



MotherToBaby

Medications & More During Pregnancy & Breastfeeding
Ask The Experts

Fact Sheet

by the **Organization of Teratology Information Specialists (OTIS)**

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Carbamazepine

In every pregnancy, a woman starts out with a 3-5% chance of having a baby with a birth defect. This is called her background risk. This sheet talks about whether exposure to carbamazepine may increase the risk for birth defects over that background risk. This information should not take the place of medical care and advice from your health care provider.

What is carbamazepine?

Carbamazepine is a medication used to control seizures in the treatment of epilepsy. It is also used to treat bipolar affective disorder, schizophrenia, trigeminal neuralgia and other specific pain disorders. A common brand name for carbamazepine is Tegretol®, but there are others.

I have been taking carbamazepine for many years. Can this affect my ability to get pregnant?

Studies have found that long-term use of seizure medications in women with seizure disorders is associated with menstrual irregularities and difficulty getting pregnant. Talk to your healthcare provider if you are experiencing difficulty in becoming pregnant.

I am taking carbamazepine, but I would like to stop taking it before becoming pregnant. How long does carbamazepine stay in your body?

Each person's ability to break down the medication can be different. When you first start to take carbamazepine, your body breaks it down slowly. It can take 5-14 days to clear from your body. After long-term treatment, most of the carbamazepine should be gone from your body 3-5 days after the last dose.

Pregnant women should not change their medications during pregnancy without talking to a health care provider. Having a seizure while pregnant may be harmful to the baby. Women with bipolar disorder who stop taking medication during their pregnancy may be at an increased risk for episodes of depression or mania that could be harmful to both the mother and the baby.

If possible, women with seizure disorders or bipolar disorder who could become pregnant should discuss their options for treatment, including medications, with their health care provider before becoming pregnant.

Can taking carbamazepine during my pregnancy cause birth defect?

Studies looking at women who have taken carbamazepine during the first trimester of pregnancy have found a 1% chance (1/100 births) of neural tube defects (the spinal cord or skull do not form properly). The most common neural tube defect is spina bifida. Other studies have reported a 2 to 3 times greater chance for other major birth defects, such as heart defects or cleft lip.

Some studies have also suggested an increased chance for minor birth defects such as a small nose with a long space between the nose and upper lip, and small finger and toenails. Other studies have reported an increased chance of growth issues and small head size.

Folic acid has been found to reduce the chance for neural tube defects. Because women taking carbamazepine have a higher chance of having a baby with a neural tube defect, healthcare providers recommend that all women taking carbamazepine take extra folic acid before and during pregnancy. Speak with your healthcare provider to discuss how much folic acid you should take.

Can taking carbamazepine during pregnancy affect my baby's development?

More studies are needed before we can be sure of the long-term effects of carbamazepine. Researchers are just

beginning to look at the development of children who have been exposed to carbamazepine during pregnancy. Some studies have found a small increased chance for developmental delays. Other studies have found no differences in development or IQ.

I have been taking carbamazepine for the last few years and I just found out I am pregnant. What tests are available to see if my baby has spina bifida or other birth defects?

Screening tests are available for neural tube defects and other birth defects in your pregnancy. There are blood tests and ultrasounds. Discuss your screening options with your healthcare providers. There are no tests that can tell if there has been any effect on behavior or ability to learn.

What could happen to my baby if I stopped taking my carbamazepine and then had a seizure during my pregnancy?

About 1 in 3 women with epilepsy experiences an increase in frequency of seizures during pregnancy. Problems for the mother and fetus depend on how often she has a seizure and how long they last. Epileptic seizures and convulsions could cause a lack of oxygen in the blood. This could potentially lead to brain damage and developmental issues for the child, or could be life-threatening. In addition, a seizure could cause the mother to fall and physically injure herself.

Should I stop taking carbamazepine during my pregnancy?

You should contact your health care providers before becoming pregnant, or when you find out that you are pregnant, to discuss making any changes to your medication. The benefits of taking carbamazepine must be weighed against the possible risks to the developing baby.

Are there any other concerns with carbamazepine use during pregnancy?

Rarely, maternal use of carbamazepine during pregnancy has been associated with bleeding problems in the newborn due to low vitamin K levels. It has been recommended that women taking these medications receive vitamin K supplements near the end of their pregnancy and that their infants receive vitamin K supplement at birth. Women taking carbamazepine in pregnancy should discuss this with their healthcare provider and their child's pediatrician before delivery.

Can I take carbamazepine while breastfeeding?

Carbamazepine passes into breast milk. However, the amount of carbamazepine found in an infant's blood is usually below a therapeutic level, meaning it would not be expected to affect the infant. Breastfeeding while taking carbamazepine monotherapy does not appear to affect infant growth or development. Some healthcare providers can measure levels of carbamazepine in the newborn if there is concern. Be sure to talk to your health care provider about all your breastfeeding questions.

What if the father takes carbamazepine?

One small animal study and a couple small human studies have suggested that carbamazepine might affect sperm development, but the studies did not look at whether or not this went on to cause problems getting a woman pregnant. More studies are needed to know if men who take carbamazepine have a harder time getting their partners pregnant. In general, exposures that fathers have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures and Pregnancy at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/pdf/>.

References Available By Request.

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