

Controlling Blood Glucose Levels Through Diet

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Diabetes is often associated with sugar, also known as carbohydrate, but there is more to managing diabetes than just avoiding sugar. Carbohydrates are a major part of a human diet and are necessary for good health. All carbohydrates we eat are changed to glucose in our body because glucose is the only carbohydrate that our bodies can use for energy. A hormone called insulin helps the body regulate the glucose that the body absorbs. To read more about insulin check out this article, [Introduction to Diabetes](#).

Contrary to some beliefs, diabetes isn't caused by eating too many carbohydrates. Diabetes occurs when one of the systems in our body fails to regulate the amount of glucose that is in the blood. Also, glucose is not the problem in this disease. Being able to move glucose out of the blood is. It becomes very important to eat a balanced diet when an individual is diagnosed with diabetes, because the foods they eat will change how much glucose is in their blood at any given time. Eating carbohydrates will directly increase the amount of glucose in the blood. How quickly the glucose enters the blood stream, and how long it stays there, depends on a few different things.

The first thing that affects blood glucose levels are the different components of the food we eat. These food components change how quickly we digest food, which can then change how often we eat and how much we eat during a meal. A few of the components found in food are fiber, protein, and fat. Foods high in fiber take longer to digest, slowing down the rate glucose enters the blood stream. Proteins also have a slowing effect on digestion, and eating protein will increase insulin sensitivity in the body which can lower blood glucose levels. Fat

provides many important vitamins, slows down digestion which regulates glucose absorption, and helps us to feel full for a longer amount of time. However, the amount and type of fat eaten regularly can change how the body responds to glucose after a meal. Below you will find some suggestions to help you include more foods in your diet to better regulate blood glucose levels for longer periods of time.

Fiber

Fiber is a carbohydrate, but our bodies do not have the enzymes needed to digest it, so fiber won't raise blood glucose levels. Eating fiber provides some functional benefits to the body that are especially helpful to those with diabetes. These functional benefits include feeling full earlier in a meal, staying full for longer amounts of time, and slowing down the digestion of other foods. The slowing of digestion allows a slower absorption of carbohydrates which keeps blood glucose levels from rising too quickly.

Some great places to find fiber are in whole foods. Whole foods are foods that are in their natural state or have had very little processing. Good sources of fiber include [non-starchy](#) vegetables, whole fruits, whole grains, and legumes.

Try these great recipes to help you increase how much fiber you eat:

<https://extension.usu.edu/nutrition/recipes/whole-wheat-almond-toaster-waffles>

<https://extension.usu.edu/nutrition/recipes/sweet-potato-black-bean-soup>

<https://extension.usu.edu/nutrition/recipes chia-pudding>

Protein

Lean proteins like chicken, fish, and beans are a great part of every healthy diet but are particularly beneficial for



individuals with diabetes. Protein takes longer to digest so it slows down how fast the stomach empties into the intestines. Because food is absorbed in the intestines, this creates a slower rate of glucose absorption. A higher protein diet can also increase insulin sensitivity. When a cell is sensitive to insulin it allows more glucose to enter a cell and lowers the glucose levels in the blood stream. The amount of protein eaten at all meals and snacks can change blood glucose levels as well. Research suggests that eating higher amounts of protein at a meal can have a stabilizing effect on blood glucose right after the meal, but eating more protein at every meal and snack can create more stable blood glucose levels over the whole day.

These recipes are great high-protein choices:

<https://extension.usu.edu/nutrition/recipes/three-bean-and-beef-chili>

<https://extension.usu.edu/nutrition/recipes/hearty-and-healthy-pasta-bowls>

Fat

While fat is a necessary part of a healthy diet, research suggests that diets high in fat can change insulin sensitivity in individuals with diabetes. This is particularly true when individuals eat more saturated fats found in

butter, red meats, cheese, palm oil, and coconut oil. Eating saturated fats significantly reduces the action of insulin and blood glucose levels tend to be higher. However, research also suggests that eating more unsaturated fats found in oils, fish, and nuts can create better glucose control. Current recommendations suggest eating a diet with less than 10% of the calories coming from saturated fat. Focus on foods that contain unsaturated fats like fish, vegetable oils, seeds, and nuts.

These recipes are good sources of unsaturated fats:

<https://extension.usu.edu/nutrition/recipes/roasted-winter-squash-or-pumpkins-seeds>

<https://extension.usu.edu/nutrition/recipes/carrot-top-pesto-pasta>

Managing blood glucose can be challenging for those that have diabetes, but it is not impossible! Simple changes in a diet can make a huge impact on disease outcomes in the future.

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