end and less than 140 mg/dL an hour or two after eating. Fasting blood sugar levels are considered normal when under 100 mg/dL, but evidence suggests that *optimal* fasting blood-sugar control is actually closer to 82 to 88 mg/dL.
- **Insulin (or the surrogate marker of insulin, C-peptide):** This hormone is released when blood sugar increases. Conventional reference ranges for insulin can surge up to 25 mIU/L and still be considered normal, however many functional health practitioners target values of less than 10 mIU/L.
- **Hemoglobin A1C:** This blood test helps estimate your blood-sugar control over the previous three months. Measured as a percentage, a solid target is less maintaining a level that is than 5.3 percent, with most conventional ranges considering any value below 5.7 percent as normal.
- **Glucose tolerance test:** This involves drinking a standardized amount of glucose solution and measuring the blood-sugar response one to two hours later. It's often used in screening for gestational diabetes during pregnancy.
- **Triglycerides:** Although this is a type of fat in the blood, high triglycerides can suggest a caloric surplus, particularly from high-carbohydrate foods (which raise blood sugar). Triglycerides are often high in uncontrolled type 2 diabetes. While anything under 150 mg/dL is considered medically normal, optimal levels might be less than 100 mg/dL.

Keep in mind that for the above tests, the medical reference range may not represent the *optimal* range of the health spectrum. If lab markers start to drift toward either end of the diagnostic range, it's a signal that it's time to try to bring things under control.

How Do I Control My Blood Sugar?

Seek Steps To Manage Your Weight

Of those with diabetes, 89 percent are estimated to be overweight or obese. Studies show that a 15 percent weight loss can put half of those with diabetes into remission.

The main difference in those who recover versus those who don't is the health of beta-cells, the insulin-producing cells of the pancreas. The sooner healthy habits are put into place, the more likely it is that the health of these cells can be preserved. This means that intervening early is crucial.

Weight control involves managing the complexity of calorie balance, along with addressing sleep, exercise and activity levels, stress, and underlying health issues and hormone balance.

Caveat: Remember, you can't judge a book by its cover. If 89 percent of those with diabetes are overweight, that means 11 percent are normal weight, with a BMI of less than 25.

Train Regularly and Lift Heavy

Good news: If you worked out today, your cells are likely more responsive to insulin (which lowers blood sugar) for the 16 hours following your sweat session. When thinking long term, maintaining and gaining lean muscle mass might serve as an antidote to high blood sugar. Physical activity is a non-negotiable.

As we get older, a decline in muscle mass can increase the risk of developing type 2 diabetes. Clearance, or lowering, of blood sugar is better in strength-trained muscles. One of the reasons this happens is due to a transporter called GLUT4.

Think of GLUT4 as a doorway that glucose can use to get out of the bloodstream and into muscle cells, *even if the cells are insulin resistant*. Muscle contractions — such as those when we lift weights and resistance train — increase the concentration of these doorways of our cells so that blood sugar can lower more effectively.
In those with diabetes, resistance training of all intensities can help lower blood sugar. As intensity increases, hemoglobin A1C (the three-month marker of average blood sugar) can start to decrease as well. This is a good thing.

The positive impact of training on blood sugar can happen remarkably quickly. In fact, a mouse study showed that insulin sensitivity and blood-sugar stability improved in as little as 15 days, even before changes in weight occurred. While findings of mouse studies can't automatically be applied to humans, the results are encouraging — and can help provide the motivation needed to get started with an exercise program.

Prioritize Protein

When protein is included at meals, especially those containing starches or carbohydrates, it can help slow the rise of blood sugar.

On top of that, it's been shown that those with higher protein intake (when combined with regular exercise) gain lean, strong muscle tissue and lose body fat more effectively than those with lower protein intakes, even if they exercise.

This is likely due to muscle protein synthesis, or gain of lean body mass (and therefore strength). If you've heard confusing messages about protein intake in the media (especially animal protein), check out this article about the benefits of a high protein diet.

From a weight management standpoint, including protein can help you lose fat instead of muscle. And since 25 to 30 percent of the calories in protein are burned in digestion

(compared to 2 to 3 percent for fat and 6 to 8 percent for carbohydrates), it can put you in a slightly larger calorie deficit without having to sacrifice how much food you're eating.

Aiming for one to two palm-size portions of high-quality protein per meal, such as poultry, fish, eggs, or dairy (if tolerated), is a good starting point for most. It's ideal if your protein intake is spread out throughout the day as well.

Focus on Fiber Density

An eight-week study of people without diabetes showed that with calories equal, a higher fiber diet could support weight loss and insulin sensitivity.

A trip down the aisles at the grocery store would make anyone think that cereal is the best source of fiber to include. However, you might be better off focusing on the amount of fiber you're getting *in comparison to* the total calories and carbohydrates you're eating. Getting the recommended minimum of 25 grams of daily fiber for women and 38 grams for men can be done by eating highly marketable grain products and processed foods — or it can be done primarily through non-starchy vegetables, some high-fiber fruit (like berries), and portions of nuts and seeds.

In the former, carbohydrate intake can skyrocket and surge blood sugar and insulin levels. In the latter, blood sugar is likely going to remain more even and calories will be easier to control, whether or not you're counting them.

For example, two cups of broccoli provides about five grams of fiber, just under 60 calories, and 12 grams of carbohydrate. To get the same amount of fiber from a popular breakfast cereal touted for its "heart-healthy whole grains," you would have to consume 167 calories and 33 grams of carbohydrate.

Moderate Your Carbohydrate and Calorie Intake

Even without a significant drop in caloric intake, a short-term, lower-carbohydrate approach may support insulin and blood-sugar control in those with prediabetes. There may also be favorable effects on triglycerides and HDL (or "good" cholesterol).

That's not to say that going lower carbohydrate is a long-term miracle cure or that we should be fearful of mindfully including carbohydrates in our plan. But since all carbohydrates (except fiber) break down into sugar, it's no surprise that moderating your carbohydrate intake is a good idea.

Generally, starchy carbohydrates (such as lentils, sweet potatoes, or oats) are better tolerated as activity levels and muscle mass increase. Try to time them around exercise and be sure that the portions you're eating are not infringing on your intake of blood-sugar stabilizing protein and non-starchy veggies.

In other words, prioritize your protein and vegetables. Add in any carbohydrates as needed, choosing nutrient-dense, high fiber options as often as possible.

Boost Omega-3s

Omega-3 fatty acids help support a healthy inflammatory response, which can be threatened when blood sugars are out of whack.

There are three types of omega-3 fatty acids: alpha-linolenic acid (ALA), eicosapentaenoic acid (EPA), and docosahexaenoic acid (DHA). The ALA form is found mostly in plants and must be converted to EPA and DHA to be usable in the body, but this only happens to a small degree.

A meta-analysis looking at 20 different studies including over 1,000 participants showed that EPA and DHA had a significant positive impact on triglyceride levels and some additional benefit to hemoglobin A1C levels. Similar results were found in studies of both children and those with non-alcoholic fatty liver disease.

In another meta-analysis that did *not* look at triglycerides, no effect was seen on blood sugar — but it was found that supplementation with ALA (the plant-based form that needs to be converted) might actually *increase* insulin.
When optimizing omega-3 fatty acid status, focus on the EPA and DHA forms found in fatty fish and fish oils, and consider looking into the health benefits of fish oil supplements.

Optimize Vitamin D and Magnesium

Magnesium and vitamin D are the most common mineral and vitamin deficiencies, respectively. And both are intimately involved in blood-sugar control.

Magnesium can be found in greens, beans, and cocoa — but most people are not getting enough. When low, insulin sensitivity is reduced. Many people benefit from an additional magnesium supplement — even if some magnesium is already included in their high-quality multivitamin — because the mineral takes up so much physical space.

Getting enough vitamin D can also support improvements in insulin resistance. One study showed that just 1,332 IU of vitamin D daily for one month could decrease insulin resistance by 21 percent — and that is in those who started with an average vitamin D level of 35.1 nmol/L (or 14 ng/mL).

For context, the Vitamin D Council recommends a target blood level of 100 to 250 nmol/L (or 40-100 ng/mL). If you don't know your levels, be sure to get tested and dose it appropriately, as some people may require 5,000 to 10,000 IU daily of vitamin D3 (combined with vitamin K2) to reach optimal ranges.

It's no surprise that we include both vitamin D and magnesium in the Foundational Five supplements we recommend as a starting point for everyone.

Get Enough Sleep

Studies have shown that those who sleep less than six hours are more than four times more likely to have high fasting blood sugar. Sleep disorders, such as sleep apnea, can raise both blood sugar and hemoglobin A1C.

Even partial sleep deprivation (or less than seven to eight hours nightly) can change appetite-regulating hormones, causing more feelings of hunger and less of an ability to feel full.

Feeling hungrier and insatiable, especially with higher glucose levels in the blood, is a recipe for trouble. The importance and benefits of adequate sleep are limitless, so do whatever you can to protect and optimize your sleep schedule.

Control Your Stress

Stress management and supporting the adrenals are both non-negotiable for long-term health.

Cortisol, often referred to as the body's stress hormone (although it's one of many), is in a class of compounds called glucocorticoids. These compounds are important for the regulation of inflammation, but they also directly increase blood sugar — even if you're exercising or eating a lower carbohydrate diet.

I've personally worked with clients who have had stubborn blood-sugar issues despite being dialed in with their body composition, nutrition plan, exercise programming, sleep schedule, and supplement regimen. While they saw some improvements in blood-sugar control with each piece that was addressed, their levels were not optimized until a purposeful stress management protocol was put in place.

Stress management can come in various forms: yoga, Pilates, mediation, prayer, alone time, signing off social media, gardening, a walk in nature, Epsom salt baths. Find the strategy that works for you — and remember that effective stress management is in fact a productive use of time.

We can't always change our circumstances, but we can, however, address our perception and strategies to cope with them.

Other Potential Blood-Sugar Support

As always, be sure to work with your medical team before implementing a new supplement plan, including the ones outlined here.

Cinnamon

Studies have shown mixed results on the impact of cinnamon with blood sugar. It appears that it might have the potential to reduce blood-sugar spikes after meals, especially in those with poorly controlled diabetes.

Takeaway? It might be a good addition to your nutrition plan, such as in a protein shake or on top of some sliced apples, but it certainly does not replace other interventions.

Berberine

An alkaloid compound extracted from a variety of herbs, berberine has long been touted as an anti-diabetic agent in Traditional Chinese Medicine.

A systematic review of 14 clinical trials involving over 1,000 participants concluded that for those with type 2 diabetes, a dose of 0.5 to 1.5 grams per day of berberine could be effective in lowering both blood sugar and cholesterol.

It's important to note that berberine can cause digestive upset, and you should work with your doctor before considering taking it, especially if you are on diabetes medication.

Chromium

Chromium is a trace mineral and may also support the action of insulin. In a study of 50 subjects with type 2 diabetes, chromium picolinate supplementation improved blood-sugar control. Another small study of 60 diabetic participants showed that using milk powder fortified with chromium lowered fasting blood sugar and insulin after 16 weeks.

For those who are deficient, the repletion of chromium may also help cravings. For those taking chromium, it's best to take it with a meal.

Fenugreek

Fenugreek is an herb that has been promoted to help with blood-sugar control, libido support, and even milk production in breastfeeding mothers.

While it may have a minor impact on blood-sugar control due to a compound it contains called 4-hydroxyisoleucine, it can also reduce potassium levels in the blood and cause urine to have a maple smell.

Ginseng

Ginseng falls into the "adaptogen" category of supplements. These are herbs that are suggested to have the potential to increase mental endurance and attention, as well as support resilience to the neurological, hormonal, and immune detriments of excessive stress.

One meta-analysis concluded that in those with blood-sugar issues, ginseng supplementation (typically at a dose of 3 grams daily in Traditional Chinese Medicine) may help reduce fasting blood sugar and improve insulin resistance relatively safely. However, caution should be taken by those using diabetes medication or insulin.

You'd be hard-pressed to find a body system or function that is not grossly impacted by blood-sugar levels.

It's critical to take control. Start by regularly assessing your fasting blood-sugar trend and hemoglobin A1C. Refuse to accept borderline levels and work with your physician and your fitness and nutrition support team to implement strategies that can help you achieve optimal ranges.

Since diabetes and prediabetes are so prevalent, it's safe to assume that a high proportion of us are at risk of having some level of blood-sugar imbalance. Unless, of course, *you manage it on purpose.*

FOOD ADDICTION – SUGAR SUBSTITUTES

One cause for confusion with sugar, natural sweeteners, and artificial sweeteners is that they can be listed under many different names on food labels, which leaves them disguised for consumers. The different types also can have difference effects on your health.

Sugar, or sucrose or table sugar, has four calories per gram. **Alternative sugars** are essentially alternative names for sugar, which are also used as sweeteners in food products.
Low-calorie sweeteners have less than four calories per gram. Most of them are slightly less sweet than sugar, so you may have to use more of them to get the same sweetness

effect. Often, food manufacturers use less of an alternative sugar plus a low-calorie sweetener to get the same sweetness level as pure sugar without as many calories.
The category of **high-intensity sweeteners** includes artificial sweeteners. They contain no calories and can be anywhere from 100 to several thousand times sweeter than sugar. It's an advantage for food manufacturers to use these because they result in a sweet taste minus the calories or carbohydrates.
In this episode, Kriegler shares the pros and cons of these different types, but to help you better identify sugar and sugar alternatives on labels, check out this chart for some of the common ones you might see in each category.

High-Intensity Sweeteners (Non-Nutritive)	**Low-Calorie Sweeteners**	**Alternative S**
Acesulfame potassium (Ace-K)	Allulose	Agave syrup
Aspartame	Erythritol	Coconut suga
Monk fruit	Glycine	Date syrup
Saccharin	Inulin	Glycerol
Stevia	Kabocha extract	Honey
Sucralose	Lucuma	Maple syrup
	Polydextrose	Trehalose
	Sorbitol	Yacon syrup
	Tagatose	
	Xylitol	

ULTRA PROCESSED FOODS

Ultraprocessed foods are likely to play major roles in a myriad of diseases, such as diabetes, coronary heart disease, stroke, a variety of cancers, and even mental health disorders," writes lead study author Dawn Harris Sherling, MD, FACP, an associate professor of medicine at FAU's Schmidt College of Medicine.

"Ultraprocessed foods are likely to play major roles in a myriad of diseases, such as diabetes, coronary heart disease, stroke, a variety of cancers, and even mental health disorders."

Sherling goes on to describe the "novel ingredients" in these products — various emulsifiers, maltodextrin, and other additives — as foreign invaders "never before encountered by human physiology." This can cause havoc in the gut microbiome, triggering an inflammatory response that promotes chronic disease. To drive home her point, she notes that ultraprocessed fare now makes up nearly 60 percent of the average American diet compared with about 20 percent of people's diets in countries reporting lower rates of serious illness and longer life expectancy.

Fast food, salty snacks, and sugary drinks have been around for the better part of the last hundred years, of course, but the marketing of convenience food really hit its stride in the years following World War II, and it overwhelmed the taste buds and eating patterns of my baby boom generation. The effects, some experts suggest, have lingered well into our dotage.

"An increased consumption of ultraprocessed foods and decreased consumption of minimally processed foods among older adults in recent years may reflect the food environment during their childhood and adolescence," explain the authors of a study published in 2022 in the *American Journal of Clinical Nutrition*. "This generation of older adults grew up during a time when ultraprocessed foods were increasingly available and marketed in the United States, which may have influenced their preferences and dietary habits."

I can't help recalling with some vague wonder the Swanson TV dinners, the Jeno's pizzas, and the Chung King chow mein Mom would serve us on those rare occasions when she allowed herself to take a break from scratch cooking. Those meals represented a refreshing change from our dreary dinner regimen as well as an attempt — however tentative — to keep pace with the fast-evolving American food culture of the 1950s and early '60s. Convenience food back then just felt so *modern*.

It would take decades of research and consumer activism before the Food and Drug Administration would mandate that ingredient lists appear on some of these products. Meanwhile, food manufacturers and their scientists gradually perfected recipes and formulations that made their products more addictive, capturing and retaining consumers of all ages while paying lip service to the harmful effects of their artistry.

Sherling compares these companies with their counterparts in the tobacco industry, which spent decades deflecting concerns about lung cancer, emphysema, and other diseases their products caused until the federal government finally took action. But she doubts we'll see a similar effort to limit advertising for junk food — which she calls the new "silent killer" — or mandate tougher product warnings anytime soon.

Doctors, nurses, researchers, and policymakers exercise much less influence over our collective eating habits than the scientists who create the addictive pleasures of ultraprocessed food and the marketers who whet our appetites for it.

"The multinational companies that produce ultraprocessed foods are just as, if not more, powerful than tobacco companies were in the last century, and it is unlikely that governments will be able to move quickly on policies that will promote whole foods and discourage the consumption of ultraprocessed foods," she argues. "Importantly, healthcare providers also should remain cognizant of the difficulties that many of our

patients have in being able to afford and find healthier options, which calls for a broader public health response."

That's a tall order for our brittle healthcare system. For all their good intentions, doctors, nurses, researchers, and policymakers exercise much less influence over our collective eating habits than the scientists who create the addictive pleasures of ultraprocessed food and the marketers who whet our appetites for it. I'm happy to report that it's been more than a half century since I last dug into one of those Swanson's TV dinners, and the golden arches long ago lost their allure. Maybe I've managed to loosen junk food's grip on my appetite over the years.

Just don't open a bag of Doritos while I'm in the vicinity.

HUNGER V. CRAVINGS

In general, hunger builds gradually, while cravings come on suddenly. And while hunger is more open-minded, cravings tend to target one food specifically.

Sometimes hunger is described as physical and a craving as emotional, but psychologist and eating-disorder specialist Rachel Millner, PsyD, doesn't believe that emotional hunger is any less legitimate.

In general, hunger builds gradually, while cravings come on suddenly. And while hunger is more open-minded, cravings tend to target one food specifically.

A craving for chocolate, for example, may be a sign that you're feeling lonely or bored and your body knows the comforting hit of dopamine it provides will give you a lift.

"Many of us have connections with certain foods to childhood or memories," she says. "Sometimes we might crave certain foods based on that."

CRAVING SALTY FOODS

Salty foods are often highly palatable, but salt cravings can be about more than just taste. They may be a signal that the body is experiencing chronic stress, which taxes the adrenal glands by constantly calling on them to produce more cortisol.

"When people crave salt, it's often either that their blood pressure is low or they have some adrenal dysfunction," explains integrative physician Frank Lipman, MD. "Often

when those hormones are off, there's a craving for salt." (For more on managing cortisol and adrenal health, see "How to Balance Your Cortisol Levels Naturally.")

Salt is a mineral we lose when we sweat, so we might also crave it after an intense workout or a sauna. Pediatrician Jan Chozen Bays, MD, once saw a 1-year-old child who was "so floppy that he was unable to sit up." His parents had just driven through 100-degree heat, hydrating him with distilled water, which is stripped of minerals, including sodium.

Upon hearing this, Chozen Bays went to the cafeteria and returned with a bag of chips. Immediately, the boy sat up, grabbed the chips, and started eating. "He had 'heard' his cells calling out for sodium chloride (salt), and as soon as he saw it, he responded," she explains in her book *Mindful Eating*.

WHY DO I CRAVE SWEET FOODS WHEN I AM EMOTIONALLY UPSET?

Sometimes when we crave sugar, we're just trying to feel better — and sweet foods do provide a temporary boost. "[Sweet] substances release opioids . . . into our bloodstream, and when those chemicals bind with the receptors in our brain, we experience an intense sensation of pleasure — maybe even get a little high," explains Alexandra Jamieson, co-creator of the Oscar-nominated documentary *Super Size Me* and author of four books, including *Women, Food, and Desire*.

A habit of turning to sweets can become an unconscious strategy for mitigating difficult feelings, says functional-medicine dietitian Katherine Wohl, RDN, IFNCP. "You naturally want to tamp down that stress response with carbs and sugar and foods that mitigate those feelings in the moment — but it backfires [in the] long term, actually making the stress response worse."

9 COMMON QUESTIONS ABOUT HUNGER

What is physical hunger?

The sensation of hunger is a signal from your body to the brain to find food. Your stomach might growl, you may feel irritable, and you are likely to become preoccupied with food until you eat.

The whole process is stimulated by the release of hormones. "Many metabolic hormones help regulate hunger, but two of the biggest are leptin and ghrelin," explains functional-medicine dietitian Katherine Wohl, RDN, IFNCP. When you're hungry, your stomach

produces ghrelin and sends it to the brain — it's like the warning light flashing on the fuel gauge in your car, alerting you that you're running low.

Once you've eaten, leptin kicks in. Also known as the satiety hormone, leptin is secreted by fat cells, telling your brain that you've stored enough energy now, and that it can call off the alarm. "When we eat when we're hungry, and stop when we're full, we get those cues in a really harmonious way," Wohl explains.

If there's a hormonal disruption, however, the cues can go haywire.

Insulin is another hormone that regulates metabolism, and it can become dysregulated when there's more glucose in the system than the body can handle. The stress hormone cortisol can also upend the hunger-signaling process. When metabolic hormones are out of balance, Wohl says, "we lose our body's innate wisdom that helps tell us when we're hungry and when we're full."
(To learn more about insulin and cortisol, go to "How to Balance Your Hormones.")

How does chronic dieting affect appetite?

Missing a meal now and then won't harm your hunger cues, but routinely repressing or ignoring them can scramble the body's signals.

When we chronically resist physical hunger, as with dieting or disordered eating, it's almost as if the body throws up its hands. "The body is wired for survival," says psychologist and eating-disorder specialist Rachel Millner, PsyD. "If we're not eating day after day, it will stop sending out cues, such as stomach growling or shakiness. This is like the body saying, 'This person isn't feeding me consistently, so I'm not going to show those more obvious signs of hunger anymore.'"

Missing a meal now and then won't harm your hunger cues, but routinely repressing or ignoring them can scramble the body's signals.

At this point, metabolism slows and blood pressure drops. "The body needs food to stay alive, and if it's not getting enough, it's going to slow down and quiet everything else to try and preserve life," explains Millner. "You will likely feel fatigue and will be thinking about food more often." This confusion of signals can make it hard to tell when you're hungry or when you're full.

But the body is wise, and it's possible to reteach it to feel hunger. In the same way it learns to start shutting down when it's being deprived, it will start waking up when food is available again.

In her work with clients recovering from eating disorders, Millner first asks them to eat predictably and consistently throughout the day — whether they're aware of hunger or not. "Start to build a trusting relationship with the body, where every couple of hours it starts to learn that food is coming."
Over time, this consistency helps rebuild appetite. Your body recognizes that sending hunger signals is a good use of energy, because it results in being fed.

Does fatigue make us feel hungrier?

Sleep deprivation can throw your hunger hormones out of whack. Ghrelin surges, making us hungrier. Leptin sputters, making it harder to feel sated. And stress hormones like cortisol flood the bloodstream.

This is the brain's way of putting out an SOS for more fuel. It's trying to compensate for the lack of sleep with other sources of energy, preferably "any kind of energy source that will deliver the most immediate surge of usable fuel," explains Jamieson.

That energy source is often sugar. "What do you crave when you're low on sleep?" Wohl asks. "You crave sugar and carbs so that you can get that energy back. Studies show that sleeping less than seven hours can increase your cravings for sweet foods — but getting extra sleep, even if it's small amounts, can reduce cravings."

Why do I crave salty foods?

Salty foods are often highly palatable, but salt cravings can be about more than just taste. They may be a signal that the body is experiencing chronic stress, which taxes the adrenal glands by constantly calling on them to produce more cortisol.
"When people crave salt, it's often either that their blood pressure is low or they have some adrenal dysfunction," explains integrative physician Frank Lipman, MD. "Often when those hormones are off, there's a craving for salt." (For more on managing cortisol and adrenal health, see "How to Balance Your Cortisol Levels Naturally.")
Salt is a mineral we lose when we sweat, so we might also crave it after an intense workout or a sauna. Pediatrician Jan Chozen Bays, MD, once saw a 1-year-old child who was "so floppy that he was unable to sit up." His parents had just driven through 100-degree heat, hydrating him with distilled water, which is stripped of minerals, including sodium.
Upon hearing this, Chozen Bays went to the cafeteria and returned with a bag of chips. Immediately, the boy sat up, grabbed the chips, and started eating. "He had 'heard' his cells calling out for sodium chloride (salt), and as soon as he saw it, he responded," she explains in her book *Mindful Eating*.

Is there a difference between hunger and cravings?

In general, hunger builds gradually, while cravings come on suddenly. And while hunger is more open-minded, cravings tend to target one food specifically.

Sometimes hunger is described as physical and a craving as emotional, but Millner doesn't believe that emotional hunger is any less legitimate.

In general, hunger builds gradually, while cravings come on suddenly. And while hunger is more open-minded, cravings tend to target one food specifically.

A craving for chocolate, for example, may be a sign that you're feeling lonely or bored and your body knows the comforting hit of dopamine it provides will give you a lift.

"Many of us have connections with certain foods to childhood or memories," she says. "Sometimes we might crave certain foods based on that."

Why do I lose my appetite when I'm anxious, angry, or sad?

When you're anxious or afraid, your body detects a threat. The sympathetic nervous system responds by flooding your body with cortisol, preparing it to react. In this state, digestive processes are suppressed as blood flow is redirected toward bigger interior muscles, ones that enable you to put up your dukes or run like the wind. This is not the time to think about food, after all: Your body is convinced that it's time to escape danger.

Not eating may be part of a coping strategy that helps numb emotions we'd rather not experience.

Sometimes, appetite loss also occurs when we feel sad. Some healthcare providers see this as an early warning sign of depression: A loss of interest in food may indicate a broader disinterest in regular activities.

Not eating, Millner says, may be part of a coping strategy that helps numb emotions we'd rather not experience. "For some people, eating less can dull some of the feelings."

Why do I sometimes feel hungry immediately after a big meal?

It may have something to do with what you ate — or didn't eat. A meal without much fiber or protein won't keep you full for long. Protein takes longer to digest than carbohydrates, and fiber helps slow the digestive process — all of which helps keep you feeling sated.

Fast-burning, low-fiber carbohydrates, such as white bread, pasta, and pizza, won't keep you feeling full.
Protein also reduces ghrelin levels and increases leptin sensitivity. "Protein is an incredibly satiating macronutrient," Wohl says.
Similarly, a meal containing a lot of sugar (think French toast with syrup and a large cup of sweetened coffee) can set off an insulin reaction that leaves you feeling not just hungry but cranky. You might then crave protein or fat, a sign that your body is struggling to get macronutrients that can satisfy it. (To learn more about how excess insulin can provoke hunger, see "Hungry No More.")
Finally, you may just need water. "Sometimes when people think they're hungry . . . they're actually thirsty," notes Lipman.

Why do I crave sugar when I'm upset?

Sometimes when we crave sugar, we're just trying to feel better — and sweet foods do provide a temporary boost. "[Sweet] substances release opioids . . . into our bloodstream, and when those chemicals bind with the receptors in our brain, we experience an intense sensation of pleasure — maybe even get a little high," explains Jamieson.

A habit of turning to sweets can become an unconscious strategy for mitigating difficult feelings, Wohl says. "You naturally want to tamp down that stress response with carbs and sugar and foods that mitigate those feelings in the moment — but it backfires [in the] long term, actually making the stress response worse."

How can I tell if I'm hungry for something other than food?

Deciphering hunger signals may take some practice. But "the body has its own wisdom and can tell us a lot about what it requires if we are able to listen," suggests Chozen Bays.
In her book *Mindful Eating*, she describes something called "heart hunger," which has little to do with food. "Most unbalanced relationships with food are caused by being unaware of heart hunger," she offers. "No food can ever satisfy this form of hunger. To satisfy it, we must learn how to nourish our hearts."
Most of us need to learn to identify heart hunger before we can satisfy it. Chozen Bays recommends the following exercises:

- Make a list of the foods you eat when you are sad or lonely.
- Notice when you feel an impulse to have a snack or a drink between meals.

- Stop and observe the emotions and thoughts you were having just before the impulse arose.

- Then, if you have the snack or drink, pay attention. Does anything change?

If you notice that what you're really feeling is loneliness, try addressing it directly by calling a friend. Or if you discover that you're genuinely sad, wrap yourself in a blanket and feel sad. This is how you feed heart hunger — by giving the heart what it really wants.

Finally, if you discover that what you're hungry for really is food, then put some food on a plate, sit down, and enjoy a meal that will nourish you on every level.

This article originally appeared as "What Your Hunger Is Trying to Tell You" in the May 2023 issue of Experience Life.

CAN ULTRAPROCESSED FOODS GIVE YOU THE BLUES?

57 % of calories consumed daily by the average American come from ultraprocessed foods.

These foods can reduce levels of serotonin (associated with feelings of happiness) and dopamine (rewards) in the brain while sparking neuroinflammation. The gut microbiome may also be damaged, triggering a systemic inflammatory flare-up that may affect brain function.

More research is needed, Hecht says; the data he and his team analyzed was self-reported. But their conclusions bolster those of earlier studies about the damaging effects of ultra-processed food and send a strong message to the millions of Americans entrenched in a junk-food diet.

"Since ultraprocessed foods represent the majority of calories consumed by the U.S. population, these data may also have significant clinical and public-health implications," he says.

HOW CAN I CUT DOWN ON ALCOHOL

With every turn of the calendar year, a portion of the population hits pause on their alcohol consumption — perhaps after imbibing more than usual over the holidays — in what's commonly known as "dry January." Surveys show that 35 percent of legal-age adults in the United States sustained from alcohol for the entire month in 2022, up from 21 percent in 2019.

But this inclination is no longer just bound to the timing of the New Year — the sober-curious movement is one that's only growing in popularity. Choosing to reduce or take a

break from alcohol consumption, whenever that might be, can be beneficial for your health.

"Alcohol is a toxin that our body has to metabolize, chemically convert, and excrete," explains Paul Kriegler, RD, CPT, director of nutritional products at Life Time. "This is a process that disrupts our normal metabolism, sleep, and increases certain nutrient requirements. It can also negatively impact your mood, concentration, and general mental wellness. Cutting back on alcohol is sure to help most people feel and function better, even if they don't go totally dry."

If you're looking to scale back your alcohol intake, Kriegler suggests following these steps.

1. Reflect on how your current alcohol consumption aligns with who you are. Does alcohol help or hinder you from being the person who you want to be? Does it make your life better or more challenging?
2. Define what "cutting back" means to you. No matter how you outline it, make sure your goal is measurable, reasonable, and achievable.
3. Frame it as an experiment. Rather than letting this feel like a high-pressure commitment, consider thinking of it like this, for example: "I wonder what will happen if I don't drink alcohol for one month?"
4. Recruit support. Finding someone to do this with you or who can help cheer you on along the way can help you stay disciplined.
Often one of the biggest barriers to cutting back on consumption is how intertwined alcohol and socialization can be. Kriegler also offers these tips for not letting your intent to abstain prevent you from enjoying time with others:

- Offer to be the sober cab when you and your group goes out.
- Instead of suggesting "drinks," invite friends to do something active together, such as a taking a yoga or cycle class, or playing pickleball.
- Explore non-alcoholic beverages. There are a wide variety of non-alcoholic beers, liquor alternatives, and mocktails on the market (and often on restaurant and bar menus) that can give you a way to still feel like you're participating.
- Limit alcohol to just one or two specific days or evenings per week where you plan to responsibly enjoy only one or two drinks.

For more resources, check out:

- "5 Tips to Stay Sober"
- "The Sober-Curious Movement"

- "How to Drink Mindfully"

ULTRA PROCESSED FOODS – FOOD ADDICTION – AND COGNITIVE DECLINE

People who consumed more than 20 percent of daily calories from processed foods had a 28 percent faster decline in global cognition and a 25 percent faster decline in executive functioning compared to people who ate less than 20 percent," study coauthor Natalia Gonçalves, PhD, tells *CNN*.
It's all about inflammation, which is triggered by eating foods high in sugar, salt, and fat, explains Rudy Tanzi, PhD, director of genetics and aging at Massachusetts General Hospital. "[It's] perhaps the most major threat to healthy aging in the body and brain."

But too much junk food also means you're missing out on healthier fare. "Since they are convenient as a quick meal, they also replace eating food that is high in plant fiber that is important for maintaining the health and balance of the trillions of bacteria in your gut microbiome," Tanzi adds. "[This] is particularly important for brain health and reducing risk of age-related brain diseases like Alzheimer's disease."

Ultra-processed foods dominate the average American diet, accounting for about 58 percent of daily caloric intake. And while public-health officials and Big Pharma haven't yet connected the dots when considering the factors behind the continuing rise in dementia cases, the Brazilian study offers some instructive clues — and perhaps a worthwhile treatment approach.

"While this is a study of association, not designed to prove cause and effect, there are a number of elements to fortify the proposition that some acceleration in cognitive decay may be attributed to ultraprocessed foods," notes preventive-medicine specialist David Katz, MD, MPH, who was not involved in the study.

Conversely, he notes, cutting back on junk food may ease the harm done to the brain. Those study participants whose diets included some junk food but mostly featured quality whole foods were able to mitigate the cognitive damage caused by ultraprocessed fare. "Atypical as it seems, apparently some of the participants managed it," Katz notes. "And when diet quality was high, the observed association between ultraprocessed foods and brain function abated."

Katz is correct to caution us about making too much out of these results; Gonçalves' study doesn't prove causation. But there's plenty of previous research showing how our addiction to junk food leads to cardiovascular disease, diabetes, cancer, and obesity, so even if we can't be sure whether avoiding ultraprocessed fare will lower the risk of dementia, a move toward a healthier diet offers all sorts of other benefits.

And if there's some chance that a healthier diet will keep our aging brains humming effectively by the time Cheung and his Big Pharma colleagues finally come up with a pill to treat Alzheimer's, maybe we won't need it.

10 SUGAR FREE CHALLENGE?

Taking on the Sugar Challenge

Life Time has several complimentary fitness and nutrition programs available in the Life Time Digital app. One of them is Sugar Fix, a 10-day program designed to help kick sugar habits and curb cravings. I decided that together with my dad, we'd take on the 10-day challenge and share our experience with you.

As we began preparing for our adventure, my mom decided to join in, which was an awesome added layer of support for the two of them since I live 1,000 miles away. Then, when my brother heard about it, he showed interest in joining too. I quickly realized that Sugar Fix (or whatever other Life Time program is your goal) can be something you do for *you*, or it can be something you do to support someone you love who may need a little push to make a change. Before you begin, I highly suggest considering sharing your plan with someone else — maybe they'll partner up with you!

What Sugar Fix is: Sugar Fix is a 10-day program that teaches you how to spot tricky added sugars like a pro and helps you reduce your sugar intake by using daily habits and a realistic plan for what to do when cravings do strike. The basis of this challenge is to remove added sugar from your diet for 10 days. All the guidance and resources — including a downloadable program guide, shopping guide, recipes, habit tracker, and more — are available right in the Life Time Digital app (and are all included in memberships).

How we got started: We simply enrolled in the program in our Life Time Digital app and had one week to prep before beginning.

Here's how it went for each of us:

Tom's Experience

His preparation mindset going into the challenge: He says, "Change requires giving something up, so I thought about what I needed to give up during those 10 days to allow my body, mind, and soul to benefit the most. After all, who is better to look after yourself than *you*?"

My dad had a great career in leadership development, so when I asked him about his experience preparing for the challenge, it didn't surprise me to see the level of accountability and long-term thinking he put on himself. "It's not a 10-day challenge, it's a new life-journey," he said.

Leading up to the challenge, my dad spent a lot of time learning about the impacts of sugar through the program guide, really forming a basis for his commitment to the challenge. He anticipated how he'd feel on his daily walks (e.g., "Will I have more energy?") and if he'd be more alert in later-day consulting sessions and bible studies. He also became more conscious about what impact he could have on others he'd observed practicing poor sugar habits and previously thought nothing about (e.g., adding sugar to coffee).

How the challenge went for him: Though it was a rough start with temptations of cookies and other snacks still in the pantry, my dad was disciplined and engaged with the challenge. He quickly realized sugar is everywhere, and to avoid it takes mental strength and constant awareness.
He stuck to his plan, eliminating treats and opting for nuts when a craving for a bowl of ice cream would arise. Eating healthier meals with less sugar became easier with effort: His daily menu often looked like cereal with a banana and blueberries for breakfast; cottage cheese with grapes and macaroni salad for lunch; and salmon, corn, and salad for dinner.

While he missed having treats — eating them just one special night when they hosted dinner and my mom served pie — he looked at the positives: he was enjoying more protein, he discovered a newfound love of beets, and he realized the benefits of having more energy, such as choosing to mulch his yard himself rather than hiring it out.

What was surprisingly the biggest challenge for him was sticking to how much he should be hydrating (that was something on the program's habit tracker). However, that change in habit likely contributed to him feeling better overall.

What was most surprising to him: He said he found that the longer you stay the course, the easier it gets, and that it really is about discipline.
What's next for him: My dad is committed to staying the course, lowering his sugar intake and being very conscious of products containing sugar, and is prepared to continue making efforts to improve his physical and mental health. "I'm not going to be angry or upset if I occasionally miss the mark," he says, "because this is life. But it is my goal to lower my sugar intake and maintain this healthy life path. The light has been turned on."

Patti's Experience

Her preparation mindset going into the challenge: She says, "I told myself I would try to not feel guilty if I was not perfect, and that I would rejoice in any behaviors that were changed for the better."
Since my mom's entry to the challenge was last-minute, she began it with her usual positivity, but also with uncertainty around what she'd be able to withstand. She's a retired school teacher and really dug into the preparation guide in advance of the first day, educating herself on key ingredients, supplements, and daily expectations.

She opted to purchase electrolyte supplements to maximize her hydration and magnesium to help support healthy blood-sugar levels (and reduce cravings). Rather than purging what was in their pantry that contained added sugar, she chose just to not add anything else with it. She grocery shopped for more fruits and veggies and leaned on self-control to avoid what could be found in the cupboards.
How the challenge went for her: When the challenge began, she focused on avoiding sugar and exercising more, but found a little discomfort in not being told what exactly to do. Sugar Fix does not give you daily defined menus and exercises, rather it gives you guidance in the choices you'll make.
For my mom, this was a little overwhelming at the start, but she had protein shakes to lean on while she thought through meal planning for the forthcoming days. By day two, she had hit her stride enjoying turkey burgers with homemade guac on top; red pepper, pita crackers, and hard-boiled eggs; and chocolate popsicles with no sugar added. She kept her meal plan simple and stuck to a similar lineup each day.

She found herself making different choices, both when going out to eat as well as when they hosted friends. She still served a dessert and wine, but didn't view this as a failure — she knew going into the challenge she'd make improvements, but allow herself some grace.

Through the tracking process, she found areas she needs to give more focus to, those being her water intake and daily sleep. She's looking to adjust her water consumption at home and find ways to capture more quiet time.

What was most surprising to her: The increase in water intake was a big struggle for her, most often during the times of the day when she was away from home. She wants to continue to get the water she needs, but is going to try to lean more on drinking it when she's at home.
What's next for her: My mom always exercises (she's an avid aqua class attendee) but is really excited about the overall health guidance she can get from Life Time. Her biggest takeaway from this challenge is the extra focus on reading labels that will lead to bringing home better food choices.

5 FOOD PATTERNS TO AVOID

The first step to disentangling ourselves from unhelpful food patterns is the same as for any behavior change: We must become aware of what we're doing, as well as when and how. That's easier said than done, of course, since the very nature of a habit is to operate beneath our notice.

To make these tendencies easier to spot, we've investigated five of the most common problem eating patterns. We've also gathered expert insight on the ways each might affect us and learned how — with awareness and self-compassionate experimentation — we can reclaim our rightful place at the table.

QUESTIONS ABOUT THE NO-SUGAR CHALLENGE

Samantha McKinney | What made you want to go through the 10-day Sugar Fix program — was there anything in particular you were struggling with?

Sharee | After I hurt my foot playing tennis, I wanted to get my weight in check. I had previously done the 60day and the D.TOX program, but I continued to struggle with my consumption of sugar. I have the WORST sweet tooth. I could eat sugar all day, every day — and I did when I was recovering from my foot injury.

Any little stress, I turned to sugar. Any emotional up or down, I turned to sugar. And when I say I turned to sugar, there was no "in moderation," but rather my intake was way overdone and in excess.

So, I decided to turn to the 10-day Sugar Fix program to try to help me. I was honestly skeptical it would work because of how addicted to sugar I was.

SM | How did you prepare for the program? Do you have any advice to help someone get started confidently from day one?

Sharee | I prepared by reading all of the program materials I received from Coach Lo in the Life Time Training app after I signed up for the program. I threw away anything in my home that had any added grams of sugar in it.
Day one was hard because I had cravings for sugar, but I followed the steps outlined in the guide on what to do if I had cravings, such as drinking water and going for a walk.

Little by little, my cravings went away with no side effects.

SM | What was your biggest learning or thing that surprised you most during Sugar Fix? And did you run into any challenges?

Sharee | The biggest thing I learned was how to look at labels and read them. I was so surprised to find out about all the hidden sugar that companies add into foods that seem "healthy."
I ran into a challenge because I had a wedding right in the middle of the 10-day Sugar Fix. When I was there, I had the tiniest piece of cake, and I HATED it. It didn't taste good at all and as soon as I got home, I immediately got back onto the Sugar Fix plan.

SM | Can you offer any specific tips for someone to stay on track?

Sharee | It's not about being perfect every single day, but it's about doing the best you can. What you put into the program is what you'll get out of it.
I used the chat feature in the Life Time Training app and constantly talked to the coaches for advice and assistance. I also joined the Life Time Weight Loss and Training Community Facebook group to get tips and support. But most importantly, I followed the recommendations in the guide for what to do when you get a sweet tooth.

To this day, if I get a sugar craving, I ask myself first if I am thirsty, and then I go for a walk if it's not better. I also make sure I get my protein in as the catalyst to my day every day.

SM | What was your largest takeaway from the program or result you experienced?

Sharee | My addiction to sugar is gone.
I always look at the label before I purchase any food product. I choose to stay away from sugar and am not living my life around sugar.

SM | What did you continue to do after the program — and what came next for you?

Sharee | I am always looking at labels in depth to ensure I'm not taking in any unnecessary added sugars. And if I accidentally get added sugar from meals while out to eat, I just focus on the basics of the 10-day Sugar Fix, such as hitting my daily protein goal and optimizing my water intake. I feel stronger by being able to say no to sugar. Also, the coaches have made me feel so comfortable, I can still reach out to them even though I'm done with the program.
After the 10-day Sugar Fix, I did the Fit + Focused program for six weeks. After that program, I signed up to work on a customized program with a trainer and really focused on my "why."

1. Speed-Eating

Eating too fast is endemic to our harried way of life. "We live too fast, we drive too fast, we talk too fast . . . why should our relationship with food be any different?" asks Marc David, MA, founder of and primary instructor at the Institute for the Psychology of Eating and author of *The Slow Down Diet*. "Learning how to slow down with food is a metaphor for slowing down with life."
There are several negative consequences for eating too fast. First, bolting down food robs us of the full satisfaction of eating, leading us to eat more than we otherwise would. Digestion starts with the brain's sensory experience of seeing food, smelling food, and anticipating food, David explains. "When you eat too quickly, you bypass food's sensory pleasure," he says. "This has the effect of slowing the metabolism and diminishing your body's ability to burn that food as fuel."

Eating too fast also triggers the stress response, which inhibits proper digestion. Any rapid behavior helps trigger the body's fight-or-flight mechanism, David notes. For primal humans, moving quickly usually meant we were in danger. In this state, breath becomes shallow, and blood is channeled away from the digestive organs to the arms and legs so we can run or fight. Digesting lunch wasn't a big priority if a predator was on your heels.

The threats in our current environment may be less immediate, but our basic biochemistry is the same. Scarf down a muffin during rush-hour traffic and the fight-or-flight response is sure to kick into high gear, at which point digestive enzymes dry up. Gut transit time may hasten (causing diarrhea) or slow down (causing constipation). Nutrient absorption grinds to a halt.
The way out of this habit is to create new ones. A few ground rules can help prevent hasty eating:

- **Guard mealtime.** David calls on Americans, the consummate speed-eaters, to "reclaim their right to dine." That means dedicating a regular time to sit down at a table and savor your food. Fend off the impulse to check your messages while eating or to down breakfast in your car.
- **Take five to 10 slow, deep breaths before every meal.** This will flip on the body's relaxation response, a built-in protection against stress. Breathing deeply expands the diaphragm, stimulating the vagus nerve, which runs from the brain to the colon and activates the relaxation response, downshifting the fight-or-flight impulse. (For more on the vagus — also known as the gut-brain axis — see "Why the Vagus Nerve Matters to Your Health".)
- **Pace yourself.** If you normally eat breakfast in five minutes, try 10. "If you are a fast-and-furious eater, it's time to change gears," says David. "The more time we set aside for a meal, the more we place ourselves in the optimum state of nutritional and calorie-burning metabolism. The less time we take for a meal, the less the body is able to determine when it is full."

2. Secret Snacking

If you hide chocolate in your desk drawer or eat chips only in private, it's a sign that you might be adding a heavy dose of moral judgment to your snacks. Sneaking food implies that we believe the food, and probably the appetite for that food, is "bad," says David. "When you label things 'bad,' like any good criminal, you will do it in secret."

Secretive eating also feeds the kind of shame that perpetuates poor eating habits. "Any behavior that takes place in secret tends to go hand in hand with shame," says Michelle

May, MD, a mindful-eating speaker and author of *Eat What You Love, Love What You Eat*. "If I eat something 'bad,' then I feel guilty, and I feel like a 'bad' person for doing it."
Unsurprisingly, secret eating often inhibits enjoyment. Compared with actively savoring food, eating in secret is stressful, which means the release of fewer endorphins, the pleasure chemicals that promote digestion.

Endorphins also help assimilate nutrients, boost metabolic response, and enhance satisfaction. "The chemistry of pleasure is intrinsically designed to fuel metabolism," says David. "[But] when food comes with a helping of guilt, the nervous system registers only a minimum of pleasurable sensations, and we are physiologically driven to eat more. We're compelled to hunt down the pleasure we never fully receive, even though it's continually within our grasp."
Eating furtively is also linked to what's known as "eating the feelings." Instead of sitting with an uncomfortable situation, May notes, we seek a quick pleasure-fix through food to help manage or suppress our discomfort.
When the urge strikes to eat behind closed doors, stop and ask yourself what emotion you are trying to escape. "You may think you are overeating 'just because it tastes good' or 'because you lack willpower,'" May adds. Yet that's rarely the case. "The why becomes clear only when you explore the feelings that underlie your actions."

Find your way to the why with these practices:

- **Notice which foods you eat in secret.** What do these foods have in common? Which foods cause the greatest guilt? Next time the urge to stealth-eat strikes, David suggests asking yourself, "What is my body really hungry for?" Other than food, what comes to mind?
- **Don't allow others to shame you.** "There may be people in your life who feel like they can judge what you're eating," says May. "Tell them, 'I appreciate your intention, but when you tell me what I can and can't eat, I feel angry and guilty, and it actually makes me feel like eating more. I'd appreciate it if you'd stop commenting on my food choices.'"
- **Pay attention to what came before.** Note what triggers the desire for a secret snack. What scenario typically sets you off?
- **Redirect your inner rebel.** Sneaking "forbidden" foods can also be a thrill. "There's a part of us that likes breaking the rules," says David, "and engaging in secret eating can be exciting."

If that's true for you, you might try finding other ways to appease your inner rebel. Say, do, or try something a little edgier than you normally would, or look for a way to more openly express your authentic self.

3. Night-Eating Syndrome

Regular mealtimes are key to eating more mindfully. "If all day it's coffee and cottage cheese, then night falls and all hell breaks loose, that's a sign you're setting yourself up for overeating and making poor food choices," says nutritionist Keith Ayoob, EdD, RD, FADA.

This behavior — sometimes called night-eating syndrome (NES) — is typically defined as eating 25 percent of one's total calories after the evening meal more than three times a week. NES is generally connected with blood sugar: If you have not eaten enough during the day and your body is deprived of food for many hours (and especially if you started the day with a sugary breakfast), blood-sugar levels can nosedive.

That triggers a voracious appetite for quick-energy foods, usually more sugary, simple-carbohydrate snacks. These will make blood sugar rise — but rather than initiate the gentle, rolling hills of energy the body needs to stay on its game, they trigger big blood-sugar spikes and deep valleys. "Our willpower is no match for our physiology," says nutritionist Annie Kay, MS, RDN, author of *Every Bite Is Divine*. "The biggest determinant of hunger later on is big drops in blood sugar early in the day."

NES is more common in men than women and often goes hand in hand with weight gain and depression. "The calories people binge on usually aren't salad," Ayoob says. "It's hard to make good decisions when you are hungry."

These behaviors can help counteract this tendency:

- **At each meal, plan the next.** At breakfast, think ahead to lunch. Decide what you want to make or which leftovers to take to work. After dinner, consider tomorrow's breakfast. Maybe slice some strawberries to pair with yogurt or make a couple of hard-boiled eggs. It may feel tedious at first, but a supportive eating routine involves a certain amount of advance planning, says Ayoob. "That doesn't mean you can't ever have treats or be spontaneous," he offers. "It just means that planning and prepping is a must."
- **Make sure each meal includes protein.** Although bowls of oatmeal and pasta are comforting, they can set you up for a blood-sugar crash. Put high-quality protein on the plate for each meal. (This also applies to vegetarians — nuts, beans, and tempeh will help you stay grounded.) Snacks can also be protein-rich. Consider a fistful of almonds or a hard-boiled egg with hot sauce.
- **Plan a preemptive strike against the postwork binge.** We often ignore the body's needs for nourishment during the working day, either because we're too distracted or feel too busy to eat. "After work, when the brain finally gets permission to attend to our physical needs, the body is as ravenous as a neglected dog, and so we tend to overeat," says David. He suggests eating a high-fiber,

protein-rich snack before dinner. This will take the edge off extreme hunger and help prevent the urge to binge later.

(See "13 Strategies to Avoid Late-Night Snacking" for more alternatives to help curb self-destructive NES.)

4. Stress-Eating

Most of us know the feeling — we've just endured a stressful scenario, and we're suddenly gripped with an urge to eat everything in sight.

These cravings come courtesy of cortisol, the hormone our adrenal glands unleash anytime the body faces a real or perceived threat. Elevated cortisol levels can arouse a craving for sugar to fuel the fight-or-flight impulse, even though we don't necessarily feel hungry.

When we eat in this state, the calories are more likely to be used to create visceral abdominal fat, a clever survival strategy the body uses to store fuel for lean times. Stress also reduces the gut's acidity and, consequently, its ability to absorb key nutrients.

All to say, eating when we're hungrier for comfort and safety than actual food does a number on us. But recognizing this tendency will help overcome it. "Noticing that you aren't hungry but you feel like eating is half the battle," says May. "Ask yourself in that moment, 'What else can I do to address this emotion?'"

Here are some other tactics to try when you're tempted to stress-eat:

- **Consider your options.** If stress sends you running to the refrigerator, remind yourself that eating won't erase the stress, says May. Try making a list of things you find relaxing, such as a hot bath or taking your dog to the park. Keep the list on the pantry or refrigerator door. Next time you find yourself reaching for a stress snack, look at the list and consider your alternatives.
- **Notice when the heat is rising.** Do your best to notice the early signs of stress, such as a rapid heartbeat or racing thoughts. "Practicing self-awareness (such as noticing negative self-talk) and taking deep breaths at the first signs of stress can put you on a different path," says Kay.
- **If you give in, let it go.** Berating yourself after a splurge only adds fuel to the fire. It's better to simply acknowledge what happened and move on. "Turning to food at times of stress is part of being human," says Eunice Chen, PhD, principal investigator for the Temple Eating Disorders program at Temple University. "Stress-eating only becomes a real problem when it's your only way to deal with stress."

5. Mindless Eating

You plunk down on the couch with a full bag of chips, and before you know it, the bag is empty. Or you sit down at your desk with a sandwich, check your email, and suddenly there's nothing but crumbs.

The sad reality of mindless eating is that it leaves us empty, even when we're technically full. And then we keep searching for fulfillment. "If we don't feel satisfied, we'll look around for something more or something different to eat. Everyone has had the experience of roaming the kitchen, opening cupboards and doors, searching in vain for something, anything, to satisfy," explains Chozen Bays.

But she believes the solution is straightforward, if not always easy. "The only thing that will cure this fundamental kind of hunger is to sit down and be, even for a few minutes, wholly present."
These are ways to offset the negative effects of mindless eating:

- **When you eat, just eat.** If you're going to have a meal or snack, eat it before you begin doing anything else. Then clean up and put all food away. If you tend to eat while watching TV, try replacing eating with another activity: folding laundry, holding a mug of hot tea, lifting weights, knitting.
- **Make the mechanisms of mindless eating work for you.** If you know your habit is to grab the first thing in the fridge and eat it when you get home from work, make sure the first thing you grab is something like a tub of hummus and a container of prepped raw veggies. Or if you're just not ready to give up eating the occasional dinner in front of the TV, decide that salads are the only thing you eat while you're watching shows.
- **Use your dishes.** Even if you just want a handful of chips, put them on a plate. Plating food increases our awareness of portion size; it also makes us aware of the fact that we are, indeed, eating food at this moment.

Recognition is always the first step. From there, change often flows naturally. If you start by implementing one or two of these shifts, you might be surprised by how many others come along for the ride. You might also be shocked by how much you discover about yourself in the process.

"The antidote to modern food culture is bringing more self-inquiry into your day," says Kay. "This is far from a chore — it's a juicy opportunity to delve into what's going on in your body and mind."

SUGAR AND DYSFUNCTIONAL CELL METABOLISM INC CANCER
While the top priority during treatment is to keep eating — you need to avoid excessive weight loss and muscle wasting — there are benefits to proceeding with a minimal reliance on sweets.

"In my mind, sugar is the No. 1 no-go," says Donald Abrams, MD, integrative oncologist at the University of California San Francisco. "Too much sugar can lead to systemic inflammation and cancer growth."

The connection comes down to insulin, which balances glucose levels in the blood. When glucose moves from the gastrointestinal tract to the bloodstream, insulin signals to the cells that glucose is available.

Cells take this signal as a positive cue to grow, explains Naama Kanarek, PhD, a professor at Harvard Medical School who studies cancer metabolism. "If a normal cell gets insulin's signal that glucose is available, it acts like a normal cell, takes up a little glucose, and uses it."

The problem is that cancer cells also respond to insulin's call. "If a tumor cell gets that same cue," she says, "the signal is translated into growth because that is what they do. Every cell has a function. Tumor cells proliferate — that is *their* function." To reduce cancer cells' growth, drugs were developed to directly inhibit this growth signal, and cutting back on sugar can help these drugs to discourage proliferation in tumor cells. That said, you don't want to overthink this — and an all-or-nothing approach is counterproductive, says Rebecca Katz, MS. "Nutritional analysis leads to culinary paralysis. [People] put themselves into flight-or-fight mode every time they think about food."

"Food [as medicine] can be empowering," she explains, "but when we start to get dogmatic it becomes a constraint instead of an expansion." If you want to curb a sweet tooth, try swapping out refined-sugar treats for those sweetened by dates, maple syrup, or coconut.

Finally, she suggests that if you find yourself with homemade treats from friends and family from time to time, just enjoy them. They're not poison.

"Don't demonize any one food or nutrient," she says. "Food can play a supportive role if you let it."

SUGAR & LIVER HEALTH

Consuming a lot of added sugar is associated with numerous health concerns, including heart disease, high blood pressure, type 2 diabetes, and cancer. Yet recent research suggests that even moderate amounts can stimulate harmful metabolic changes.

In a recent study in the *Journal of Hepatology*, Swiss researchers observed 94 healthy male participants ages 18 to 30, controlling for those who have elevated liver fat, consume lots of sugary drinks, or exercise more than three hours weekly. During the seven-week trial, most participants were asked to consume beverages sweetened with a different type of sugar — fructose, glucose, or sucrose (table sugar, which is a combination of fructose and glucose) — while a small group of volunteers was asked to abstain from sweetened drinks altogether.

Unlike previous studies that have involved copious amounts of added sugar, the total consumed for this study was 80 grams a day — barely more than the USDA's recommended limit of 50 to 75 grams.

Nevertheless, the researchers found that participants consuming drinks containing fructose or sucrose began producing fat in the liver at twice the rate of those in the glucose and control groups. "And this was still the case more than 12 hours after the last meal or sugar consumption," adds study lead Philipp Gerber, MD, MSc, senior researcher at the University of Zurich.

Gerber and his colleagues were also surprised to note that beverages containing sucrose — not previously associated with these kinds of changes — actually led to slightly higher fat production rates than fructose-sweetened drinks.

KICKING THE SUGAR HABIT – FINALLY

Get a handle on the basics.

First things first: Give yourself a reality check in the hydration, protein intake, and movement departments.

Are you hydrated — *really*? Ideally, you want to drink half of your body weight in ounces of water daily, and many Americans fall short of that. When our body sends a signal that it's thirsty, we can often mistake it for hunger, leading to reaching for the nearest cupcake. Naturally, if we're using sugar in an inadvertent attempt to resolve physiological thirst, our "cravings" will not be satiated.

Secondly, optimize your protein intake to help stabilize blood sugar spikes and crashes, which cause an energy level roller coaster and endless cycle of cravings for sugar and

carbs. Many of my clients are shocked to learn their true protein needs and are pleasantly surprised when they're liberated from the perceived need to eat every two to three hours.

Lastly, don't forget about movement and exercise. Sure, a walk will distract you from the vending machine fare. More importantly, however, you'll enjoy the non-sugar-induced serotonin boost. Add some sun exposure — especially during the midday slump — and you'll feel naturally invigorated.

Ditch "healthy" labels.

Every nutrition choice either moves you toward health or away from it. Choose wisely.

From my experience as a dietitian, most foods plastered with flashy labeling and an elephant-sized font proclaiming their "health" qualifications are anything but nutritious.

Processed foods that are unrecognizable to nature (and ironically usually labeled "natural") are typically high in carbohydrates and grossly lacking in hunger-busting protein and healthy fat. The processed carbs certainly will give you a temporary elation, but what goes up must come down.

You'll be left where you started: undernourished, cranky, and channeling too much mental energy towards abstaining from the leftover donuts in the break room.

Instead, opt for satiating whole foods, such as a handful of cashews, a couple of hard-boiled eggs, or plain Greek yogurt topped with a few berries.

Bottom line: Man-made "food" products rarely provide optimal nourishment. Stick with unprocessed, natural-to-the-earth foods whenever possible.

Arm yourself with adequate sleep.

Are those late-night, sleepless entertainment hours really worth out of control cravings the next day?

Research shows when healthy adults are sleep deprived, they tend to crave carbohydrates and display changes in blood-sugar patterns that are reflective of insulin resistance.

Inadequate sleep can disrupt normal blood-sugar regulation. This means your body is even more apt to add any sugary intake directly to your midsection. The number one reason I hear for not catching the appropriate seven to eight hours of sleep is screen time, whether from a phone or TV. Aim to power down all devices at least an hour before bed.

Retrain your taste buds.

A whole saga could be written about the added sugars that seem to saturate the American food supply. In one of my former client group sessions, the participants found added sugars in everything from gravy mix to canned mushroom soup. These sneaky sources don't taste overtly sweet to the average American, yet sugar is still a staple ingredient.

Our sweet-tasting sensors require much more sugar now than they ever have before to actually register the sweet sensation. The solution, however, isn't simply transitioning to chemically-fortified "sugar-free" alternatives to enjoy at liberty. And while a naturally-sweetened option (with stevia, monk fruit, or erythritol) is an acceptable alternative in most nutrition plans, any dessert food with a rich sweetness isn't advised to take up a substantial portion of your diet.

While it may sound extreme, going temporarily cold turkey on sugar can go a long way in turning down taste buds to their natural subtlety.

You might even find yourself fully satisfied with the silky sweetness of roasted beets, or the vivid taste of fresh summer raspberries. Believe it or not, the taste of a diet soda may actually become sickening over time. That's a very good problem to have.

Supplement strategically.

Ensure that you're benefiting from core supplements for foundational health and blood-sugar control. The two best things you can do to help set yourself up from a supplement standpoint are boosting protein intake with a quality protein powder with vitamins and minerals, while optimizing hydration by adding no-added sugar, naturally sweetened electrolyte support to your daily water intake. .

From my experience with clients, magnesium and collagen peptides can both be helpful as well. Anecdotally, most people who start supplementing with evening

magnesium report an improvement in cravings (presumably from magnesium's role in supporting healthy blood-sugar control).

Additionally, some naturally flavored and sweetened (with monk fruit or stevia) collagen peptides are known to blend easily into coffee, oatmeal, and yogurt to provide an easy and delicious replacement to common added-sugar food culprits.

Consult with a nutrition coach or dietitian to consider adding others, such as the 5-HTP and botanical blend in Relax to help promote sleep, when appropriate.

There's no reason to have to exert chronic willpower over a sweet tooth to reach your long-term health and fitness goals. While taking ownership of your decisions is a critical part of getting there, treating the root cause of your cravings will allow you to finally surrender them.

5 UNEXPECTED WAYS YOU FIND SUGAR

However, sugar can also be found in other places that we might not as easily recognize, and when added to any goodies we're already consuming, can easily lead to overconsumption.

Check out these five unexpected places to be on the lookout for sugar so you can plan how to mindfully monitor your intake without risking the health effects of consuming too much sugar.

Coffee Run

My team knows that my love language is coffee, so coffee runs and bringing in coffee to share is a regular occurrence at my workplace. Coffee shops love taking advantage of all the nostalgia and emotions that come with the various seasons and often launch some really amazing tasting limited-time drinks. However, most of these drinks contain more sugar than the daily recommended dose — and many contain so much it's no different than chugging a can of soda.

Pro tip: When it comes to coffee, stick with basic add-ins or consider bringing your own. I'm a big fan of some of the minimally-sweetened almond milk creamers on the market, but also enjoy a coffee with a little heavy cream. Although it is artificial, you could go for a little sugar-free shot of flavor if you really want to add some sweetness. Or, try using a healthy seasonal extra, such as peppermint extract or cinnamon.

Happy Hour

"Does wine actually contain sugar?!" This is a common question I get from clients — and one they're often surprised by the answer of. The answer is yes: Wine does contain some sugar, and alcohol can absolutely interfere with any weight-loss efforts. It can easily add up quickly, especially times of the year when there are more celebrations, high amounts of stress, or an early onset of darkness which can make it easier to hibernate on the couch and simply sip a glass or two.
Pro tip: Pick your indulgences wisely, and on those occasions, give yourself a limit. If you want to linger with a drink in hand, opt for a sparkling soda water with lime. If you prefer cocktails, choose calorie-free mixers. All alcohol counts, so sip slowly and consume water in between drinks.

Presents

Food tends to be a universally appealing gift. It's easy and something many of us value. Whether it's a hostess gift or holiday present, there are a ton of opportunities to be given food as a present — and often they tend to be sweeter treats, not a bunch of veggies. Although it's OK to enjoy some sugar-containing foods if you get as a thoughtful gift, try to assess the frequency of their availability (likely higher than normal if you're getting around a holiday, for example) and ration the ones that will be the most meaningful.

Pro tip: It might not be easy, but try to gift non-food items. If you're given food (and it's not something that will promote your health) regift, donate, toss, or trial and share. One of the coaches on my team said her mother used to give a piece of exotic fruit in place of candy in her stocking growing up — try to be creative and think outside the box.

The Work Break Room

Navigating away from temptations at work is a common topic I work through with my clients when we're identifying healthy-eating strategies. It's not uncommon for coworkers to be bring in treats to share. One thing I remind my clients of to help reframe their mindset is that often people are bringing food they've been gifted and want to get rid of so they don't eat it. You don't have to feel any guilt or obligation to consume what's been brought in.

Pro tip: Snap a picture of it. We've seen this tactic work with some of our 60day Challenge participants: Challengers snap a picture of the food and share it with their group so others can help motivate and support them so they don't feel alone with their healthy-eating habits.
Keeping a tub of protein powder at your desk for a quick shake (when cravings hit) can also be a great tactic. You can also practice saying "No thank you," and always have the choice to toss anything that's been personally gifted to you but you don't want to consume.

Seasonal Foods

Gingerbread protein bars, candy canes, dark chocolate granola bars, pumpkin-spice cereal — food companies do a great job of capitalizing on the season to create limited-edition options. Although many of these processed starches are now being marketed as containing no artificial ingredients, it doesn't mean they are healthy. In fact, they're often the biggest offenders of adding additional sugar.
Pro tip: Check the label and look for less than 5 grams of sugar per serving (and only eat one serving). Even better, make your own seasonal foods so you can control the added ingredients. One of my favorite things to make to snack on is my own granola bars (see recipe below).
Overall, just know that a high sugar intake is likely in our food culture if you're not aware of and intentional about your consumption, and can easily elevate even higher during certain times of year when in seasons of celebration. Choose mindfully, aim for balance, and where you can, make your own healthier versions of favorite goodies.

WHAT DO I EAT WHEN I'VE CRAVING CARBS?

Why are carbohydrate cravings so hard to ignore?

Truth be told, food manufacturers are really good at their job. If you made money off people buying certain food products, wouldn't you do anything in your power to make them want more?

Processed food today is chock full of artificial ingredients, sugar, and salt, which influence your taste buds to want more. And unfortunately, these foods are not typically filling, making it easy to overeat and not support a healthy waistline. Not to mention, many of us get a good feeling after consuming them.

What You Should Eat

When trying to lose weight, cravings for carbs can completely derail your nutrition plan. But if you have them, you can set forth some strategies to have in your back pocket when cravings arrive.

It's also important to consider long-term strategies in the event that your body is going through chronic periods of stress or lack of sleep. In those cases, supportive supplements — or even meditation — would be advantages when it comes to your weight-loss plan.

The foods below should help feed your fix for carbs while providing your body good nourishment — and without leading to additional blood sugar imbalances.

If you're craving a salty carb:

Chips and pretzels are your jam. Whether it be because of the crunch or your need for salt (a common symptom of a chronically stressed individual), to help get your fix, try something similar in texture, such as:

- Raw carrots and hummus
- 1–2 cups of homemade popcorn with some butter and Himalayan sea salt
- Roasted Chickpeas
- Baked cheese slices. Line a baking sheet lined with parchment paper and bake at 400 degrees F for 10 minutes.

If you're craving a sweet carb:

Candy, dessert, or chocolate is something you fixate on. This is likely because your blood sugar has dropped and you're craving sugar. Whether right after a meal or in between, these choices are quick, easy, and taste great.

- Frozen or fresh berries with heavy cream
- Chocolate protein shake
- Small square of 80 percent or higher dark chocolate
- Small banana with natural almond butter

If you're craving a starchy carb:

Pasta, bread, cereal — you name it. For some, they crave starchy carbs because they've been a staple at mealtime their entire lives. Others might crave them after a really tough workout (where you might need additional carbohydrate to refuel). These choices below are better staples for your menu for those days when you just don't feel like solely eating meat and vegetables.

- Spaghetti squash noodles or zucchini noodles
- Cauliflower substitutes (pizza crust, mashed, and even riced)
- Almond Butter Banana Muffins
- Homemade granola: chopped cashews, coconut flakes, and sunflower seeds mixed with a 1 tbs. of dark chocolate chips or dried fruit

When can I have the real thing?

Minimally processed and real-food carbs — outside of fruits and vegetables — can have a place in a diet when it comes to losing weight and being healthy. Higher carbohydrate foods, such as steel cut oats, brown rice, or quinoa, can be eaten alongside any combination of quality protein and fats.

I encourage clients to keep portions to a half cup or less, and to save these higher carbohydrate foods for post workout (a time when their body can have increased needs for this type of fuel) or at night/dinner time.

One awesome tool many of my clients use as a pre-workout fuel or snack is Generation UCAN. It's a powdered sports-energy drink that is made up of SuperStarch — a complex carbohydrate that breaks down slowly over time and doesn't spike your blood sugar like other carbohydrate foods and beverages.

10 foods for recovering food addicts

1. **Cilantro** has powerful properties that detoxify the body of heavy metals. Mercury and lead, for instance, have been shown to disrupt the brain's dopamine-reward system, which can increase vulnerability to addiction.
2. **Grassfed and pastured beef** are healthy sources of protein, a critical building block for the recovering brain. It needs vital amino acids to repair oxidative neurological damage, notes Arwen Podesta, MD. Compared with grain-fed beef, grassfed contains more conjugated linoleic acid (CLA), a natural trans-fatty acid that supports many healthy functions, including insulin regulation. Protein itself also keeps blood sugar stable, which is why Podesta recommends people have it with all meals, including breakfast.
3. **Walnuts** are packed with protein, healthy fats, and fiber, making them a great on-the-go option for snacking. They help keep blood sugar steady and provide the brain with much-needed antioxidants and anti-inflammatory phytonutrients.
4. **Flaxseed** is rich in omega-3 fatty acids and fiber; it also nourishes beneficial gut bacteria, supports the GI tract, and strengthens neurological health. Try adding ground flaxseed to your morning smoothie, or pair flaxseed crackers with cheese or nut butter for an afternoon snack.
5. **Hemp** is a nutritional superfood. Hemp-seed oil is rich in fatty acids, which nourish the brain's myelin sheaths, and gamma-linolenic acid (GLA), which supports hormonal health. Hemp seeds (also called hemp hearts) have a nutty flavor and are a great source of magnesium and zinc, two vital nutrients for addiction recovery.
6. **Lemon juice** helps promote healthy digestion by stimulating bile production in the liver. In addition, a 2017 study found that mice that consumed lemon juice experienced reduced alcohol-related liver damage compared with a control group.
7. **Potato skin** — whether on a russet, Yukon gold, sweet potato, or others — is a rich source of fiber and other vital phytonutrients. It also provides complex carbohydrates. When eaten a few hours after a meal that contains protein, these carbohydrates stimulate the body to produce the insulin it needs to create serotonin, helping to regulate mood and impulse control. (Note: Always stick with organic potatoes if you're going to eat the skin.)
8. **Cold-water fish,** such as salmon, mackerel, herring, and sardines, are some of the most potent sources of omega-3 fatty acids, as well as protein and vitamin D. Vitamin D has been shown to help modulate the brain's dopamine circuits and contribute to the creation of serotonin. Look for canned fish that includes skin and bones — that's where you'll find most of the vitamin D.

9. **Whole grains,** like steel-cut oats, brown rice, and barley, provide complex carbohydrates that are digested more slowly than their refined counterparts. This helps nurture beneficial gut bacteria and support satiety. They also supply calming minerals — selenium, potassium, and magnesium. And oats are a good source of tryptophan, a key ingredient in serotonin production.