



What is Monogenic Diabetes?

The most common types of diabetes are type 1 and type 2 diabetes. In every type of diabetes, the patient's blood sugar levels are high because there is not enough insulin to keep the blood sugar levels normal.

There is another type of diabetes that is often misdiagnosed as type 1 or type 2 diabetes, called **monogenic diabetes**. Different forms of monogenic diabetes include neonatal diabetes and MODY (maturity onset diabetes of the young).

Monogenic diabetes happens when there is a mutation in a single gene of the diabetic person. The human body has about 30,000 individual genes. So far, more than 20 genes have been linked to monogenic diabetes. An mutation in any one of these genes can cause a child or adult to develop monogenic diabetes.

Scientists do not yet understand exactly why genetic mutations occur. If an individual has a mutated gene, this mutation may be passed from parents to their children. Some mutations occur spontaneously in an individual, and some are passed down from one generation to the next.

Monogenic Diabetes: By the Numbers

- Monogenic Diabetes accounts for 2–3% of all diabetes cases, but is often misdiagnosed as type 1 or type 2
- As many as 500,000 of the 25 million people in the U.S. with diabetes may be living with Monogenic Diabetes
- Enrollment in Kovler's Neonatal Diabetes Registry includes 265 individuals who were diagnosed under 1 year of age
- Enrollment in Kovler's Monogenic Diabetes Registry includes 1,540 patients, of which over 700 have diabetes, and the rest are family members. With testing ongoing, 268 of these have so far been found to have a genetic cause.

