

Antiseizure medication in pregnancy associated with twice the risk of autism in child

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Women with epilepsy who take the antiseizure drug valproic acid while pregnant are at more than double the risk of having children with autism spectrum disorder and nearly double the risk of having children with attention deficit hyperactivity disorder (ADHD), according to a study in the October 28, 2020, online issue of *Neurology*, the medical journal of the American Academy of Neurology.

"Clinical recommendations warn against the use of valproic acid in pregnancy if possible due to associations with [birth defects](#) and other health conditions in [children](#), but valproic acid is also a first-line treatment for generalized seizures and may be the best option for optimal seizure control," said study author Brian D'Onofrio, Ph.D., of Indiana University in Bloomington. "We looked at three medications and found that women who reported using valproic acid in the first three months of pregnancy had more than twice the risk of their children having [autism](#) and nearly twice the

risk of their children having ADHD than women with epilepsy who were not taking any antiseizure drugs during pregnancy."

The study looked at 14,614 children born to women with epilepsy between 1996 and 2011. About 23% of those women reported using antiseizure medication in their first trimester. The three most used drugs were carbamazepine, taken by 10% of the women, lamotrigine, taken by 7% of the women, and valproic acid, taken by 5% of the women.

Using medical records, researchers identified which children were later diagnosed with autism or ADHD.

Of the children exposed to valproic acid, 36 out of 699 developed autism by the age of 10 years, compared to 154 out of 11,298 who were not exposed to any antiseizure medication during gestation. A total of 54 out of 699 children whose mothers took valproic acid during their pregnancies developed ADHD by the age of 10, compared to 251 out of 11,298 who were not exposed.

After adjusting for factors like the severity of the epilepsy, women who reported using valproic acid during the first trimester had a 2.3 times greater risk of having children diagnosed with autism and a 1.7 times greater risk of children diagnosed with ADHD than women who reported using no antiseizure medications.

Researchers found that the women who took lamotrigine and carbamazepine had no increased risk of their children developing autism or ADHD.

"Our findings add to the growing body of evidence that suggests certain antiseizure medications may be safer than others during pregnancy," D'Onofrio said. "While we did not find that the drugs directly

caused autism or ADHD, our study expands upon prior work on birth outcomes by demonstrating a link between valproic [acid](#) and longer-term problems. Our findings suggest that [women](#) who use antiseizure medications, particularly [valproic acid](#), should weigh potential harm to the fetus, as well as ongoing seizure management, in their decision-making with their doctors if they are considering becoming pregnant."

A limitation of the study is that researchers were not able to rule out all alternative explanations for associations, such that these findings should not be seen as entirely conclusive.

Provided by American Academy of Neurology

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