# Why Did My Glucose Go Up?

## MEDICAL DISCLAIMER

**This content is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of your physician or other qualified health provider with any questions you may have regarding a medical condition. The site is for Informational purposes only.**

There are a lot of things that can raise your glucose that has nothing to do with eating food. And if you're watching glucose to see if you're burning fat you're looking at the wrong place. Your blood glucose can rise even when you are fasting with zero food. Even then, you're making some glucose.

For example, if you check your glucose levels over a 7-day water fast (no food) you will see your glucose levels going up and down. Does that mean that the water and air have carbs in it? Of course not, here are some other examples of how your glucose levels will go up without food;

**Sleep:** One study performed on Japanese men found that getting under 6.5 hours of sleep each night increases a person's risk for high blood glucose levels. Prioritizing healthy sleep and promoting sleep hygiene are good habits for everyone; lack of sleep can be especially bad for people with diabetes, because it can really raise blood sugar levels for people with diabetes.

**Stress:** When under a lot of stress, the body produces hormones that make it difficult for insulin to do its job, which means your cells aren't sucking them up and more glucose stays in the bloodstream. That will raise your glucose readings and have nothing to do with your ketones.

**Exercise:** Having a sedentary lifestyle can cause blood sugar levels to go up. In addition, exercise that is difficult can cause stress and blood glucose levels to rise. That's right, working out harder requires more energy. You would think that it would drop glucose levels. Even a mild workout, like walking or doing light housework, can lower your blood sugar. Here's a twist, when you don't move around enough, your glucose levels can rise too. A lot of exercise and too little exercise can have the same effect on making your glucose go higher.

**Medications:** Some medicines can cause blood sugar levels to rise, such as corticosteroids, diuretics, some blood pressure medications, and some antidepressants. Your glucose levels are affected by a lot more things than just food.

**Birth Control Pills:** Types that have estrogen can affect the way your body handles insulin. And that means it will affect your glucose levels if insulin is affected.

**Steroids and Water Pills**: People take corticosteroids, such as prednisone, to treat rashes, arthritis, asthma, and many other conditions. But they can boost your blood sugar and may even trigger diabetes in some people. Diuretics that help high blood pressure, also called water pills, can do the same thing.

**Cold Medicines**: Decongestants that have pseudoephedrine or phenylephrine can raise blood sugar. Cold medicines also sometimes have a little sugar or alcohol in them, so look for products that skip those ingredients. Antihistamines don't cause a problem with blood sugars.

**Smoking:** Smoking cigarettes can make it difficult to keep blood sugar levels low. A person who smokes should make it a priority to quit.

**Not Brushing and Flossing**: If you don't brush or floss, you're increasing the risks of gum disease. Gum disease can make it harder to keep your blood sugar under control. Because of the infection, like ALL infections it may cause your glucose to rise. That, in turn, can make other infections more likely.

**Caffeine**: Your blood sugar can rise after you have coffee — even black coffee with no calories — thanks to the caffeine. The same goes for black tea, green tea, and energy drinks with no calories. Caffeine will also raise your ketone levels. That's why I told you not to do your ketone test and drink caffeine. Caffeine won't put you into ketosis, but if your already producing ketones it acts like a turbo and could increase your ketone levels depending on how much caffeine you take.

**Sugar-Free Foods**: Because of the artificial sweeteners. Most of them won't raise your glucose directly but will raise your insulin, which will in turn, affect your glucose levels. Remember, sugar alcohols such as sorbitol, maltitol, and xylitol are not regular sugar, but they may still have enough to boost your levels.

**A Bad Cold**: Your blood sugar rises as your body works to fight off an illness. Drink water and other fluids to stay hydrated. Remember that some medicines, such as antibiotics and the decongestants that can clear your sinuses, can affect your blood sugar.

**Alcohol:** Alcoholic drinks have plenty of carbs, so at first, they'll raise your blood sugar. But your levels may drop for as long as 12 hours after drinking.

**Heat:** You'll be safer inside with the AC when it's hot outdoors. Heat makes your blood sugar harder to control. Your body works to regulate your core body temperature has an effect on your blood glucose readings.

**Female Hormones**: When a woman's hormones change, so does her blood sugar. If you're checking your reading, pay attention to when your cycles are. Hormones also change during menopause and may make blood sugar even harder to control. Talk to your doctor about whether hormone replacement therapy is a good idea.

This is only 15-common things that most of us have experienced that will have an effect on glucose readings. And none of them were food. Are you getting the idea that checking for glucose to see if you have ketones in your blood is not the right test? Be smart and check for ketones instead.

Checking for ketones can clear up some of the mistakes people can make when they test their blood sugar. Use this guide when you absolutely need to know if your insulin is low and if you are in ketosis.

 

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## If You're Diabetic - Cause of Increased Blood Sugar Levels

In addition to the list above, your blood glucose levels could increase due to the following. It is advised to double check to see if any of these events apply to you. In the case of our peanut butter, it is made without adding any sugars. Only Reb A stevia is used to sweeten our peanut butter spread. If you experience a blood glucose rise after consuming our peanut butter, we propose the increase may be due to the following. Determine your level of insulin resistance, and or carbohydrate intolerance. There are 4 sources from which your liver can produce glucose.

### YOU MAKE GLUCOSE – EVEN IF YOU EAT ZERO CARBS

- Your liver and kidneys go through a process called Gluconeogenesis to make glucose when you're not eating any carbs. When carbs are not available, your body can make glucose from four separate sources. Your body doesn't need as much carbohydrates as some would have you believe but your body does need a little glucose. What you don't eat, your body will make for you. There are four sources that your body can use to make the glucose you need, when you aren't eating any carbs.
- From glycerol which a part of fat. (especially if you're following a low-carb diet)
- From your muscles by lactate acid which is produced when your muscle is working really hard.
- From amino acids that are found in the protein that you eat. (especially if you're consuming more protein than you need)
- Glucose can also be made from ketones in small amounts from ß-hydroxybutyrate, BHB for short. BHB is one of the three ketones that your body makes when burning fat. BHB can be converted to glucose in small amounts. Starting with BHB then converted to acetoacetate and then to acetone, all are different types of ketones. From there it is broken down to propanediol then to pyruvate and finally to glucose.

**More possibilities:**

If you have type 1 diabetes, you may not have taken enough insulin before bed or your insulin pump may have stopped working properly.

If you have type 2 diabetes, the insulin you take may not be as effective as it needs to be.

- Being sick will especially affect a diabetic. You might have a cold or the flu. When you're sick, your body releases hormones that help you fight off the germs that are attacking you. These hormones can interfere with insulin's ability to lower your blood sugar.
- You ate more carbohydrates the day before than you normally do.
- You could have what's known as the "dawn phenomenon." Experienced by everyone, even those who don't have diabetes, the dawn phenomenon is part of your body's natural biological rhythms. Pre-dawn, usually between 4 a.m. and 8 a.m., your pancreas releases a surge of hormones, including glucagon and cortisol, and temporarily slows down insulin secretion. In response, your liver releases more glucose into your bloodstream. When you have diabetes, your body doesn't release enough insulin to adjust properly to this early morning surge of glucose, so you wake up with high blood sugar.
- You could be experiencing "the Somogyi effect" and rebound hyperglycemia. This usually happens early in the morning. If you've skipped your dinner or bedtime snack or had a lighter dinner without adjusting your insulin doses, your blood glucose levels can drop after you've been sleeping awhile. If this happens, your liver tries to return them to normal and releases glucose into the blood. Your liver can overcompensate for low blood sugar and cause it to become too high.

## Managing Morning Blood Sugar Highs: How to Treat the Top 3 Causes

Setting your alarm to wake you up for blood sugar testing in the middle of the night can help you solve the mystery of high morning blood sugar.

A high blood sugar reading first thing in the morning can throw off your whole day — and signal a chronic problem. Despite their best efforts to control your blood sugar levels, some people simply wake up with elevated blood sugar. Starting your day this way isn't just alarming: If it becomes a pattern, high morning readings can make it difficult to achieve your long-term diabetes management goals.

Whether you have type 1 or type 2 diabetes, a morning blood sugar high can be due to several causes. But with a little detective work and the help of your diabetes care team, you can isolate the cause and take steps to correct it. Here are three common scenarios:

### 1. THE DAWN PHENOMENON

This occurs during the night while you're asleep and the body releases stress hormones. This phenomenon usually occurs between 3 a.m. and 8 a.m. and involves growth hormone, cortisol, and adrenaline, which trigger the production and release of glucose from your liver. The end result of this chemical cascade is an increase in blood sugar.

These hormones are designed to get us up and moving in the morning. While everybody experiences these natural changes in hormone levels, in people with diabetes the body may not adjust appropriately. This can lead to higher-than-normal blood sugar at the start of the day. Testing for these elevated first morning blood sugars is one way to diagnose people with type 2 diabetes.

 

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## 2. THE SOMOGYI EFFECT

High morning readings can also be caused by the Somogyi effect, a rebound response that occurs when the body overcompensates for a low blood sugar reaction at night. If you take blood sugar–lowering medication — such as insulin — in the evening, this may cause you to have a hypoglycemic reaction while you're asleep, and your body will then release these stress hormones, causing you to have high blood sugar in the morning.

If this is contributing to your high morning blood sugar. In addition, you may experience symptoms of hypoglycemia that can wake you from sleep in the middle of the night, including headache and excessive sweating. You may also experience difficulty waking in the morning. If your physician is increasing your evening diabetes medication to lower your morning blood sugar but your blood sugar keeps going up, you may be experiencing the Somogyi effect.

## 3. WANING INSULIN

The third common cause of high morning blood sugar levels is waning amounts of insulin, which means your insulin levels are going down and no longer keeping your blood sugar in check. As a result, you wake up to an elevated reading.

### Finding the Cause of Your Morning Blood Sugar High

Though the three most likely causes of high morning blood sugar can all be treated, first you have to know which one is the source of your condition. If you're not sure, you might have to take the somewhat inconvenient step of waking up to check your blood sugar levels in the middle of your sleep pattern (for example at 3 a.m. if you go to bed at 11 p.m.)

**Here's why:**

- Consistent blood sugar from bedtime until about 3 a.m. and then a rise suggests the dawn phenomenon.
- Low blood sugar at 3 a.m. suggests the Somogyi effect.
- Blood sugar that increases from bedtime to 3 a.m. and then is even higher when you wake is probably due to waning insulin.
- Using a continuous glucose monitor enables you to get this information without having to wake up for it.
- Treating High Morning Blood Sugar
- A blood sugar high in the morning can be tough to treat. With the help of your medical team, you can try different approaches. Talk with your doctor about these strategies:
- Adjust your pump. If you're testing high regularly and you use an insulin pump, you might be able to program it to help manage your morning highs.
- Check blood sugar before bed. Granted, many people have morning high blood sugar after an acceptable blood sugar before bedtime. Even so, don't go to bed with high blood sugar.
- Take basal insulin. Taking basal insulin at bedtime could help but be sure to clear any changes in dosing with your physician before you try it.
- Adjust medication. If in fact your high morning blood sugar is a rebound response to a low blood sugar level while you're asleep, you might need to change the dose of any medication you take in the evening that could be causing low blood sugar. **Talk with your doctor about whether your medication schedule should be adjusted to treat morning highs**.
- Have a healthy pre-bed snack. For those experiencing the Somogyi effect, a healthy mixed snack of protein and carbohydrates could help prevent your blood sugar roller coaster at night.
- Increase physical activity. Being physically active during the day can help you manage blood sugar more effectively in general. If your diabetes is treated with insulin or you have a concern about low blood sugar, find out how to exercise safely before increasing your physical activity.

High morning blood sugar levels are a concern, especially if they happen regularly and seem to make it hard to meet your blood sugar goals. But taking steps to address these morning highs can improve your overall diabetes management and stave off diabetes-related complications.

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