3 Ways to Prevent Blood Sugar Spikes While Sleeping

by COLLEEN KELLY

High Blood Sugar in the Morning

When you are first diagnosed with type 2 diabetes, it is likely your physician or certified diabetes educator handed you a meter and asked you to check your glucose levels fasting. You might find that you have high blood sugar in the morning. Don't fret yet — there are some ways to help this.

You probably experimented a bit while you changed your eating habits and began taking medications or insulin. And now maybe you are wondering, “Why the heck are my fasting numbers so hard to control?”

You’re not alone. If you do a quick Google search, you will see that many other people have searched this same topic because they also struggle too!

So, let’s take a look at high blood sugar in the morning and how to maintain it.

Blame the Liver

Ah, the liver. It works so hard – but it may also play a part in high blood sugar in the morning.

As we are well aware, our glucose levels rise in response to the foods that we eat. However, our lives also produce glucose. Yes – you read that right, friends! Our livers also produce glucose.

Certain hormones in the body signal the liver to release this glucose at specific points during the day – generally at points of fasting, such as between meals and overnight.

And guess what? Hormonal imbalances can even cause the liver to release more glucose than it should. You know what that means, right? You guessed it – higher than normal fasting blood glucose levels.

The Dawn Phenomenon

Then there are people who suffer from the dawn phenomenon. The dawn phenomenon is an uptick in blood glucose levels between the hours of 3:00 a.m. and 6:00 a.m. No one knows why this occurs, but it is thought to be due to an increase of hormones – specifically human growth hormone – that tell the liver to release glucose.

People without diabetes are able to counteract the dawn phenomenon by releasing insulin from the pancreas in order to reduce glucose levels. However, people with diabetes often do not have enough insulin in order to counteract the dawn phenomenon.

Inaccurate Waning of Insulin

We often want to blame a high fasting blood sugar on the foods we eat the night before, and sometimes that may

really be the case!

If you are an insulin-requiring diabetic, you may count carbs for your meals and dose your insulin accordingly. If your insulin-to-carb ratio (ICR) is not accurate, it is entirely possible that your glucose levels may still be elevated in the morning.

In the same vein, a basal insulin – either through an insulin pump or as an injection – is supposed to be the background insulin. This means that it is supposed to help reduce glucose levels overnight by helping to control the glucose that the liver produces.

Basal insulins are typically dosed once daily, but when the dose is inaccurate or the insulin wanes, a high fasting glucose can result.

How Can You Fix These Problems?

Of course, you should discuss your elevated fasting glucose number with your physician to determine what the cause of your high number is.

1. Medication

If you note elevated glucose numbers and you are currently not taking any medication, you may want to consider speaking with your physician about taking a medication called Metformin. This medication specifically reduces hepatic glucose production – or in layman's terms, it reduces the liver's production of glucose.

As an added bonus, it also increases the body's sensitivity to insulin, meaning that it will use its own insulin more effectively. Metformin is not for everyone – people with liver and kidney disease must have a baseline of their organ functioning and have lab work serially to ensure that it is still safe to take.

2. Long-Acting Insulin

Treating elevated morning glucose is a bit trickier in those with dawn phenomenon. For those on an insulin pump, basal rates can be increased during the hours that the glucose levels increased. For those not on an insulin pump, this is when things get difficult.

According to Diabetes Self-Management, "If you are taking any long-acting medicine, consider asking your doctor about changing meds, doses, or times." What this boils down to is possibly experimenting with changing your medication or time that you take your medication.

And what about if the elevated glucose is the result of an incorrect ICR? Keep track of the amount of carbs that you have been eating and your glucose levels – bring your log to your physician or CDE so they can adjust your ratio!

3. Track Your Doses and Glucose Levels

Last but not least, if your basal insulin dose is not accurate, again, keep track of your dose and glucose level. The appropriate provider can make an adjustment to your provider.

If your insulin is not lasting as long as it should, it may be split into two doses (morning and evening) or your physician may recommend switching you to a different basal insulin with a longer-acting profile.