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Exposure to Antiepileptic Drugs in Pregnancy Not as Serious as Initially Report

By Lisa Boylan, senior editor, *epilepsyUSA*

Recent study results published in the latest issue of *Epilepsia* point to increased risk of adverse [pregnancy](#) and birth outcomes for women with epilepsy. However, Epilepsy Foundation Professional Advisory Board Chair and Director of Research for the Epilepsy Division of the Department of Neurology at Brigham and Women's Hospital, [Page Pennell, M.D.](#), found much in the study that was actually reassuring for [women with epilepsy](#).

Based on data from a study of the compulsory Medical Birth Registry of Norway, all 2,861 deliveries by women with epilepsy recorded from 1999-2005 were compared to all 369,267 non-epilepsy deliveries in the same period. In the article, Dr. Gyri Veiby, of Haukeland University Hospital in Bergen, Norway, cites Dr. Pennell in the opening line: "Epilepsy is the most common maternal neurologic disorder requiring medical treatment during pregnancy."

Dr. Pennell praised the overall results of the study but was puzzled by the focus on the relatively transient negative findings that made the news. She said, "The study should in no way be taken to imply that a woman who needs antiseizure medications to control her seizures should now stop her medicine based on the findings of this study." She added, "We know from prior reports that uncontrolled seizures can actually cause harm to the mother and developing fetus or even loss of the pregnancy."

The broad scope of the study, which examined thousands of pregnancies, uncovered findings that could affect pregnancy and the child, such as low Apgar scores, premature birth and small head circumference. While these neonatal complications did exist, the statistics show the overall risk for those complications is still low.

Dr. Pennell said one of the most positive findings in the study is how rare the birth defects (major congenital malformations) were in the epilepsy group and that the frequency was not significantly higher than in the control group. The birth defects in the control group (children of women without epilepsy) was 2.5 percent and in children of women with epilepsy—either taking medications or not—was only 2.8 percent. Dr. Pennell praised the study's inclusive analysis of birth defects that spanned from birth to the child's first birthday. However, she said, this comprehensive approach likely accounts for why the birth defect rates seem higher than previous studies for both groups of women, with and without epilepsy.

Another finding Dr. Pennell found reassuring was that the only women who stood out for a higher risk of children with birth defects were the women on [valproate](#) (Depakote), or women who were taking more than one drug to control their seizures (polytherapy). She said it was helpful to know the new findings substantiate the recent findings of the American Academy of Neurology and the American Epilepsy Society's collaborative [Practice Parameter Update on women and epilepsy](#). Those findings were based on a rigorous evaluation of the scientific literature that's been published to date. The results show that if a woman is on a medication other than valproate and she can be treated with one medication to control her seizures, then her risk for any type of birth defects in her offspring is very low.

The study also singled out two medications—carbamazepine and lamotrigine—that did not show an increased risk of birth defects. Those findings were also mirrored in the previously published AAN/AES Practice Parameter update on Women and Pregnancy. Dr. Pennell said, "That's great news."

Another encouraging finding, Dr. Pennell said, was that previous studies suggested that there may be an increased risk of perinatal death in children of women using AEDs and this study found no increased risk of perinatal death.

The bottom line: This study underscores a consistent recommendation from several different sources that a woman should talk with her health care provider (HCP); optimize her medications prior to conception; begin taking folic acid (Vitamin B9); and stick to one seizure medication during pregnancy that is not valproate.