

## **Valproic Acid**

This sheet is about using valproic acid 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 valproic acid?

Valproic acid is a medication that has been used to control seizures in the treatment of epilepsy, and to treat bipolar disorder and migraines. Valproic acid is sometimes also called sodium valproate or valproate sodium. Some brand names for valproic acid are Depakene®, Stavzor®, and Depacon®. A similar medication, divalproex (Depakote®), breaks down into valproic acid in the body.

The Food and Drug Administration (FDA) recommends that people who are pregnant do not take valproate sodium and related products, valproic acid and divalproex sodium to prevent migraine headaches. For epilepsy or bipolar disorder, valproate products should only be prescribed during pregnancy if other medications are not effective in treating the condition or cannot be used for another reason.

Sometimes when people 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.

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

People eliminate medications at different rates. In healthy adults, it takes 2-4 days, on average, for most of the valproic acid to be gone from the body.

What might happen if I stopped taking my valproic acid and then had a seizure during my pregnancy?

Having a seizure while pregnant might be harmful to the fetus. Complications depend on many things, such as the type of seizure, how long the seizure lasts, and the number of seizures that happen. Epileptic seizures might cause periods of time when the fetus is not getting enough oxygen, which could lead to problems with development. These seizures could also be life-threatening for both the person who is pregnant and the fetus. A seizure could cause a person who is pregnant to fall or have an accident that could injure themselves or the fetus.

What might happen if I stopped taking my valproic acid and then had a relapse of bipolar disorder during my pregnancy?

People who are pregnant and have bipolar disorder who stop taking their medication during pregnancy might have a higher chance for symptoms of depression or mania that could be harmful to both the person who is pregnant and the fetus. Episodes of depression or mania are very stressful for a person who is pregnant. During manic or depressive episodes, the person who is pregnant might have more trouble taking care of themselves and keeping themselves safe.

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

Some studies suggest that people on valproic acid might have a higher chance of developing polycystic ovary syndrome (PCOS), a condition associated with trouble getting pregnant. Studies have found that people with seizure disorders and people with bipolar disorder might have problems with their periods and trouble getting pregnant. This possible increase might be due to the conditions that the people have, rather than the use of medication.

Does taking valproic acid increase the chance of miscarriage?

Miscarriage is common and can occur in any pregnancy for many different reasons. It is not known if valproic acid increases the chance of miscarriage.

Does taking valproic acid increase the chance of birth defects?\*

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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 valproic acid, might increase the chance of birth defects in a pregnancy.

Studies have found that taking valproic acid in pregnancy is associated with a chance of having a baby with fetal valproate spectrum disorder, which includes minor and major birth defects. Birth defects are typically classified as major if they need surgery to be repaired. About 10% of babies exposed to VPA in the first trimester have been found to have a major birth defect. Some of the birth defects that are more likely to happen include heart defects, cleft lip (when the lip does not form correctly and needs surgery to repair after birth), or neural tube defects (an opening in the baby's spine or skull). The chance to have a baby with a neural tube defect (NTD) when taking valproic acid is approximately 1 in 50 to 1 in 100 (1% to 2%). Some babies exposed to valproic acid might also have more minor birth defects like facial differences, such as a thin upper lip. The chance of a birth defect seems to be greater with higher doses of valproic acid or with taking it with another seizure medication.

Valproic acid can lower folic acid levels in the body. Taking folic acid before and during early pregnancy can reduce the chance of neural tube defects. All women who can get pregnant are advised to take 400 mcg of folic acid daily to help prevent NTDs. Research has not shown a clear benefit from taking a higher dose of folic acid to reduce the risk of NTDs if the woman is taking valproic acid during pregnancy. If you are taking valproic acid, talk with your healthcare providers to determine what dose of folic acid is right for you. For more information on folic acid, please see the MotherToBaby fact sheet at: https://mothertobaby.org/fact-sheets/folic-acid/.

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

Valproic acid might increase the chance of low birth weight (weighing less than 5 pounds, 8 ounces [2500 grams] at birth). There have been reports of temporary low blood sugar levels (hypoglycemia) in newborns.

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

Prenatal exposure to valproic acid can increase the chance of problems with learning and development. Different studies have shown an increased chance of intellectual disability, developmental delay, autism spectrum disorder, other developmental disorders, attention deficit/hyperactivity disorder (ADHD), attachment disorder, decreased language and memory skills, and decreased social and adaptive behavior skills. Not all studies have shown the same results. Some of the long-term problems in the exposed children might be due to how severe the seizure disorder is in the person who is pregnant.

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

There are ways to screen for neural tube defects in pregnancy. A blood test can be done to measure the amount of a protein called alpha fetoprotein (AFP) in the blood of the person who is pregnant. Babies with spina bifida have higher levels of AFP. If the AFP is higher than usual in the blood test, more testing or screenings might be offered to you to get more information.

An ultrasound that looks at the fetal spine can be used to screen for spina bifida. Ultrasounds can also screen for some other birth defects, such as a heart defect or cleft lip. 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 valproic acid:

The amount of valproic acid that passes into breast milk is low and blood levels from exposed infants are low to undetectable. There is a theoretical (not proven) concern that infants exposed to valproic acid through breastmilk could develop liver toxicity, so infants should be monitored for any changes or problems. If you suspect the baby has symptoms such as jaundice (yellowing of the skin or eyes), rash, or fever, contact the child's healthcare provider. Be sure to talk to your healthcare provider about all your breastfeeding questions.

If a male takes valproic acid, could it affect fertility or increase the chance of birth defects?

It is not known if valproic acid could affect male fertility (ability to get partner pregnant) or increase the chance of birth defects above the background risk. In general, exposures that sperm donors or fathers 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/.

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Please click here to view references.
Questions? Call 866.626.6847   Text 855.999.3525   Email or Chat at MotherToBaby.org.
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