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Methotrexate and Pregnancy

This sheet talks about the risks that exposure to methotrexate 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 methotrexate?

Methotrexate is a medicine that can stop the growth of cells and can interfere with the immune system. Methotrexate is prescribed to treat many conditions, including cancers and autoimmune conditions like rheumatoid arthritis and psoriasis. Methotrexate is also used to treat ectopic pregnancies (ones that grow outside the uterus). It can be taken by mouth, intravenous injection or intramuscular injection. Methotrexate is prescribed in a range of doses including low doses for rheumatoid arthritis to high doses for cancer.

Methotrexate decreases the body's ability to break down and use folic acid. During pregnancy, folic acid is important for normal development of the baby.

How long does methotrexate stay in the body?

Every person's ability to break down medication is different. The time for methotrexate to leave the body also varies with dose. However, methotrexate is mostly cleared from the body within one week after the last dose is taken. Certain medications may slow down the clearance of methotrexate. Individuals who have reduced kidney function or a condition that leads to extra body fluid may clear methotrexate more slowly.

I have recently been treated with methotrexate for an ectopic pregnancy. How long should I wait before I try to become pregnant again?

Before you try to become pregnant again, you should confirm with your doctor that the ectopic pregnancy has been treated and you are no longer pregnant. Your doctor may want to monitor your levels of hCG (a hormone produced during pregnancy) in order to confirm you are not pregnant. Once this is confirmed, your doctor may recommend waiting one to six months before trying to become pregnant to ensure the medication has been cleared from the body.

Will my past methotrexate use make it harder for me to get pregnant?

Probably not. One small study found that women who were treated with methotrexate for an ectopic pregnancy may be less successful with treatment for infertility within 6 months of exposure to the drug. However, this finding was not confirmed in other studies.

Women who are actively trying to become pregnant should not be taking methotrexate!

Does exposure to methotrexate cause an increased risk for miscarriage?

Since methotrexate can be used to abort pregnancies or treat ectopic pregnancies, it seems likely that methotrexate use in early pregnancy would increase the risk of a miscarriage. Small studies have reported an increased risk for miscarriage; however, there weren't enough women followed to adequately assess the level of risk.

Can taking methotrexate in pregnancy cause birth defects?

YES. The use of methotrexate in the first trimester has been associated with a specific pattern of birth defects. This pattern of birth defects includes malformations of the infants' head, face, and bones. Poor growth and developmental delay have also been described. For other birth defects, like heart defects and oral clefts, the evidence is currently not strong enough to show that methotrexate is the cause.

There is some limited evidence to suggest that a pregnant woman will be at risk for having a baby with methotrexate-related birth defects if she takes 10 mg or more of methotrexate per week between 6 and 8 weeks after conception (8 to 10 weeks after the first day of her last menstrual period). More information regarding the risks with specific timing and dose of methotrexate are needed to draw firm conclusions.

One 2009 review paper reported no increase in birth defects or miscarriage rates in 101 women

with rheumatoid arthritis who were exposed to 5-25mg/week of methotrexate in the first trimester. While reassuring, this paper does not mean there is no risk for low dose methotrexate exposure in the first trimester.

Is it OK to restart methotrexate after the first trimester?

No. Methotrexate should be avoided after the first trimester. During the second and third trimesters of pregnancy, the baby is still growing and the brain is still developing. Poor growth and learning problems have been associated with methotrexate, so use after the first trimester is a potential concern.

I am currently taking methotrexate, but would like to become pregnant. How long do I need to wait to become pregnant after I stop taking methotrexate?

Some health-care professionals suggest waiting one to six months after stopping methotrexate to ensure the medication has been cleared from the body. However, there are no reports of women who stopped methotrexate anytime before conception and then had a baby with the pattern of birth defects associated with methotrexate.

If I get pregnant while taking methotrexate, what should I do?

Contact your health care provider right away. Your health-care provider can discuss your specific risks, as well as suggest prenatal testing.

Prenatal testing may involve a blood or amniotic fluid test for neural tube defects (such as spina bifida) and a detailed ultrasound to look at the growth and development of the baby. Ultrasound can show some birth defects associated with methotrexate, but is not able to detect all potential problems caused by a methotrexate exposure.

Can I take methotrexate while breastfeeding?

There are no studies looking at the effects of methotrexate in the breastfed infant. Methotrexate passes into breast milk in small amounts. Because of its toxic properties and possible build up of the drug in an infant's body, the American Academy of Pediatrics does not recommend methotrexate in breastfeeding.

Some researchers believe that low-dose methotrexate, such as the dose used for the treatment of rheumatoid arthritis, is a low risk to the breastfed infant. If a woman and her health care provider decide to continue methotrexate treatment in breastfeeding, monitoring of the baby's blood count is suggested.

If a man uses methotrexate, will it cause infertility or birth defects in the baby?

Methotrexate may cause an increased risk for infertility. Low sperm count has been seen in some

men using methotrexate. Most of these men were using high doses of the medication, as well as other medications used to treat cancer. Sperm levels returned to normal after the men stopped using methotrexate. Men needing methotrexate as part of cancer treatment may want to consider banking sperm prior to treatment.

There are no reports suggesting that men who use methotrexate at the time of conception are more likely to father a baby with a birth defect. Two studies noted no increase in birth defects in the children of 65 men who had taken methotrexate around the time of conception. However, due to general concern rather than actual risks, some health-care providers recommend that men wait at least 3 months after stopping methotrexate before trying to conceive. For more information, please see the OTIS fact sheet [Paternal Exposures and Pregnancy](#).

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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.