

TYPES OF DIABETES

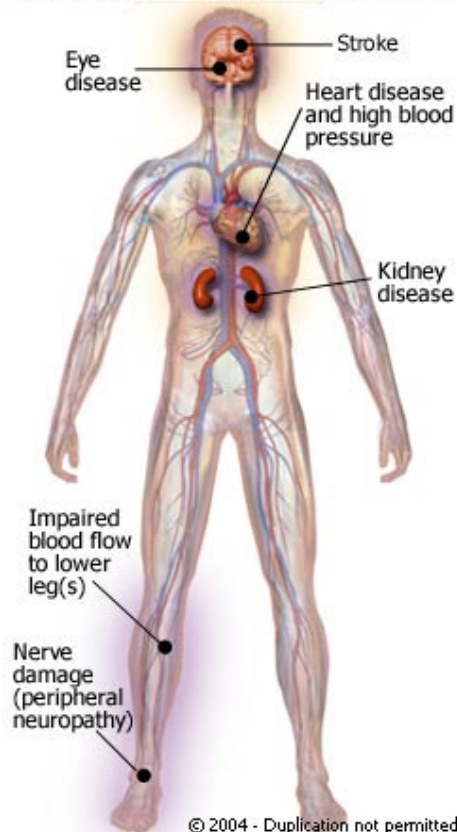
(Adult Onset Diabetes, Juvenile Diabetes, Insulin Dependent Diabetes, IDDM, Type I Diabetes, Type II Diabetes, NIDDM, Noninsulin Dependent Diabetes)

Summary

There are two types of **diabetes**: Type 1 and type 2. Type 1 is thought to be caused by a combination of genetic and environmental factors that results in a lack, or complete absence, of insulin. However, the reasons are largely unknown as to why the body's immune system attacks itself, destroying over 90 percent of its own insulin-producing *beta* cells in the pancreas. Much more common, type 2 diabetes has been linked to **obesity**.

Diabetes-related Complications

Over time, high levels of blood sugar can lead to the following:



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Treatment for type 1 continues to consist of insulin injections, although other strategies for taking insulin are currently being researched (e.g., nasal spray or skin patch). type 2 requires medication and sometimes insulin injections. Both types require lifestyle changes that include **diet** and **exercise**.

About type 1 diabetes

Type 1 diabetes is also called *insulin-dependent diabetes mellitus* (IDDM) or juvenile-onset diabetes. It refers to a condition in which little or no insulin is produced by the pancreas (an organ next to the stomach). This is a rare and severe form of **diabetes**. It affects about 5 to 10 percent of all diabetics and develops before the age of 30. It is thought to be caused by a combination of genetic and environmental factors that results in a lack, or complete absence, of insulin. However, the reasons are largely unknown as to why the body's immune system attacks itself, destroying over 90 percent of its own

insulin-producing *beta* cells in the pancreas.

Treatment for type 1 diabetes

Type 1 patients must administer daily injections to maintain adequate glucose levels. Diet and exercise must also be carefully coordinated with insulin injections. Insulin is injected by the patient (or by a child patient's parent) under the fat layer of the arm, leg or stomach. Because the bodies of type 1 patients would destroy insulin if it passed through the normal digestive process, insulin must be injected and not taken by mouth. New forms of insulin include nasal sprays, external and implantable pumps and methods that are *transdermal* (through the skin, usually in the form of a patch). These new forms are still considered experimental and are currently being tested for safety and effectiveness.

About type 2 diabetes

Type 2 diabetes is a far more common condition, affecting about 90 to 95 percent of all cases. Patients with type 2 diabetes do manufacture insulin, sometimes even more than necessary. However, for some reason their bodies reject and/or do not detect it, resulting in what the body perceives as a deficiency. This insulin blockage is due to cell abnormalities of unknown cause in the liver and muscles. The onset of this type of diabetes, also called adult-onset diabetes, usually occurs after age 30.

The likelihood of onset increases with age; 15 percent of people over 70 have type 2 diabetes. Blood glucose levels are usually more stable in these patients. **Obesity** seems to play a large role in the development of type 2 diabetes; up to 90 percent of these patients are obese. Also, both type 2 diabetes and obesity tend to run in families.

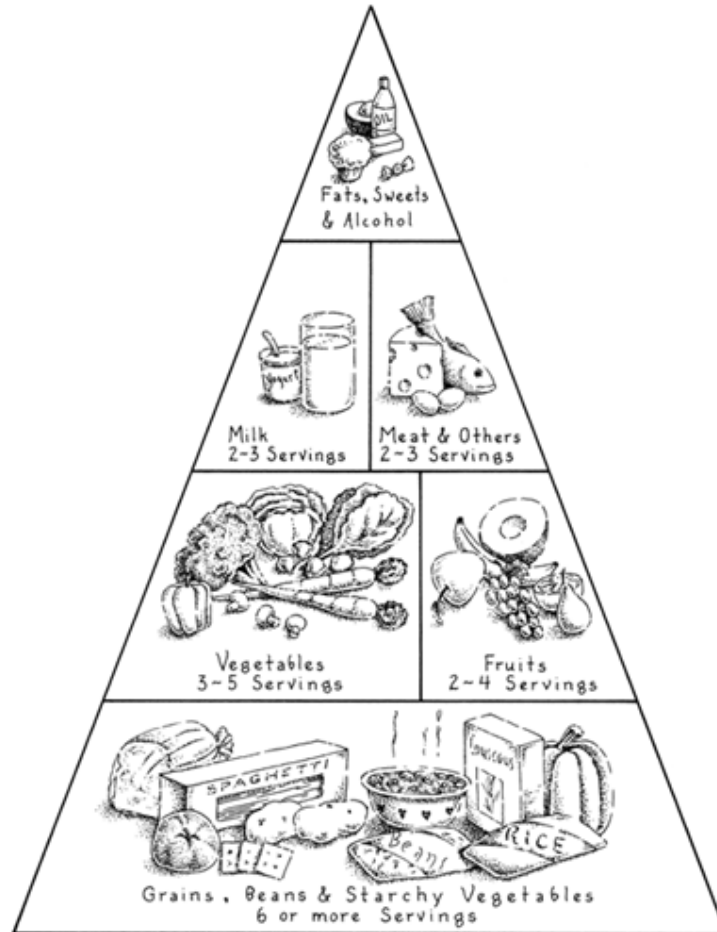
Treatment for type 2 diabetes

People with type 2 diabetes are often treated with medication. Depending on the severity of the condition, they may be able to take oral medications instead of injections. However, some insulin injection may still be used. Insulin is generally injected by the patient (or a child patient's parent) under the fat layer of the arm, leg or stomach.

Lifestyle considerations for diabetics

In addition to keeping blood glucose levels within the normal range, making some lifestyle changes can help diabetics to avoid long-term consequences such as **heart attack** and **stroke**. These include the following:

- Maintaining a balanced diet low in **fats and oils**, low in sweets, and high in **fiber** (see **Diabetic Food Guide Pyramid**)



- Eating regular meals and light snacks
- Lowering **cholesterol** levels
- Maintaining proper weight to avoid **obesity** – a major risk factor for type 2 diabetes
- Engaging in regular **exercise**, which lowers blood sugar levels and helps the body to use insulin