

**What is Diabetes (also known as Diabetes Mellitus or DM)?** (3,4)

Diabetes is a condition where blood sugar is too high. Normally, a hormone called “insulin” helps your body move sugar from your blood into cells. Insulin is made by an organ called the “pancreas” in response to high blood sugars. Insulin normally tells cells in your body to remove sugar from the blood and store it away. However, in diabetes, insulin is either not produced (type 1 diabetes) or cells do not listen to insulin signals (type 2 diabetes).

In type 2 diabetes, tissues in the body do not respond as well to insulin. This means the pancreas has to make more insulin to get the cells to respond as they did before. Eventually, the pancreas is not able to produce enough insulin to get the cells to respond. At this point, the pancreas “burns out”. This is when type 2 diabetes develops. Type 2 diabetes is the more common type, and it used to be called “adult onset diabetes.”

**What is prediabetes?** (3,4)

Prediabetes is when your blood sugar is higher than normal, but not as high as in diabetes. People often do not have symptoms, which is why screening tests are so important. Taking action at this stage may prevent development of diabetes.

**I feel fine. Why should I be concerned about my blood sugar?** (2,3,4)

Often, people do not have symptoms from their high blood sugar initially. However, the high levels of sugar can cause damage to blood vessels, nerves, eyes, kidneys, and other organs. This damage can lead to loss of nerve sensation in the lower legs, kidney damage/failure, blindness, and heart attacks/strokes. It is well known that uncontrolled diabetes is an equal risk for heart attacks and stroke as heart disease. Additionally, damage to blood vessels can lead to the need for amputation of toes, feet, or legs.

**How do I monitor my diabetes?**

Blood sugar is measured by a “glucometer.” These readings look at single points of time. Blood sugars often vary over time, so repeated readings are needed. This allows for you and your doctor to best understand the how well your diabetes is controlled.

A hemoglobin A1c test is able to estimate the average blood sugar over a 3 month period.

**How do I control blood sugars?** (1)

Weight loss helps your body need less insulin. This effect is seen with as little as 5 percent loss of your body weight. 30 minutes of exercise daily helps your body use insulin more effectively. This can be a simple as a walk.

Sugar in our diet comes from carbohydrates. These are often called “carbs” and are found in breads, grains, pasta, and potatoes. Sugars are commonly found in fruit, juice, and sweets. Carbohydrates are necessary, but it is best to get them from fruits, vegetables, and whole grains. In addition, eating more fiber can help control blood sugar levels.

To help with weight loss, it is best to reduce the number of calories in one’s diet. It is estimated that there are 3500 calories in one pound. Removing 500-1000 calories per day from your diet helps lose 1-2 pounds per week..

A diet with lean protein, fish, and plant proteins (nuts, soy, beans), is suggested. Eating less saturated and trans fats can also help you decrease your risk for heart attacks. Saturated fats are found in meat and dairy products. Trans fats are found in products with “partially hydrogenated oil” on the label. Monounsaturated and polyunsaturated fats are found in fish, avocado, nuts, and olive oil, and are more healthy.

A doctor may prescribe medications to help your body use insulin more effectively, or help your pancreas produce more. The final treatment option is insulin injections.

References:

1. UpToDate staff. (2018) Patient education: Diabetes and Diet (The Basics). Retrieved February 18th, 2018 from [https://www-uptodate-com/contents/diabetes-and-diet-the-basics?search=patient%20education%20diabetes&topicRef=15402&source=see\_link](https://www-uptodate-com.ezproxy.library.wisc.edu/contents/diabetes-and-diet-the-basics?search=patient%20education%20diabetes&topicRef=15402&source=see_link)
2. UpToDate staff. (2018) Patient education: Type 2 diabetes (The Basics). Retrieved February 18th, 2018 from [https://www-uptodate-com/contents/type-2-diabetes-the-basics?search=patient%20education%20diabetes&source=search\_result&selectedTitle=4~150&usage\_type=default&display\_rank=4#H31795201](https://www-uptodate-com.ezproxy.library.wisc.edu/contents/type-2-diabetes-the-basics?search=patient%20education%20diabetes&source=search_result&selectedTitle=4~150&usage_type=default&display_rank=4#H31795201)
3. “What Is Diabetes?” *National Institute of Diabetes and Digestive and Kidney Diseases*, U.S. Department of Health and Human Services, 1 Nov. 2016, [www.niddk.nih.gov/health-information/diabetes/overview/what-is-diabetes](http://www.niddk.nih.gov/health-information/diabetes/overview/what-is-diabetes).
4. “Diabetes | Type 1 Diabetes | Type 2 Diabetes.” *MedlinePlus*, U.S. National Library of Medicine, 7 Feb. 2019, medlineplus.gov/diabetes.html.