Methimazole

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

What is methimazole?

Methimazole is a medication that has been used to treat hyperthyroidism (when the thyroid gland makes too much thyroid hormone) and Graves' disease (a common cause of hyperthyroidism). Methimazole lowers the amount of thyroid hormone that the thyroid gland makes. Tapazole® was a brand name for methimazole.

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. Untreated hyperthyroidism can increase the chance of illness for the pregnant woman and the chance of pregnancy complications. Your healthcare providers can talk with you about the benefits of treating your condition and the risks of untreated illness during pregnancy.

The US Food and Drug Administration (FDA), The American College of Obstetricians and Gynecologists (ACOG), and The American Thyroid Association (ATA) have stated that propylthiouracil (PTU), another medication that has been used to treat hyperthyroidism, might be the preferred treatment for hyperthyroidism during the first trimester of pregnancy. MotherToBaby has a fact sheet on PTU here: https://mothertobaby.org/fact-sheets/propylthiouracil-ptu/.

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

Studies have not been done to see if methimazole can make it harder to get pregnant. Untreated thyroid disorders can make it harder to get pregnant.

Does taking methimazole increase the chance for miscarriage?

Miscarriage is common and can occur in any pregnancy for many different reasons. One study did not find an increased chance of miscarriage in 241 women who were pregnant and used methimazole in early pregnancy. Hyperthyroidism has been associated with an increase in the chance for miscarriage.

Does taking methimazole 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 methimazole, might increase the chance of birth defects in a pregnancy. Some studies and case reports suggest there could be an increased chance of birth defects when taking methimazole. There has been a suggested pattern of birth defects linked to methimazole exposure. The most commonly reported findings include aplasia cutis (ulcers on the scalp), choanal atresia (narrowing in the opening to the nasal passages), and esophageal atresia (tube connecting mouth to stomach is not formed properly). There are also studies and case reports that did not find an increase in the chance of birth defects when methimazole is taken in pregnancy. Some studies suggest that the underlying medical condition (hyperthyroidism), may play a role in the chance for birth defects. In summary, there is not enough evidence to suggest that taking methimazole clearly increases the chance of birth defects above the background chance.

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

One study found a higher chance of preterm delivery (birth before week 37) and low birth weight (weighing less than 5 pounds, 8 ounces [2500 grams] at birth) when methimazole was used during pregnancy. Hyperthyroidism has also been found to increase the chance for preterm delivery, smaller size (small for gestational age), and low birth weight.

Taking medications to lower thyroid levels, like methimazole, or having Graves' disease in pregnancy can lead to thyroid levels that are either too low or too high in the fetus. If you take methimazole or if you have Graves' disease, let your baby's healthcare providers know, so that they can check your baby's thyroid level after delivery.

The FDA has reported that methimazole can cause liver damage and or serious life-threatening decreases in white blood cells in people who take this medication, including pregnant women. There is limited information on whether

methimazole use during pregnancy can cause liver damage or a decrease in white blood cells in the fetus.

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

Three studies looking at 56 children (from preschool to adult ages) exposed to methimazole during pregnancy found no difference in intelligence scores compared to their unexposed brothers or sisters or other unexposed people. Untreated thyroid disorders in pregnancy can increase the chance of learning problems in children.

Breastfeeding while taking methimazole:

Methimazole gets into breast milk. In 3 case series including 56 infants, and 1 study including 51 infants, methimazole in doses up to 20mg per day did not affect the breastfed infants' thyroid function or intellectual development. Be sure to talk to your healthcare provider about all your breastfeeding questions.

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

Studies have not been done to see if methimazole could affect a man's fertility (ability to get a woman pregnant) or increase the chance of birth defects above the background risk. In general, exposures that men have are unlikely 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.

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, July 1, 2024.