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Metformin and Pregnancy

This sheet talks about the risks that exposure to metformin can have during pregnancy. With each pregnancy, all women have a 3% to 5% chance of having a baby with a birth defect. 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 and insulin resistance in polycystic ovarian syndrome (PCOS). Other names for this medication include Glucophage[®], Diformin[®], Glumetza[®] and Glycon[®].

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

Before and during pregnancy, blood sugar levels should be under control to prevent an increased risk of birth defects and other complications. Insulin is usually the medication of choice because it controls blood sugar more tightly than oral medications. However, metformin has also been used to treat type 2 diabetes in pregnant women when insulin alone provides only partial blood sugar control. Please consult your physician *before* pregnancy to determine which medication(s) is/are the most appropriate for you. For more information about diabetes during pregnancy, please see the OTIS fact sheet [Diabetes and Pregnancy](#).

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

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

You should not stop any medication without first talking with your physician. Studies have indicated that women with PCOS who are treated with metformin have a

higher chance of getting pregnant. Women who continue metformin during their first trimester could also experience fewer risks of miscarriage. Also, small studies have shown that continuing metformin throughout pregnancy may decrease the likelihood of developing gestational diabetes. Depending on your medical history, your physician might encourage you to continue your medication during pregnancy or to stop it when you learn you're pregnant. It is best to discuss these issues with your physician before getting pregnant.

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

Most studies suggest that metformin is not associated with an increased risk of birth defects. Recent trials studying the safety of metformin during pregnancy, mostly when used to treat insulin resistance in women with PCOS, did not show an increased rate of birth defects or complications at birth.

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

Two recent studies concluded that women receiving metformin during the second and third trimesters for the treatment of gestational diabetes did not have higher rates of complications at birth than women taking insulin. Therefore, metformin use during the second or third trimesters is not expected to increase the risk of complications for newborns.

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

A small study showed a link between the use of metformin during pregnancy and preeclampsia (high blood pressure requiring immediate medical attention). However, this could not be proven by other studies. Other studies compared the use of metformin with 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 (high levels of bilirubin in the system) 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.

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

No study has looked at the use of metformin in men. Typically, medications taken by the father are not thought to increase the risk of birth defects and other problems related to pregnancy. For more information, please see the OTIS fact sheet [Paternal Exposures and Pregnancy](#).

Can I take metformin while breastfeeding?

Metformin appears to be safe during breastfeeding. Three studies have shown that metformin is transferred into breast milk in very small amounts. 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 discuss your metformin use with your baby's pediatrician.

For information on a related topic see the OTIS fact sheet for [Diabetes and Pregnancy](#) available at www.otispregnancy.org.

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*If you have questions about the information on this fact sheet or other exposures during pregnancy, call **OTIS** at **1-866-626-6847**.*