

Type 1 and Type 2 Diabetes

This sheet is about having diabetes in pregnancy and while breastfeeding. This information should not take the place of medical care and advice from your healthcare provider.

What is diabetes?

Diabetes is a medical condition where the body either does not make enough insulin or cannot use insulin correctly. Insulin is a hormone that helps sugar (glucose) move from our bloodstream into the cells in our body. Cells use this glucose for energy to function. When glucose cannot enter the cells, it builds up in the blood (hyperglycemia). These higher than normal sugar levels can lead to damage of blood vessels, nerves, and organs like the eyes and kidneys.

Is there more than one type of diabetes?

There are different types of diabetes. This sheet will talk about type 1 and type 2 diabetes. Gestational diabetes is another kind of diabetes that is diagnosed for the first time during pregnancy.

Type 1 diabetes (once called juvenile-onset diabetes or insulin-dependent diabetes) is a condition where the body does not make enough insulin, or might not make any insulin at all. People with Type 1 diabetes need insulin injections and close monitoring to control their blood sugar levels.

Type 2 diabetes (once called adult-onset diabetes) is a condition where the body does not produce enough insulin or the insulin the body does make is not able to work well. Some people with type 2 diabetes can manage their condition with exercise and changes to their diet. Others may need insulin or other medications.

I have diabetes and I am planning on getting pregnant. Is there anything I need to know?

Speak with your healthcare providers before becoming pregnant to determine the best treatment plan to keep your blood glucose levels under control before and during pregnancy. Along with medications, you and your healthcare team should develop a personalized diet and exercise plan as soon as possible, preferably before pregnancy.

The hemoglobin A1c (HbA1c) blood test can be done to look at glucose levels over the past 2-3 months. Ideally, HbA1c levels should be within the normal range before pregnancy. Some healthcare providers will recommend home blood glucose testing to check the sugar levels more often during pregnancy.

If you take insulin or other medication to control your diabetes, you can contact a MotherToBaby specialist to learn more about the use of your specific medication(s) while pregnant and/or breastfeeding.

Well-controlled glucose levels are when your levels are in the range that works best for you. Uncontrolled or poorly-controlled diabetes means your blood sugar levels are too high, even if you're treating your condition. What is considered well-controlled, poorly-controlled, and uncontrolled can vary from person to person. According to the American Diabetes Association, for people with pre-existing type 1 diabetes or type 2 diabetes who become pregnant, ideal glucose levels are:

- Fasting glucose 70-95 mg/dL (3.9-5.3 mmol/L) and
- HbA1c <6.0% and either
- One-hour postprandial glucose 110-140 mg/dL (6.1-7.8 mmol/L) or
- Two-hour postprandial glucose 100-120 mg/dL (5.6-6.7 mmol/L)

However, because every person and every pregnancy are different, it is important to work with your healthcare team to determine your glucose goals.

I have diabetes. Can it make it harder for me to get pregnant?

Having diabetes can make it harder to become pregnant. Different factors, such as obesity, being underweight, having complications related to diabetes, and/or having conditions such as polycystic ovary syndrome (PCOS) can affect a

person's ability to get pregnancy. Having appropriate blood sugar control and a healthy body weight may help with conception.

For more information on obesity, please see our fact sheet: <https://mothertobaby.org/fact-sheets/obesity-pregnancy/>.

Does having diabetes increase the chance for miscarriage?

Miscarriage can occur in any pregnancy. People with type 1 or type 2 diabetes and whose glucose levels are not in control have an increased chance for miscarriage.

Can diabetes cause birth defects?

Every pregnancy starts with a 3-5% chance of having a birth defect. This is called the background risk. Most babies born to people with type 1 or type 2 diabetes are not born with birth defects. However, high glucose levels during pregnancy increase the chance that a baby will be born with birth defects. High glucose levels have the greatest effect early in pregnancy, possibly before a person knows they are pregnant. These risks are thought to be highest when hemoglobin A1C levels are above 8% or the average blood glucose is >180 mg/dL (10 mmol/L). As hemoglobin A1C levels go above 8%, the chance of birth defects increases. For people who are pregnant and have poor control of their diabetes, the chance for a baby to be born with birth defects is about 6-10% (about 1 in 16 to 1 in 10). For those with extremely poor control in the first trimester, there may be up to a 20% (1 in 5) chance for birth defects. These birth defects can include spinal cord defects (spina bifida), heart defects, skeletal defects, and defects of the urinary, reproductive, and digestive systems.

Can diabetes cause pregnancy complications?

People with type 1 or type 2 diabetes and whose glucose levels are not in control have an increased chance for stillbirth. There is also a higher chance of pre-eclampsia (dangerously high blood pressure), more amniotic fluid around the baby than usual (polyhydramnios), and delivery before 37 weeks of pregnancy (preterm delivery). Babies born to people with diabetes might also have trouble breathing, low blood sugar (hypoglycemia) and jaundice (yellowing of the skin and the whites of the eyes) at birth.

People with poorly-controlled diabetes are more likely to have large babies (called macrosomia). Some babies could weigh over 10 pounds. In some cases when ultrasound shows macrosomia, the healthcare provider may advise delivery of the baby by C-section rather than by vaginal delivery in order to reduce the chance of injuries to the mother and the baby. On the other hand, babies born to people with poorly-controlled diabetes might not get the nutrition they need before birth to grow typically, and could be smaller than expected. Chances for growth issues are lower when blood sugar levels are in the normal range in pregnancy.

People with type 1 or type 2 diabetes who have other medical issues such as high blood pressure or obesity have a higher chance for pregnancy complications.

Can having type 1 or type 2 diabetes in pregnancy cause long-term complications for the baby?

People born to those with diabetes have an increased chance of also developing diabetes later in life. This is thought to be caused by both genetics and diabetes management during pregnancy (whether glucose is controlled). Some studies suggest that poorly-controlled diabetes during pregnancy could affect neurodevelopment, although the data from these studies is limited.

What kinds of tests are recommended during pregnancy for people with diabetes?

Your healthcare providers will follow you and your developing baby's health closely during the pregnancy. Your healthcare provider can discuss any screenings that are recommended to help monitor your diabetes and pregnancy. Some might include:

- Blood screenings to measure certain proteins the baby makes that cross into the mother's blood. The levels of these proteins can give information on a baby's chances of having certain birth defects such as spina bifida.
- Ultrasounds to look at the baby, the placenta, and the fluid around the baby. People who are pregnant and have type 1 or type 2 diabetes may need to have more ultrasounds than someone without diabetes to monitor the growth of the baby and look at amniotic fluid levels.
- HbA1c blood test to check glucose levels throughout pregnancy.
- Nonstress tests in the third trimester to monitor the baby and amniotic fluid levels.

- Eye exam before pregnancy and in the first trimester. People with diabetes may develop an eye problem called retinopathy, which can lead to vision problems. People with poorly-controlled diabetes may find that this condition worsens during pregnancy.

I have to take medication for diabetes. Should I stop?

Talk with your healthcare providers before making any changes to how you take your medications. Diabetes that is uncontrolled or not well-controlled can cause miscarriage, birth defects, pregnancy complications, and stillbirth. People who are using insulin to control their diabetes may need a higher dose, especially as the pregnancy progresses. Talk with your healthcare provider if you find out that you are pregnant. They can go over the benefits of taking your medication versus the risk of an untreated condition. You can also discuss your medications with a MotherToBaby specialist.

If I have diabetes will I be able to breastfeed my baby?

There are health benefits of breastfeeding and people with diabetes should be supported if they want to breastfeed. People with type 1 and type 2 diabetes should make sure their glucose levels are well-controlled when breastfeeding. Some research has found that high maternal glucose can overflow into the breast milk as sugar.

Diabetes can slow down the production of milk. Insulin is necessary for milk production, so this may partly explain why people with diabetes are slow to produce milk.

I take medication for my diabetes. Can I breastfeed?

Insulin is a normal part of breastmilk. It does not cross over into breast milk in large amounts, and is not expected to cause problems for the breastfed baby. People using oral medications to treat their diabetes should monitor the baby for jitteriness, a sign of low blood sugar. If the baby has symptoms, contact the child's healthcare provider. Be sure to talk to your healthcare provider about all of your breastfeeding questions.

How will breastfeeding affect my blood sugar levels?

People with diabetes will often experience lowered blood sugar after nursing. Many people require less insulin while breastfeeding. You may need to monitor your blood sugar more carefully and adjust your insulin dose.

If a male has diabetes, could it affect fertility (ability to get partner pregnant) or increase the chance of birth defects?

It is possible for males with poorly-controlled type 1 or type 2 diabetes to have fertility problems. However, there is no evidence to suggest that a male's use of medications to treat diabetes would increase the chance of birth defects in a pregnancy. In general, exposures that fathers and sperm donors have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/>.

Please click [here](#) for references.

Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at [MotherToBaby.org](https://mothertobaby.org).

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