

15 Ways High Blood Sugar Affects Your Body

Source: *msn lifestyle*



High blood sugar symptoms

Glucose, or sugar, is the fuel that powers cells throughout the body. Blood levels of this energy source ebb and flow naturally, depending what you eat (and how much), as well as when you eat it. But when something goes wrong—and cells aren't absorbing the glucose—the resulting high blood sugar damages nerves, blood vessels, and organs, setting the stage for dangerous complications.

Normal blood-sugar readings typically fall between 60 mg/dl and 140 mg/dl. A blood test called a hemoglobin A1c measures average blood sugar levels over the previous three months. A normal reading is below 5.7% for people without diabetes. An excess of glucose in the bloodstream, or hyperglycemia, is a sign of diabetes.

People with type 1 diabetes don't make insulin, the hormone needed to ferry sugar from the bloodstream into cells. Type 2 diabetes means your body doesn't use insulin properly and you can end up with too much or too little insulin. Either way, without proper treatment, toxic amounts of sugar can build up in the bloodstream, wreaking havoc head to toe.

That's why it's so important to get your blood sugar levels in check. "If you keep glucose levels near normal, you reduce the risk of diabetes complications," says Robert Ratner, MD, chief scientific and medical officer of the American Diabetes Association.

Here's a rundown of the major complications and symptoms of high blood sugar.

No symptoms at all

Often, high blood sugar causes no (obvious) symptoms at all, at least at first. About 29 million people in the U.S. have diabetes, but one in four has no idea. Another 86 million have higher-than-normal blood sugar levels, but not high enough to be diagnosed with type 2 diabetes. That's why it's a good idea to get your blood sugar tested if you are at risk for diabetes. That includes people who are overweight, physically inactive, have high blood pressure or have a family history. A single high blood sugar test isn't enough to diagnose diabetes, because blood sugar can spike if you are sick or under stress. But if repeated tests are elevated, it's a sign you have a problem. The good news is that catching it early—before you have any of the following signs and symptoms—can help you get treated and avoid serious complications down the road.

You pee a lot and you drink a lot

When there's too much sugar circulating in the blood, the body tries to get rid of it. Excess sugar spills into urine, drawing water out of the body. It makes you pee frequently—and in large amounts. It can make you really thirsty because you're dehydrated (here are other dehydration symptoms). Some people feel extremely hungry and may experience sudden or unexplained weight loss because the cells of the body aren't getting the sugar they need as a fuel source.

Many people don't know they have diabetes until they're tested. For others, the symptoms are clear: "They urinate too much, they're getting thirsty, they're getting up at night to urinate, they're hungry, they're losing weight," said Fernando Ovalle, MD, an endocrinologist and director of the University of Alabama at Birmingham's Comprehensive Diabetes Clinic.

You're tired all the time

If your cells aren't getting glucose, they are literally being starved of energy. That can make you feel like you're always tired. When your blood is thicker and more viscous due to elevated blood sugar, your heart has to work harder to pump it, and it moves more slowly throughout your body to deliver nutrients to your cells. Additionally, when your body gets rid of excess sugar in the blood through urination, you're literally flushing energy out of your body and into the toilet. Plus, increased thirst and urination means more nighttime trips to the bathroom, interrupting your sleep.

Your blood gets syrupy

Sugary blood has a thicker, stickier consistency. "You can imagine how hard it can be for thick syrup to get to the tiniest point of small blood vessels—places like the eyes, the ears, the nerves, the kidney, the heart," said Joanne Rinker, a certified diabetes educator and registered dietician in Waynesville, NC. "That's why we start to see complications in these very small blood vessels." Even in people who do not have diabetes, there is a direct relationship between blood viscosity and blood glucose levels, an Italian study found.

It can rob your vision

High blood sugar can seriously harm your eye health over time. One area where small blood vessels get damaged is in the retina, the light-sensitive portion of the back of the eye. In the short term, blood sugar spikes can cause blurry vision, at least temporarily; once sugar levels are closer to normal, vision improves. But in later stages, abnormal vessels can appear, obstructing central and peripheral vision. The macula, the center part of the eye responsible for detailed vision, can swell, too, causing vision loss.

You have pain in your extremities

Numb toes and tingling fingers—a condition called peripheral neuropathy—can be a sign that your blood sugar has been too high, for too long. The ends of the longest nerve fibers in the body are usually the first to suffer, according to the American Academy of Neurology. That's why the feet, legs, arms, and hands are all vulnerable. Nerve damage to the extremities can produce a range of symptoms, from burning or prickling to shocking pain. Controlling blood sugar levels can prevent further damage. "But if it's been going on for a while and the sugars have been high for years, then it probably won't go away," says Terri Washington, MD, an endocrinologist at Diabetes, Osteoporosis, Obesity Inc., in Oak Lawn and Amherst, Ill.

Feet get infected

People with high blood sugar can lose sensitivity in their feet, from the tips of their toes to the heel. So any injury, say, whether it's an ingrown toenail, a blister, or a tack in the foot, can snowball into a bigger problem.

"Sugar feeds a wound, [it] just makes it fester," Rinker says. To guard against infection, people need to be vigilant about getting their blood sugar in control and checking their feet daily.

Thirty years ago, entire hospital wards were filled with people with foot ulcers and amputations. Today, amputations are down 40%, Dr. Ratner says. Yet diabetes remains the leading cause of major limb amputations.

"So we've done better, but we still have difficulty getting glucose levels as close to normal as possible without side effects of hypoglycemia [low blood sugar]," he says.

It puts a crimp in your sex life

A loss of libido or difficulty having an erection or an orgasm can signal that your blood-sugar levels are out of whack. Excess sugar in the blood damages the nerves and blood vessels that play a crucial role in making sex enjoyable or even possible. Men may experience erectile dysfunction due to blood vessel damage, and some can have a problem with retrograde ejaculation, in which semen travels to the bladder instead of through the tip of the penis. Women may have vaginal dryness, painful sex, or reduced sensation in the genital area.

"Sometimes that's a great motivational discussion to have with people, to try to get them to make some behavior changes," Rinker said.

It messes with your gut

GI problems? The nerves that control internal body functions, like digestion, are vulnerable to high blood sugar levels, too. People can have severe constipation, frequent bouts of diarrhea, or both. Uncontrolled blood sugar can lead to gastroparesis, a condition where food in the stomach moves slowly to the small intestine or stops moving altogether. It causes nausea, vomiting, bloating and pain. And that exacerbates the problem of controlling blood glucose, says Dr. Ovalle.

"If the gut's not moving appropriately, the absorption of nutrients from the gut becomes very erratic and then your blood glucose becomes very erratic," he says.

It harms your kidneys

The kidneys house tiny blood vessels that filter waste products from the blood. When blood sugar is persistently elevated, the filtering system essentially has to work overtime to clear the excess sugar from the blood. Over many years, the filters become scarred and the kidneys no longer function properly.

Increased protein levels in the urine is one of the first signs of trouble. Controlling blood sugar and blood pressure can preserve kidney function.

But if years go by without proper blood-sugar control, "that scarring can't be reversed and that's when the kidney function starts to decrease," Dr. Washington noted.

Eventually, the kidneys can shut down entirely, requiring dialysis or transplantation.

Your heart and brain are at risk

Here's the awful truth: People with diabetes have considerably elevated risks of stroke and heart attack. Studies show that's true even if they have the same level of blood pressure, cholesterol, and other risk factors for heart disease and stroke as other people without the disease.

But there is an upside: In a major clinical trial, tight glucose control sharply reduced the risk of heart disease and death in people with diabetes. The findings also suggest that it takes many, many years for high blood sugar to harm the large blood vessels that serve the heart and brain.

It can affect your memory

The same blood vessel damage that can cause heart attacks, kidney, and eye health problems, can also affect your brain. Studies suggest people with diabetes may be at heightened risk for thinking and memory problems—and even Alzheimer's. A German study revealed that higher blood sugar levels impair thinking and memory even in people who do not have diabetes. On

tests of word recall, older adults with higher hemoglobin A1c results were not able to remember as many words. Brain scans also revealed a smaller hippocampus, the region of the brain responsible for memory, in people with higher blood sugar. “Over time, if your blood glucose is high, you develop poor circulation, and that can lead to problems with strokes and brain atrophy and poor memory,” Dr. Ovalle explains.

It can ruin your smile

Uncontrolled high blood sugar is your kisser’s enemy. Sugar in your saliva feeds bacteria in your mouth, leaving a sticky plaque on your teeth. Some types of plaque lead to tooth decay, while others stink up your breath. Over time, blood sugar gone wild can cause bleeding and painful gums, making it difficult to chew and eroding bone and tissue that hold your teeth in place. High blood sugar can cause dry mouth and cracked lips. And it’s one of the main causes of thrush, a type of fungal infection that can cause sore white or red patches on your gums, tongue, cheeks or roof of your mouth.

It can cause bladder problems

People with diabetes are at greater risk of urinary tract infections. Not only that, but when they do get infections, their problems are more severe. Diabetes also can damage the nerves that control bladder function. The resulting damage can lead to overactive bladder, difficulty controlling the sphincter muscles that help retain and release urine, or difficulty emptying the bladder. Not surprisingly, people with bladder problems report poorer quality of life.

Your skin takes a beating

Blood sugar problems can show up in your skin, the body’s largest organ. When blood sugar is elevated over a period of time, your body loses fluid and your skin becomes dry, cracked, and itchy. And that’s just the start. Skin issues can be among the first signs of diabetes. Yeast-like fungal infections, particularly in women, for example, can show up under the breasts and in the groin area. “It’s usually bright red,” Dr. Washington says. “It can be kind of painful, irritated and itchy.”