



Metformin

In every pregnancy, a woman starts out with a 3-5% chance of having a baby with a birth defect. This is called her background risk. This sheet talks about whether exposure to metformin may increase the risk for birth defects over that background risk. This information should not take the place of medical care and advice from your health care provider.

What is metformin?

Metformin is an oral medication used to treat type 2 diabetes (once known as adult-onset or noninsulin-dependent diabetes). It is also used to treat insulin resistance in polycystic ovarian syndrome (PCOS). Other names for this medication include Glucophage®, Diformin®, Glumetza®, FORTAMET® and Glycon®.

I use metformin for the treatment of type 2 diabetes. Should I stop metformin before I get pregnant?

If you become pregnant while using metformin, you should not stop your medication without first talking to your health care provider.

High blood sugar levels before and during pregnancy increase the chance of birth defects and other complications. Insulin is usually the medication of choice in pregnancy because it can usually control blood sugar levels better than oral medications. However, metformin is used to treat type 2 diabetes in pregnant women when insulin alone does not result in good blood sugar control. Please consult your health care *before* pregnancy to determine which medication(s) is/are the most appropriate for you. For more information about diabetes during pregnancy, please see the MotherToBaby fact sheet Diabetes and Pregnancy at <https://mothertobaby.org/fact-sheets/diabetes-pregnancy/pdf/>.

I am taking metformin to treat PCOS. Should I stop taking the medication before and/or after I get pregnant?

You should not stop this medication without first talking with your healthcare provider. Studies show that women with PCOS who are treated with metformin have a better chance of getting pregnant. Some, not all, studies report that women who continue metformin during their first trimester may be less likely to have a miscarriage. Additionally, there are some small studies that suggest that taking metformin throughout pregnancy may decrease the likelihood of developing gestational diabetes. Depending on your medical history, your healthcare provider might encourage you to continue your medication during pregnancy, or they may want you to stop taking it when you learn you're pregnant. It is best to discuss your medication use with your healthcare provider before getting pregnant.

Does metformin cause birth defects? Is it safe to take it during the first trimester?

Recent studies looking at the use of metformin during pregnancy in women with pre-gestational diabetes and in those with PCOS concluded that the use of metformin did not increase the chance for birth defects. Studies noted that women with poorly controlled pre-gestational diabetes did have an increased chance of having a baby with a birth defect. For more information about diabetes during pregnancy, please see the MotherToBaby fact sheet Diabetes and Pregnancy at <https://mothertobaby.org/fact-sheets/diabetes-pregnancy/pdf/>.

I have been diagnosed with gestational diabetes. Is it safe to take metformin during the second and third trimester?

Studies suggest that women receiving metformin during the second and third trimesters for the treatment of gestational diabetes are not expected to have higher chances of complications in their newborns.

If I use metformin throughout pregnancy will it affect the baby?

It is unlikely. A small study initially showed a link between the use of metformin during pregnancy and preeclampsia (high blood pressure requiring immediate medical attention). However, this was not seen in later studies.

Other studies compared the use of metformin with the use of insulin during pregnancy and found that metformin did not increase the risk of complications for mothers and babies. There have been some reports of jaundice in babies exposed to metformin during pregnancy, but these reports do not prove that metformin was the cause of the jaundice.

One study looked at the outcome of pregnancy after treatment of PCOS with metformin throughout pregnancy. Infants were found to have normal birth weight and height. At 6 months of age, these infants had normal weight, height, and social and motor development.

Can I take metformin while breastfeeding?

Metformin appears to be safe during breastfeeding. Several reports have shown that the amount of metformin that gets into breastmilk is low. Another study found that infants of mothers who received metformin throughout pregnancy and while breastfeeding achieved the same growth at six months of age as infants who were formula-fed. Be sure to talk to your health care provider about all your breastfeeding questions.

For information on a related topic see the MotherToBaby fact sheet for Diabetes and Pregnancy at <https://mothertobaby.org/fact-sheets/diabetes-pregnancy/pdf/>.

The baby's father uses metformin to treat diabetes. Will that harm the baby?

It is unlikely. No study has looked at the use of metformin in men. In general, exposures that fathers have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures and Pregnancy at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/pdf/>.

Please click here for references.

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