Diabetes

Diabetes is a common condition that affects people of all ages. There are several forms of

diabetes. Type 1and Type 2 which is the most common. A combination of treatment

strategies can help you manage the condition to live a healthy life and prevent

complications.NIH: National Institute of Diabetes and Digestive and Kidney Diseases

What causes type 1 diabetes?

Type 1 diabetes occurs when your immune system, the body’s system for fighting infection, attacks and destroys the insulin-producing beta cells of the pancreas. Scientists think type 1 diabetes is caused by genes and environmental factors, such as viruses, that might trigger the disease. Studies such as TrialNet External link are working to pinpoint causes of type 1 diabetes and possible ways to prevent or slow the disease.

What causes type 2 diabetes?

Type 2 diabetes—the most common form of diabetes—is caused by several factors, including lifestyle factors and genes.

Overweight, obesity, and physical inactivity

You are more likely to develop type 2 diabetes if you are not physically active and are overweight or have obesity. Extra weight sometimes causes insulin resistance and is common in people with type 2 diabetes. The location of body fat also makes a difference. Extra belly fat is linked to insulin resistance, type 2 diabetes, and heart and blood vessel disease. To see if your weight puts you at risk for type 2 diabetes, check out these Body Mass Index (BMI) charts.

Insulin resistance

Type 2 diabetes usually begins with insulin resistance, a condition in which muscle, liver, and fat cells do not use insulin well. As a result, your body needs more insulin to help glucose enter cells. At first, the pancreas makes more insulin to keep up with the added demand. Over time, the pancreas can’t make enough insulin, and blood glucose levels rise.

Genes and family history

As in type 1 diabetes, certain genes may make you more likely to develop type 2 diabetes. The disease tends to run in families and occurs more often in these racial/ethnic groups:

African Americans

Alaska Natives

American Indians

Asian Americans

Hispanics/Latinos

Native Hawaiians

Pacific Islanders

Genes also can increase the risk of type 2 diabetes by increasing a person’s tendency to become overweight or have obesity.

What causes gestational diabetes?

Scientists believe gestational diabetes, a type of diabetes that develops during pregnancy, is caused by the hormonal changes of pregnancy along with genetic and lifestyle factors.

Insulin resistance

Hormones produced by the placenta NIH external link contribute to insulin resistance, which occurs in all women during late pregnancy. Most pregnant women can produce enough insulin to overcome insulinobesity resistance, but some cannot. Gestational diabetes occurs when the pancreas can’t make enough insulin.

As with type 2 diabetes, extra weight is linked to gestational diabetes. Women who are overweight or have may already have insulin resistance when they become pregnant. Gaining too much weight during pregnancy may also be a factor.

Photo of smiling pregnant woman

Hormonal changes, extra weight, and family history can contribute to gestational diabetes.

Genes and family history

Having a family history of diabetes makes it more likely that a woman will develop gestational diabetes, which suggests that genes play a role. Genes may also explain why the disorder occurs more often in African Americans, American Indians, Asians, and Hispanics/Latinas.

What else can cause diabetes?

Genetic mutations NIH external link, other diseases, damage to the pancreas, and certain medicines may also cause diabetes.

Genetic mutations

Monogenic diabetes is caused by mutations, or changes, in a single gene. These changes are usually passed through families, but sometimes the gene mutation happens on its own. Most of these gene mutations cause diabetes by making the pancreas less able to make insulin. The most common types of monogenic diabetes are neonatal diabetes and maturity-onset diabetes of the young (MODY). Neonatal diabetes occurs in the first 6 months of life. Doctors usually diagnose MODY during adolescence or early adulthood, but sometimes the disease is not diagnosed until later in life.

Cystic fibrosis NIH external link produces thick mucus that causes scarring in the pancreas. This scarring can prevent the pancreas from making enough insulin.

Hemochromatosis causes the body to store too much iron. If the disease is not treated, iron can build up in and damage the pancreas and other organs.

Hormonal diseases

Some hormonal diseases cause the body to produce too much of certain hormones, which sometimes cause insulin resistance and diabetes.

Cushing’s syndrome occurs when the body produces too much cortisol—often called the “stress hormone.”

Acromegaly occurs when the body produces too much growth hormone.

Hyperthyroidism occurs when the thyroid gland produces too much thyroid hormone.

Damage to or removal of the pancreas

Pancreatitis, pancreatic cancer, and trauma can all harm the beta cells or make them less able to produce insulin, resulting in diabetes. If the damaged pancreas is removed, diabetes will occur due to the loss of the beta cells.