Diabetes Mellitus

Basic facts

What is diabetes?
The term diabetes mellitus comes from 2 Greek words. Diabetes means “siphon” (or faucet), and mellitus means “honey-flavored.” Over 2,000 years ago, Greek doctors observed that people with this disorder passed large quantities of urine (like a faucet) and that the urine was sweet to the taste!

Diabetes is actually not a single disease. Several different disorders can cause the glucose level in a person’s blood to rise out of control. When this happens, we say they have some form of diabetes mellitus.

How common is diabetes?
About 8% of the U.S. population – or nearly 24 million people – have some form of diabetes, and 57 million more are at risk for developing diabetes.

What controls a person’s blood glucose level?
Glucose comes from the breakdown (digestion) of the food you eat. Also, your liver makes glucose to supply your body with energy overnight and between meals. Your blood always has some glucose in it because you need glucose to fuel your body 24 hours a day.
The hormone insulin controls the amount of glucose in your blood. Insulin is released from the pancreas, an organ near the stomach. Insulin helps move glucose into your body’s cells, where it is used for energy.

What causes blood glucose to rise out of control?
In a person with diabetes, the pancreas makes little or no insulin, or their cells do not use insulin very well. There are 3 main ways in which blood-glucose control goes wrong:

1. The pancreas may stop producing enough insulin.
2. Being overweight or obese can cause the liver, muscles, and fat cells to become resistant to insulin. As a result, the body needs to make more insulin to keep blood glucose levels normal. The extra insulin in the blood causes an even greater tendency to store fat and gain weight.
3. There may be an oversupply of other hormones in the blood, which prevents insulin from doing its job.
Main Types of Diabetes

- Type 1
- Type 2
- Secondary
- Gestational

What are the main types of diabetes?

Type 1 Diabetes

Type 1 diabetes occurs when the insulin-producing cells in the pancreas are destroyed by the person’s own immune system. Type 1 diabetes occurs most often in children, but it can occur at any age. People with type 1 diabetes must take multiple daily insulin shots (injections) in order to live.

Type 2 Diabetes

Type 2 diabetes is the most common type of diabetes. It usually occurs in adults, but it can also occur in overweight and obese children. The muscles, liver, and pancreas of people with type 2 diabetes do not work together correctly. The muscles and liver do not use insulin as they should, and this causes the pancreas to make more insulin to overcome this “resistance.” Over time – usually years – the pancreas cannot keep up with making so much insulin. When this happens, the amount of insulin the pancreas makes begins to decrease. This causes blood glucose levels to rise. At this point, the person may require medicine (pills or insulin injections) in order to control their blood glucose.

Secondary Diabetes

Secondary diabetes is the term used to describe diabetes caused by another disease or condition that involves the pancreas. After transplant surgeries, insulin resistance can result from taking steroid medicines, such as prednisone, or anti-rejection drugs. A steroid-producing tumor can also cause an excess of steroid hormones in the blood, resulting in elevated blood glucose levels. Secondary diabetes can also be caused by diseases or conditions that prevent or stop insulin from working properly, such as:

- Cystic fibrosis
- Pancreatitis (inflammation of the pancreas)
- Pancreatic cancer

Gestational Diabetes

Gestational diabetes is a type of diabetes that can develop during pregnancy in women who do not already have diabetes. In most cases, it goes away once the baby is born, but it is important to diagnose and treat it to ensure a good pregnancy outcome for the mother and the baby. Also, women with gestational diabetes are at greater risk of developing type 2 diabetes later in life.
Who is at risk for diabetes?

- Being overweight or obese increases your risk of getting type 2 diabetes.
- Being physically inactive increases your risk of getting type 2 diabetes.
- Having a close relative with diabetes also increases your risk.
- These racial and ethnic groups have a greater chance of getting diabetes:
  - American Indians
  - African Americans
  - Hispanics/Latinos
  - Asian Americans
  - Pacific Rim Islanders

How can someone lower their risk for diabetes?

There is no evidence that diabetes is caused by “eating too much sugar.” You can lower your risk of getting diabetes by:

- Losing as little as 10 pounds, if you are overweight.
- Eating healthy foods.
- Walking for 30 minutes at least 5 days a week.

What can happen if diabetes is not controlled?

Over many years, poorly controlled blood glucose can damage the heart, blood vessels, and nerves. Damage to your body can cause loss of feet or legs, blindness, kidney problems, and gum problems or loss of teeth. People whose blood glucose is not well controlled are also more prone to infection and tend to heal from wounds slowly.

We know that keeping blood glucose as close to normal levels as possible decreases your risk of developing these problems.