My Drift

Title: Diabetes

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There are several people in my immediate family or family tree that have diabetes or have died from it. My dad died from a combination of diabetes and associated strokes. My dad's brother died from diabetes. My wife and stepdaughter had diabetes. So far, "knock on wood", I have not come down with this dreaded disease. But since diabetes is in my family, I know that the risk of getting it is greater than for somebody with no diabetes in their family. For these reasons, I have done a lot of research over the years on the disease to find out more about it and how to avoid getting it.

What is Diabetes?

Diabetes is a disease in which the body does not produce or properly use insulin. The hormone insulin, produced by pancreatic beta cells, is needed to convert sugar, starches and other food into energy needed for daily life. The cause of diabetes continues to be a mystery, although both genetics and environmental factors such as obesity and lack of exercise appear to play important roles.

The amount of glucose circulating through your body is regulated by the pancreas producing and releasing insulin. When glucose levels get too high, the pancreas secretes more insulin into the blood to help move the glucose out of the blood and into your cells. Problems arise when the pancreas produces little or no insulin or when the body is unable to utilize the insulin in a normal manner. When this happens, the glucose remains in the blood and reaches toxic levels. Key organs and cells are deprived of the necessary fuel to function properly.

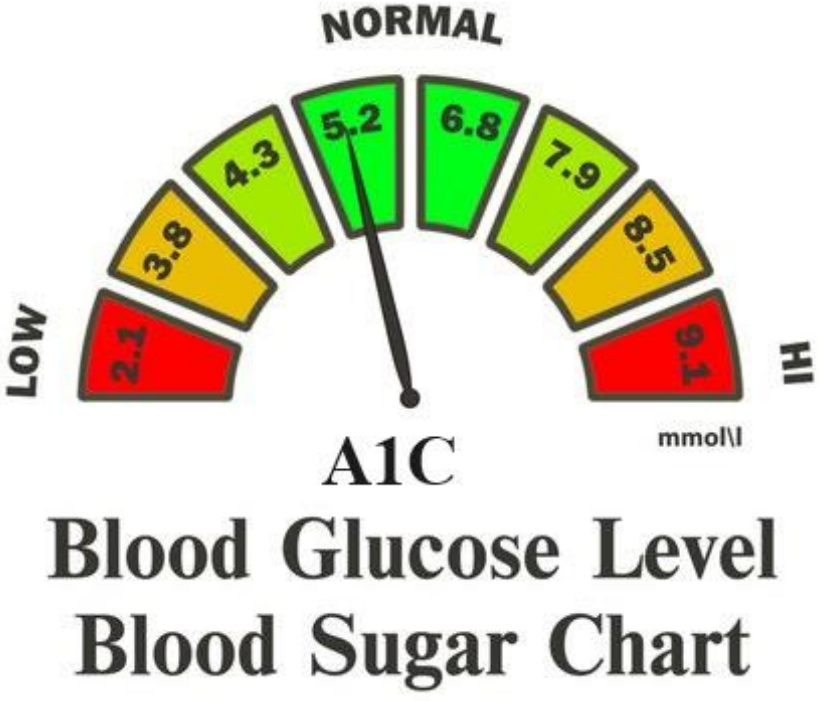
There are about 38.4 million people (children and adults) in the United States, or 11.6% of the population, who have diabetes. Of those with diabetes, approximately 30.3 million are diagnosed while 8.1 million remain undiagnosed and don't know they got it.

Major Types of Diabetes:

Type 1 diabetes – Results from the body's failure to produce insulin. This type of diabetes is typically diagnosed in childhood and is sometimes called juvenile-onset diabetes mellitus. It comprises approximately 5 to 10% of total cases and the diabetic requires daily insulin to survive.

Type 2 diabetes – Results from a condition in which the body produces insulin but is unable to utilize it properly. About 90% of diabetics have Type 2 diabetes. This type of diabetes can be controlled with diet, exercise, weight loss and medications.

In order to determine whether or not a patient has prediabetes or diabetes, health care providers conduct a Fasting Plasma Glucose Test (FPG) or an Oral Glucose Tolerance Test (OGTT). Either test can be used to diagnose pre-diabetes or diabetes. The American Diabetes Association recommends the FPG because it is easier, faster, and less expensive to perform. With the FPG test, a fasting blood glucose level between 70 and 99 is normal. A person with 100 to 125 mg/dl signals pre-diabetes and a person with a blood glucose level of 126 mg/dl or higher has diabetes.



What does A1C mean?

My doctor says at my age an A1C of under 7 is the best indicator of not being prediabetic or diabetic. I understand what my blood glucose level means but what is your A1C? The A1C test measures the amount of hemoglobin with attached glucose and reflects your average blood glucose levels over the past 3 months. The A1C test result is reported as a percentage. The higher the percentage, the higher your blood glucose levels have been. A normal A1C level is 5.2 to 6.8 percent.

What is the difference between prediabetes and diabetes?

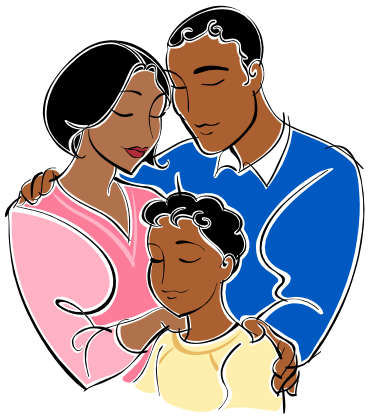
Prediabetes means you have a higher than normal blood sugar level. However, it's not high enough to be considered type 2 diabetes yet. Millions of US adults have prediabetes. But without lifestyle changes, these people with prediabetes are at high risk to develop type 2 diabetes.

Diabetes symptoms:

Excessive thirst
Excessive eating or hunger
Excessive urination
Unexpected weight loss
Fatigue
Infections
Irritability and agitation

Confusion
Blurred vision
Headaches
Numbness or tingling
Impotency
Loss of consciousness

People at high risk for diabetes:



Older than 45
Overweight
Close family member(s) has or had diabetes
African American, Hispanic, or Pacific Islander
High blood pressure
High cholesterol
All inactive people

Your child's risk:

Type 2 diabetes runs in families. In part, this tendency is due to children learning bad habits such as eating a poor diet and not exercising from their parents. But there is also a strong genetic basis. If one parent has diabetes, the risk of your child getting diabetes is 1 in 7 if parent was diagnosed before age 50 and 1 in 13 if parent was diagnosed after age 50.

If both parents have Type 2 diabetes before age 50, your child's risk is about 1 in 2 and 1 in 4 if diagnosed after age 50.

But remember – anybody can get diabetes. An active child that eats properly will greatly improve their chances of not getting diabetes.

Diabetes prevention:

It has been proven that for the most part people can prevent getting diabetes, but it requires a little will power. Studies show that people at high risk for Type 2 diabetes can prevent or delay the onset of the disease by maintaining a healthy body weight and getting 30 minutes of physical activity 5 days a week.

Managing your diabetes:

Have a meal plan and eat healthy foods.
Get 30 minutes of physical exercise 5 days a week.
Stay at a healthy weight.
Stop smoking.
Take your medicine every day.
Check your feet every day.
Brush your teeth and floss every day.
Check your blood glucose one or more times a day.
Check your blood pressure every day.
Maintain a daily log with test results, diet changes etc.
Report any changes in your eyesight to your doctor.
Visit your doctor or health care team regularly.

Diabetes is a serious disease

If you have the disease and don't manage your diabetes properly, bad things are going to happen to you. More than 65% of people with diabetes die from heart disease or stroke. Diabetic retinopathy causes about 20,000 new cases of blindness each year. Diabetes is the leading cause of kidney failure in the United States. About 65% of people with diabetes have mild to severe forms of nervous system damage. The most common nervous system problem is a lack of feeling in the feet. More than 60% of non-traumatic lower limb amputations occur in people with diabetes. People with diabetes are about twice as likely to develop periodontal (gum) disease. Men with diabetes are two times as likely to experience erectile dysfunction as men without diabetes. Uncontrolled diabetes often leads to biochemical imbalances that can cause acute life-threatening events, such as a diabetic coma.

Economic cost of diabetes:

The American Diabetes Association® (ADA) published the Economic Costs of Diabetes in the U.S. in 2022 (Economic Report), a comprehensive analysis assessing the financial burden of living with diabetes in the United States. The Economic Report, which is published every five years, found that the total annual cost of diabetes in 2022 was $412.9 billion, including $306.6 billion in direct medical costs and $106.3 billion in indirect costs. Medical costs for people living with diabetes increased by 35% over the past 10 years. People with diagnosed diabetes now account for one of every four health care dollars spent in the U.S. Additional diabetes cost findings include:

- **National health care costs attributable to diabetes have increased by $80 billion in the past 10 years—from $227 billion in 2012 to $307 billion in 2022.**
- **On average, people with diagnosed diabetes have medical expenditures 2.6 times higher than would be expected without diabetes.**
- **The inflation adjusted cost of insulin increased 24% from 2017 to 2022.**
- **Spending on insulin tripled in the past 10 years—increasing from $8 billion in 2012 to $22.3 billion in 2022.**
- **After adjusting for inflation, the total cost of insulin and other medications to manage blood glucose increased by 26% from 2017 to 2022.**
- **Despite having a lower prevalence rate, women with diabetes spend more on average than men on annual health care expenditures.**
- **Black Americans with diabetes pay the most in direct health care expenditures.**
- **People with diabetes above the age of 65 spend roughly double on per capita annual health care expenditures than any other age group above the age of 18.**
- **$106.3 billion (26%) of the total estimated national cost of diabetes can be attributed to lost productivity at work, unemployment from chronic disability, and premature mortality.**
- **Reduced work productivity accounts for $35.8 billion in annual indirect costs.**
- **Absenteeism or missed workdays accounts for $5.4 billion in annual indirect costs.**
- **If people with diabetes participated in the workforce like peers without diabetes, there would be 2 million more people between the ages of 18 and 65 in the workforce.**

Diabetes Myths and Facts:

1. Eating sugar causes diabetes

This is a common myth, perhaps understandably — blood sugar levels play an essential role in diabetes. However, eating sugar does not directly cause diabetes. Consuming a sugary diet can lead to overweight and obesity, which are risk factors for type 2 diabetes.

A little ice cream once in a while is okay

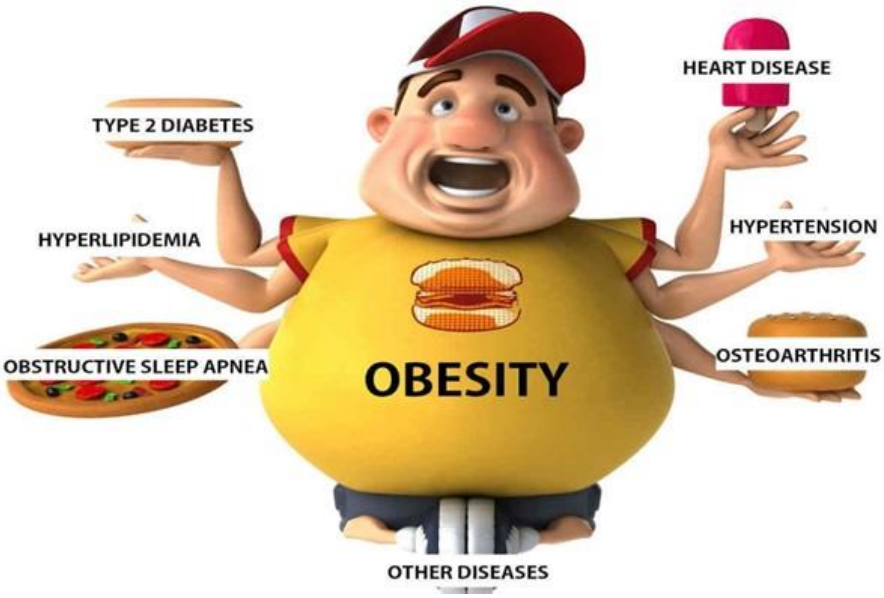
As ever, the story is complex: there does appear to be a link between regularly drinking soda (regular and diet) and risk for type 2 diabetes. One large study found that drinking soda has links with an increased risk of developing the disease. The study did not find this association in relation to other drinks, such as fruit juices.

2. Diabetes is not serious

Perhaps because diabetes is so common, some people believe that it is not a serious disease. This is incorrect. There is no cure for diabetes, and there are a host of complications that can occur if a person does not manage the condition well. Diabetes can cause cardiovascular disease, nerve damage, kidney damage, blindness, skin conditions, and hearing impairment. In 2018, diabetes was the underlying cause of 84,946 deaths in the U.S.

3. Diabetes only affects people with obesity

Overweight and obesity are risk factors for type 2 diabetes and gestational diabetes (a condition that causes high blood sugar during pregnancy), but the condition can occur in people of any weight. According to data from the Centers for Disease Control and Prevention (CDC) National Diabetes Statistic Report, 2020, more than 11% of people with type 2 diabetes in the U.S. are neither overweight nor obese. Type 1 diabetes has no associations with body weight.



Although obesity increases the risk of diabetes (and several other health issues), it does not inevitably lead to the disease. According to the CDC, an estimated 39.8% of adults in the U.S. have obesity, but only 13% have diabetes.

4. People with diabetes cannot eat carbohydrates

Carbohydrates, or carbs, are sugar molecules. Along with proteins and fats, carbohydrates are one of three main nutrients found in foods and drinks. Your body breaks down carbohydrates into glucose. Glucose, or blood sugar, is the main source of energy for your body's cells, tissues, and organs.

Is eating carbs the same as eating sugar? Sugars are a type of simple carbohydrate. Your body breaks down simple carbohydrates quickly. As a result, blood sugar levels rise — and then drop — quickly. After eating sugary foods, you may notice a burst of energy, followed by tiredness.

Starchy foods are our main source of carbohydrates and have an important role in a healthy diet. Starchy foods – such as potatoes, bread, rice, pasta, and cereals – should make up just over a third of the food you eat.

The key to sweets is to have small portions and save them for special occasions, so you focus your meals on healthier foods. Individuals with prediabetes or diabetes need to carefully plan what and when they will eat to ensure that their blood sugar levels remain balanced.

5. Diabetes always leads to blindness and amputations

Thankfully, this is a myth. While it is true that diabetes can lead to blindness and amputations in some cases, it is not inevitable. And for individuals who manage their condition carefully, these outcomes are rare.

The CDC estimates that 11.7% of adults with diabetes have some level of vision impairment. Lower-extremity amputation occurs in about 0.56% of people with diabetes in the U.S.

6. People with diabetes should not drive

A diabetes diagnosis does not automatically mean that someone needs to stop driving. In a position statement on diabetes and driving, the American Diabetes Association explain: "Most people with diabetes safely operate motor vehicles without creating any meaningful risk of injury to themselves or others."

However, they also explain that, if concerns arise, people should undergo assessment on an individual basis. According to the U.S. Department of Transportation: "People with diabetes are able to drive unless they are limited by certain complications of diabetes. These include severely low blood glucose levels or vision problems. If you are experiencing diabetes-related complications, you should work closely with your diabetes healthcare team to find out if diabetes affects your ability to drive."

7. Prediabetes always leads to diabetes

In the U.S., an estimated 88 million, or 1 in 3, adults have prediabetes. Prediabetes is a condition where blood sugar levels are higher than normal but not quite high enough to classify as diabetes. If left unchecked, prediabetes can develop into type 2 diabetes. However, it is not a given. Lifestyle changes can turn the tide. Regular physical activity and a more healthful diet can stop diabetes in its tracks.

8. People with diabetes cannot be active

Once again, this is untrue. In fact, exercise is an important component in the management of diabetes. Among other things, exercise helps drive weight loss and reduces blood pressure, both of which are risk factors for complications. It can also help the body use insulin better.

However, exercise can impact blood sugar levels in various ways, sometimes increasing it and, at other times, decreasing it. Some days, you'll do exactly the same type of activity and eat the same foods, but your blood sugar levels may act differently to what you'd expect.

Check your blood sugar before and after exercising and keep a record of how it behaves to show your doctor. This can help guide any necessary changes.

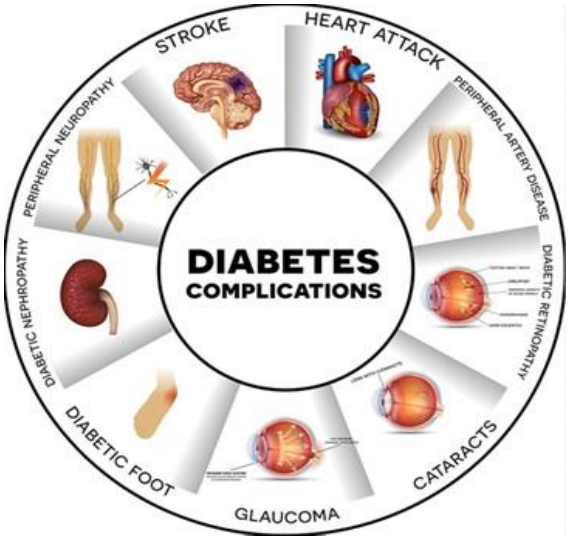
9. You can 'catch' diabetes

This is a myth and completely false. Pathogens do not cause diabetes, so a person cannot pass it to someone else. Doctors classify it as a noncommunicable disease.

10. Some natural products can cure diabetes

Currently, there is no cure for diabetes. Any claims that a product can cure diabetes are false. Most herbal or natural products will do little or nothing and, in some cases, they can potentially cause harm: Because certain herbs, vitamins, and supplements may interact with diabetes medications (including insulin) and increase their hypoglycemic effects, it is often argued that [using] natural therapies could reduce blood sugars to dangerously low levels and raise the risk of other diabetes complications.

Diabetes is a complex but common disease. As its prevalence increases, it is essential to overturn myths as we find them.



Summary

Okay, let's summarize what we have learned about prediabetes and diabetes in this article.

Prediabetes

For a lot of people with prediabetes, early treatment as well as moderate lifestyle changes can actually return blood glucose (blood sugar) levels to a normal range.

To prevent prediabetes from progressing to type 2 diabetes, try to:

- **Eat a healthy diet.**
- **Lose weight if you need to.**
- **Exercise regularly.**
- **Stop smoking if you are a smoker.**
- **Get your blood pressure and cholesterol under control.**

Diabetes

Diabetes is a very serious disease and if you have it, it is absolutely essential that you follow your doctor's orders and manage the disease properly. If you don't, some very bad things are going to happen to you and you will probably die young. Diabetes can be inherited but something in your environment must trigger it. So, if there is a history of diabetes in your family, you must take additional steps to reduce your chances of getting the disease. These steps include having your blood sugar checked once or twice a year, eating a healthy diet, getting regular exercise, and maintaining a normal weight. The rest of you are not off the hook – remember that anybody can get sugar diabetes. If you are fat and inactive, you have a good chance of getting diabetes.

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