

New findings on women, pregnancy and the effects of epilepsy

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New research pertaining to the latest findings on the effects of epilepsy on both the mother and child were presented at the American Epilepsy Society's 67th Annual Meeting in Washington DC. These studies explore folic acid use, the effect of surgery with intractable focal epilepsy, and antiepileptic drug exposure during breastfeeding.

Researchers from the Harvard Neuroendocrine Unit at Beth Israel Deaconess Medical Center in Boston, Massachusetts investigated the frequency of [folic acid](#) supplement use by [women](#) with epilepsy in the community and factors that may predict its use (Platform B.04 / Abstract 1722353). Folic acid deficiency in early pregnancy is known to cause birth defects and increase the risk of miscarriages, which can occur most with enzyme-inducing [antiepileptic drugs](#) (AED). Neural tube malformations are most common with the use of Valproate, a folic acid antagonist.

Data for this study was collected through the Epilepsy Birth Control Registry (EBCR), a web-based survey and educational site used to gather key information from 626 women with epilepsy in the community. The study found that 44% of respondents took folic acid.

"Our findings show that only about half of the women surveyed are taking folic acid, despite their high risk of unintended pregnancies. Additionally, we found that many of the respondents who were not taking precaution of neural tube malformation were taking Valproate, a folic acid antagonist," said Andrew G. Herzog, MD, principal

investigator of the study. "Overall the women at risk, regardless of antiepileptic drugs or contraceptive use, did not differ significantly from women not at risk and on no antiepileptic drugs."

In a related study, researchers from The Mayo Clinic-Rochester presented evidence to support the importance of early surgery in women with intractable [focal epilepsy](#) looking to get pregnant (Poster 3.250 / Abstract 1750307). One hundred and thirteen women were included in this study. An average of 0.93 pregnancies and 0.73 births were identified prior to surgery, compared to a significantly higher success rate of 1.27 pregnancies and 0.96 births post-surgery. A total of 17 women had a total of 35 pregnancies and 25 births after surgery. Those patients who received fewer medications prior to surgery were more likely to have additional children following surgery.

"While the significance of these findings is uncertain, we believe that they support a role for earlier surgical intervention in the management of intractable focal epilepsy and the relationship it has to conceiving and giving birth," said Rachel R. Fabris, MD, the lead author of this study.

A third study was presented as a follow up to previous research determining the effects of antiepileptic drug exposure via breast milk on IQ at age 3 years old. The new data collected was from a cohort of children at the age of 6, which the researchers deemed an age more predictive of school performance and adult abilities (Poster 2.213 / Abstract 1732174). While breastfeeding is known to have beneficial effects for both the child and the mother, there is concern regarding whether breastfeeding while taking antiepileptic drugs could be harmful to the cognitive development of the infant.

Results of the study were analyzed as a function of whether the children had been breastfed or not. Overall, 43% of the children were breastfed, but the results failed to show adverse effects of AED exposure: children

who breastfed exhibited higher IQ and Verbal Index scores even though their mothers used AEDs.

"Our results are encouraging in that women with epilepsy can be less fearful of breastfeeding their baby," said the leader of this study, Kimford Meador, MD. "Nevertheless, this is a limited study and additional research is needed."

Provided by American Epilepsy Society

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