

# What are the Types of Diabetes?

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There are several kinds of diabetes that can happen in a child. Here are the most common.

## **Type 1 Diabetes** (once known as Juvenile Onset Diabetes):

This is an auto-immune disorder. That means that the body's own immune system, which usually fights off germs and viruses, fights your own body and damages or destroys certain parts of the body. In the case of diabetes, the immune system attacks and kills the Beta cells of the pancreas. When all of the Beta cells are finally killed, the body no longer makes any insulin--insulin is completely gone.

Right now, we do not know what causes type 1 diabetes. We know that the ability to develop diabetes can be inherited (passed down from parent to child). However, many people have the same genes but they do not develop diabetes. We also know that something "triggers" the diabetes to happen but we are not sure what the trigger could be.

We do know that type 1 diabetes is not caused by eating too many sweets or by something that you or your child did or did not do. Right now we do not have a cure for diabetes. However, we do have many new ways to manage diabetes so a child can take part in any "normal" childhood activity.

## **Type 2 Diabetes** (once known as Adult Onset Diabetes):

This is the fastest growing type of diabetes in children. It used to be only found in older people and is associated with being overweight/obese and with not exercising regularly. As we see more and more overweight/obese children, we are seeing younger and younger children with Type 2 diabetes. Type 2 diabetes usually happens when the extra weight on people keeps their insulin from working the way it should. People with Type 2 diabetes need much more insulin than people without diabetes and the pancreas cannot keep up with the demands.

## **Diabetes during medical treatments**

Sometimes the medicines used to fight cancer or other serious disorders can make blood sugar levels go very high. When this happens, insulin has to be taken in order to make the blood sugar levels go back to normal. Many times the insulin is only used for a little while and can be stopped after the medicines that affect the blood sugar levels are stopped.

## **Diabetes and Cystic Fibrosis (CF)**

Children with CF can develop diabetes. While the exact cause is not completely known, it is felt that chronic inflammation of the pancreas from the CF causes the insulin making cells in the pancreas to not work. It is very important that children with CF keep their blood sugar levels under good control in order to help keep the lungs functioning as well as possible.

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## **Genetic forms of Diabetes (Neonatal Diabetes and MODY)**

Genetic forms of diabetes (monogenic diabetes) occur rarely in children and are therefore frequently misdiagnosed as either type 1 or type 2 diabetes. Neonatal diabetes, which occurs in either a temporary or permanent form, presents within the first 6 months of life, and can be mistaken for type 1 diabetes. It is important to diagnose this condition, because it may often be treated with an oral medication. Genetic diagnosis is available through a simple blood test and is recommended for children with diabetes diagnosed within the first few months of life.

Maturity-onset diabetes of the young (MODY) refers to several single-gene mutations resulting in a mild form of diabetes that is frequently misdiagnosed as type 2 diabetes. These are inherited conditions, so there is almost always a history of diabetes in a parent or sibling. It is also important to correctly diagnose a MODY form of diabetes, as some forms require only treatment with an oral medication, and some require no treatment at all. As in the neonatal form of diabetes, genetic testing from a simple blood test is readily available.

More information about MODY can be found at <http://diabetes.niddk.nih.gov/dm/pubs/mody/>

Your clinician can review your/your child's medical history and laboratory studies that were ordered at the time of diagnosis to determine whether genetic testing should be ordered.