Methotrexate

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

What is methotrexate?

Methotrexate is a medication that has been prescribed to treat many conditions, including cancer and autoimmune conditions like rheumatoid arthritis https://mothertobaby.org/fact-sheets/rheumatoid-arthritis/, lupus https://mothertobaby.org/fact-sheets/lupus-pregnancy/ and psoriasis https://mothertobaby.org/fact-sheets/psoriasis-and-pregnancy/. Some brand names for methotrexate are: Otrexup®, Trexall®, Rheumatrex®, and Rasuvo®.

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 your medication. Your healthcare providers can talk with you about the benefits of treating your condition and the risks of untreated illness during pregnancy.

The product label for methotrexate recommends women who are pregnant not use this medication unless it is being used for cancer treatment. However, the benefit of using methotrexate might outweigh possible risks. Your healthcare provider can talk with you about using methotrexate and what treatment is best for you.

Methotrexate lowers the body's ability to use folic acid. During pregnancy, folic acid is important for the growing fetus. If you have recently stopped taking methotrexate and are planning to get pregnant, talk with your healthcare provider about taking a folic acid supplement and what dose you should take. More information on folic acid can be found in our fact sheet here: https://mothertobaby.org/fact-sheets/folic-acid/.

I am taking methotrexate, but I would like to stop taking it before getting pregnant. How long does the drug stay in my body?

The time it takes the body to metabolize (process) medication is not the same for everyone. In healthy non-pregnant adults, it takes up to 1 week, on average, for most of the methotrexate to be gone from the body. Certain medications might affect how long methotrexate takes to clear from the body. Also, having reduced kidney function or other conditions that lead to extra body fluid might cause methotrexate to clear more slowly from the body.

How long do I need to wait to get pregnant after I stop taking methotrexate?

Some healthcare providers have suggested waiting 1 to 3 months after stopping methotrexate to make sure the medication has been cleared from the body. The drug label recommends waiting 3 to 6 months after stopping the medication. However, there are no reports of methotrexate-related birth defects in babies born to women who stopped taking methotrexate any time before conception (when the egg is fertilized by the sperm).

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

One study on women undergoing fertility treatment found that those who had been treated with methotrexate for ectopic pregnancy (when a fertilized egg implants and grows outside the uterus) within the last 6 months had a lower number of eggs. Those who were treated with methotrexate longer than 6 months ago did not have a lower number of eggs. This suggests that any effect of methotrexate on the number of eggs might be temporary. Other studies have not shown a higher chance of problems with fertility (ability to get pregnant) with the use of methotrexate.

Does taking methotrexate increase the chance of miscarriage?

Miscarriage is common and can happen in any pregnancy for many different reasons. Studies of women who used methotrexate during pregnancy have reported an increased chance of miscarriage.

Does taking methotrexate increase the chance of birth defects?

Birth defects can happen in any pregnancy for different reasons. Out of all babies born each year, about 3 out of 100 (3%) will have a birth defect. We look at research studies to try to understand if an exposure, like methotrexate, might

increase the chance of birth defects in a pregnancy.

Taking methotrexate in the first trimester could increase the chance of a specific pattern of birth defects of the head, face, limbs, and bones. It is not clear if methotrexate could cause other kinds of birth defects. Heart defects and oral clefts (cleft lip and/or cleft palate) have been reported in some infants exposed to methotrexate during pregnancy; however, there is not enough information to know if methotrexate could have caused these birth defects.

Not all babies exposed to methotrexate during pregnancy will have birth defects. A published review of studies reported no increase in birth defects among infants born to 101 women with rheumatoid arthritis taking 5 to 25mg of methotrexate per week in the first trimester.

Although birth defects could occur with exposure to methotrexate any time in the first trimester, limited evidence suggests that methotrexate-related birth defects are more likely to occur if a pregnancy is exposed to 10 mg or more of methotrexate per week between 6 and 8 weeks after conception (8 to 10 weeks after the first day of the last menstrual period).

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

Poor growth of the fetus (being smaller than expected for the weeks of pregnancy) has been reported in pregnancies affected by methotrexate-related birth defects.

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

Developmental delay, learning problems, and intellectual disability have been reported in some children who have birth defects related to methotrexate exposure during pregnancy.

What screenings or tests are available to see if my pregnancy has birth defects or other issues?

Prenatal ultrasounds can be used to screen for some birth defects, such as birth defects of the head, face, limbs, bones, heart, lips, and palate. Ultrasound can also be used to track the growth of the pregnancy. Talk with your healthcare provider about any prenatal screenings or testing that are available to you. There are no tests available during pregnancy that can tell how much effect there could be on future behavior or learning.

Breastfeeding while taking methotrexate:

Methotrexate passes into breast milk in small amounts. The product label for methotrexate recommends women not use this medication while breastfeeding. But the benefit of using methotrexate and breastfeeding might outweigh possible risks. Your healthcare providers can talk with you about using methotrexate and what treatment is best for you. Some healthcare providers recommend not breastfeeding while receiving high doses of methotrexate (such as those used to treat cancer) and for 1 week after receiving the last dose.

Testing of breast milk samples from women exposed to methotrexate at lower doses found low levels of methotrexate in the milk. As a result, some experts suggest that weekly low-dose methotrexate is unlikely to cause problems for the breastfed infant. If a woman uses low-dose methotrexate while breastfeeding, it is suggested that the baby's blood count be monitored. Be sure to talk to your healthcare provider about all your breastfeeding questions.

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

The product label for methotrexate states that men should use effective contraception (to prevent pregnancy) while on methotrexate and for 3 months after taking the final dose. Low sperm count has been seen in some men using methotrexate. Most of these men were using high doses of methotrexate to treat cancer, as well as other medications. Sperm levels returned to normal over time after the medication was stopped. Having low sperm count can affect a man's fertility (ability to make healthy sperm). Men who need to take methotrexate as part of cancer treatment can consider banking sperm before treatment. Studies looking at men taking lower doses of methotrexate to treat other health conditions have not agreed on whether these lower doses could affect a man's fertility during the time of treatment.

Studies have not found a higher chance of birth defects in the children of men taking methotrexate around the time of

conception. In general, exposures that men or sperm donors have are less likely to increase 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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