

Blood Sugar

Start relating what you eat to what your numbers are.



What is Blood Sugar?

Blood sugar, or glucose, is the main sugar found in blood. The body gets glucose from the food we eat. This sugar is an important source of energy and provides nutrients to the body's organs, muscles and nervous system. The absorption, storage and production of glucose is regulated constantly by complex processes involving the small intestine, liver and pancreas.

Glucose enters the bloodstream after a person has eaten carbohydrates. The endocrine system helps keep the bloodstream's glucose levels in check using the pancreas. This organ produces the hormone insulin, releasing it after a person consumes protein or carbohydrates. The insulin sends excess glucose in the liver as glycogen.

The pancreas also produces a hormone called glucagon, which does the opposite of insulin, raising blood sugar levels when needed. According to the Johns Hopkins University Sol Goldman Pancreatic Cancer Research Center, the two hormones work together to keep glucose balanced.

When the body needs more sugar in the blood, the glucagon signals the liver to turn the glycogen back into glucose and release it into the bloodstream. This process is called glycogenolysis.



When blood glucose is in balance, it's an important source of energy and provides nutrients to the body's organs, muscles and nervous system.



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Relationship to Disease

Heart disease, diabetes, hormone imbalances, and even Alzheimer's disease have one thing in common: they are all affected by high blood sugar levels. In fact, high blood sugar is at the root of many health problems – no thanks to the standard American diet.

There's no denying that insulin resistance causes some pretty annoying symptoms like intense cravings. But insulin resistance and high blood sugar is more than just a minor inconvenience – it can cause serious chronic conditions.

Once insulin resistance develops, the body is left with high blood sugar and too much insulin circulating throughout the blood. When hyperglycemia – which is the technical name for high blood sugar – develops, the excess sugar damages the blood vessels, frequently causing inflammation, hormone imbalances, and more. Because blood vessels supply blood and nutrients to major organs – like the heart – those organs then become affected.

Inflammation and disrupted hormones caused by high blood sugar directly contribute to specific diseases and conditions, including:

- Diabetes Polycystic Ovarian Syndrome (PCOS)
- High testosterone levels in women
- High estrogen levels in men
- Thyroid resistance and hypothyroid symptoms
- Alzheimer's disease
- Increased gut permeability
- Higher levels of the bad cholesterol Heart disease

Time of Check	Blood Sugar Level
Fasting or before breakfast	<85 mg/dl
Before meals	<85 mg/dl
1 hour after meals	<120 mg/dl
Note: These targets vary from person to person based on a range of factors. Discuss yours with your provider.	

Cancer Research shows that high blood sugar levels and high sugar consumption increase the risk of developing several different types of cancer, including colon cancer.

What can I do about my Blood Sugar?

Here is a list of possible changes you can make to control blood sugar:

- Monitor blood sugar levels closely
- Reduce carbohydrate intake
- Eat the right carbohydrates
- Choose low glycemic index foods
- Avoid processed, high-sugar foods
- Increase dietary fiber intake
- Improve sleep
- Maintain a healthy weight
- Control portion size
- Exercise regularly



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Blood Sugar Reduction Match-Up Challenge:

Test your knowledge of blood sugar health by matching the questions in Column A with the Correct Answers in Column B.

If you get 8-10 correct, congratulations! You're a pro!

A - Nutrients/Minerals	Which Benefit Goes Here?	B - Body Benefits
1) What's the best way to know my blood sugar numbers?		A. Bananas, sweet potatoes, butternut squash, beets, oranges, blueberries, grapefruit, apples, leafy greens and more.
2) What foods are affecting my blood sugar?		B. Using your plate to measure: 3/4 plate vegetables, 1/4 plate high-quality protein, 1/2 tablespoon high-fat foods.
3) What are the healthy carbohydrates I should eat?		C. <120 mg/dl
4) Which are low glycemic index foods?		D. 30 minutes of aerobic exercise such as walking, swimming or biking, 5 days per week.
5) Which foods are higher in dietary fiber?		E. The level of sugar present 6-8 hours after your last meal, usually taken before breakfast.
6) What are the appropriate portion sizes for a healthy meal?		F. <85 mg/dl
7) How often should I exercise to take control of my blood sugar?		G. Leafy greens, berries, avocados, apples, chia seeds, flax seeds, sunflower seeds, pumpkin seeds, nuts.
8) What is fasting blood sugar?		H. Non-starchy vegetables such as leafy greens, asparagus, artichoke, avocado, cauliflower, and more as well as eggs and lean protein.
9) What is ideal fasting blood sugar before breakfast?		I. Keep a food journal to be more aware of what foods affect your blood sugar so you can make adjustments accordingly.
10) What is the ideal blood sugar level after a meal?		J. Use a blood glucose monitor and track your numbers on a fasting stomach and after eating to determine how the foods you eat affect your levels.