

Metformin (Glucophage®)

This sheet is about exposure to metformin in pregnancy and while breastfeeding. 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), and gestational diabetes. It is sold under brand names including Glucophage®, Glumetza® and Fortamet® .

Sometimes when people 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 sheet on 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 for miscarriage?

Miscarriage is common and can occur in any pregnancy for many different reasons. Based on the studies reviewed, metformin is not expected to increase the chance for 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. A small number of studies looking at the use of metformin during pregnancy have not reported a higher chance of having a baby with a birth defect. Studies have found that poorly controlled diabetes in the first trimester 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?

Based on the studies reviewed, metformin is not expected to increase the chance for other pregnancy-related problems, such as preterm delivery (birth before week 37). One study suggested people with gestational diabetes mellitus 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 and were reported to have higher body-mass-index (BMI) in mid-childhood. The use of metformin through delivery has been linked with a chance of hypoglycemia (low blood sugar) in the baby.

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

Long-term problems have not been reported in at least three studies that followed children to 6 months, 2 years or 5-14 years of age. One study looked at the outcome of pregnancy after treatment of PCOS with metformin throughout pregnancy. At 6 months of age, infants had typical weight, length, and development. Another study did not find differences in learning or development children at age two who were exposed to metformin compared to children who were exposed to insulin. A third study found no difference in the average IQ of exposed children between the ages of 5 to 14.

Breastfeeding while taking metformin:

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

If a male takes metformin, could it affect fertility (ability to get partner pregnant) or increase the chance

of birth defects?

Based on the studies reviewed, it is not known if metformin could affect fertility or increase the chance of birth defects above the background risk. One study suggested that metformin use in males in the 3 months before conception might be associated with genital defects in the infant. More studies are needed to understand or confirm this finding. 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.

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