Metformin

This sheet is about exposure to metformin in pregnancy and while breastfeeding. This information is based on available published literature. This information should not take the place of medical care and advice from your healthcare provider.

What is metformin?

Metformin is a medication that has been used to treat type 2 diabetes, insulin-resistance in polycystic ovary syndrome (PCOS), obesity (high body mass index (BMI)), and gestational diabetes. It is sold under brand names including Glucophage®, Glumetza® and Fortamet®.

Sometimes when women find out they are pregnant, they think about changing how they take their medication, or stopping their medication altogether. However, it is important to talk with your healthcare providers before making any changes to how you take this medication. Your healthcare providers can talk with you about the benefits of treating your condition and the risks of untreated illness during pregnancy.

High blood sugar levels before and during pregnancy increase the chance of birth defects and other complications. For more information about diabetes during pregnancy, please see the MotherToBaby fact sheets on Type 1 and Type 2 Diabetes at https://mothertobaby.org/fact-sheets/type-1-and-type-2-diabetes/ and Gestational Diabetes at https://mothertobaby.org/fact-sheets/diabetes-pregnancy/.

I take metformin. Can it make it harder for me to get pregnant?

Based on the studies reviewed, is it not known if metformin can make it harder to get pregnant. Metformin has been used to treat PCOS, a condition that can make it harder to get pregnant.

Does taking metformin increase the chance of miscarriage?

Miscarriage is common and can occur in any pregnancy for many different reasons. Metformin is not expected to increase the chance for miscarriage. Poorly controlled diabetes in the first trimester of pregnancy can increase the chance of miscarriage.

Does taking metformin 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. Use of metformin during pregnancy is not expected to increase the chance of having a baby with a birth defect. Poorly controlled diabetes in the first trimester of pregnancy can increase the chance of having a baby with a birth defect.

Does taking metformin in pregnancy increase the chance of other pregnancy-related problems?

Some studies have suggested women with gestational or type II diabetes who were treated with metformin had smaller babies at the time of delivery than those who were treated with insulin. The children exposed to metformin during pregnancy quickly gained weight after birth. Some studies have shown that children exposed to metformin during pregnancy may have a higher chance of having obesity in childhood. However, other studies did not show a difference in obesity in children of women who took metformin in pregnancy compared to women who did not take metformin or those who took insulin.

Does taking metformin in pregnancy affect future behavior or learning for the child?

Taking metformin during pregnancy is not expected to affect future behavior or learning for the child.

Breastfeeding while taking metformin:

Metformin gets into breastmilk in small amounts. One study found no problems in breastfed infants. Be sure to talk to your healthcare provider about all of your breastfeeding questions.

*If a man takes metformin, could it affect fertility or increase the chance of birth defects?**

It is not known if metformin could affect fertility (ability to get a woman pregnant) or increase the chance of birth defects above the background risk. Some studies have suggested that use of metformin may reduce testosterone levels while other studies have suggested that better control of insulin may help improve sperm production. One study suggested that men given a prescription for metformin in the 3 months before conception might be associated with genital defects in the infant. However, no higher chance for birth defects was reported in a different study that looked at ~1,700 children of men who were prescribed metformin to treat type 2 diabetes in the 3 months before conception. Prescription based studies cannot tell us if the person actually took the medication or if they took it correctly. In general, exposures that men 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.

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Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at MotherToBaby.org.

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