

Type 1 and Type 2 Diabetes

This sheet is about having diabetes in a pregnancy or 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 glucose for energy to function. When glucose cannot enter the cells, it builds up in the blood (hyperglycemia). 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.

- Type 1 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 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.
- Gestational diabetes is another kind of diabetes that is diagnosed for the first-time during pregnancy. MotherToBaby has a separate fact sheet on gestational diabetes available on the website at: <https://mothertobaby.org/fact-sheets/diabetes-pregnancy/>

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

Planning your pregnancy and having well-controlled sugar levels before conceiving is an excellent way to increase your chances of a healthy baby. Make an appointment with your healthcare providers before becoming pregnant to determine the best treatment plan to keep your blood glucose levels in control before and during pregnancy. Along with medications, you and your healthcare team should develop a personalized diet and exercise plan. During this visit the healthcare provider can also discuss other things people can do to prepare for pregnancy in general, such as taking a prenatal vitamin and/or folic acid. If you are already pregnant, it is still important to make an appointment with your healthcare providers as soon as possible to go over the best pregnancy plan for you and the baby.

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

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

- Fasting glucose below 95 mg/dL (5.3 mmol/L) and
- HbA1c below 6%
- Glucose 1 hour after eating below 140 mg/dL (7.8 mmol/L) or
- Glucose 2 hours after eating of below 120 mg/dL (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.

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

I have diabetes. Can it make it harder for me to become 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 pregnant. Having good 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/getting diabetes increase the chance for miscarriage?

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

Does having diabetes increase the chance of birth defects?

Every pregnancy starts out 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 do not have birth defects. However, high glucose levels during the first trimester of pregnancy does increase the chance that a baby will be born with birth defects. These risks are thought to be highest when HbA1c levels are above 8% or the average blood glucose is >180 mg/dL. 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% to 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.

Would having diabetes increase the chance of other pregnancy related problems?

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 preterm delivery (delivery before 37 weeks of pregnancy). 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.

In addition, babies born to people with poorly-controlled diabetes can grow larger or smaller than expected. Babies that are larger than usual might get the medical term: macrosomia. Some babies could weigh over 10 pounds. In some cases when ultrasound shows macrosomia, the healthcare provider might discuss the option of delivery by C-section rather than by vaginal delivery in order to reduce the chance of injuries to the mother and the baby. There is also a chance for the baby to be smaller than expected among people with poorly-controlled diabetes. This is because some babies might not get the nutrition they need before birth to grow well. Chances for growth issues (being bigger or smaller) go down when blood sugar levels are in the normal range in pregnancy.

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

Does having diabetes in pregnancy affect future behavior or learning for the child?

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 blood glucose is well controlled). Some studies suggest that poorly-controlled diabetes during pregnancy could affect development and behavior of the child, 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 tests and ultrasounds to screen for certain birth defects such as spina bifida.
- Ultrasounds to look at growth of 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 prenatal ultrasounds than someone without diabetes.

- Glucose level monitoring 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. It is very important to treat diabetes. 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 might need a higher dose 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.

Breastfeeding when I have diabetes:

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.

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

Insulin is a normal part of breastmilk. It does not cross over into breast milk in large amounts. Insulin 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. Feel free to contact a MotherToBaby specialist to discuss your specific medication during breastfeeding. 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 can have lowered blood sugar after nursing. Some people need less insulin to treat their diabetes if they are breastfeeding. Your healthcare team can discuss how often to monitor blood sugar and can work with you to adjust insulin dose, if needed. Be sure to talk to your healthcare provider about all of your breastfeeding questions.

If a male has diabetes, can it make it harder to get a 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 or sperm donors have are unlikely to increase the 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://www.MotherToBaby.org).

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