Women and Men Created Equally? Not So, At Least in the Case of Epilepsy, Say Experts

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Epilepsy, a seizure disorder, is known to affect more than 1 million women and girls in the US alone. Due to the unique challenges faced by women such as hormonal and menstrual cycles, pregnancy, menopause, etc., seizure patterns evolve over time and thus can be difficult to manage.

There have been several negative reports on the use of valproic acid or Depakene, a well-known anticonvulsant oral medication and the FDA has issued several warnings regarding its use during pregnancy to health care practitioners and patients. Warnings include "…increased risk of neural tube defects and other major birth defects, such as craniofacial defects and cardiovascular malformations, in babies exposed to valproate sodium and related products (valproic acid and divalproex sodium) during pregnancy." Despite these warnings there have been reports of physicians administering valproic acid to women of child bearing potential and to those pregnant, which is worrying. Comparatively, levetiracetam or Keppra, another drug that is quite often recommended by specialists for pregnancy, has recently been demonstrated to pose low risk for the fetus, which is encouraging, but limited information is available on its effect with respect to cognition and movement in children.

Findings of the study comparing the effects of levetiracetam and valproic acid were published in *Neurology*. The study tracked "53 children aged 3 to 4 years whose mothers took levetiracetam (brand name Keppra), 44 whose mothers took valproate (known by several brand names), and 151 children of mothers who didn't take any drugs during pregnancy." The children appeared similar in both the groups, however those who took valproate scored "lower on tests of movement, expressive language, and language comprehension" compared to those in the levetiracetam group. Dr. Keith Eddleman, director of obstetrics at Mount Sinai Hospital in New York City has mentioned that this "study is important in that it is the first significant study to compare levitiracetam to valproic acid and shows that levetiracetam has a lower risk for developmental problems down the road." Another leading expert, Dr. Cynthia Harden, director of North Shore-LIJ's Comprehensive Epilepsy Care Center in Manhasset, N.Y. and author of several practice guidelines for managing epilepsy in women has also mentioned that the report is "reassuring" for women who rely on levetiracetam to control their seizures.

Whilst there are a vast majority of women taking anticonvulsants and delivering healthy babies, one should be wary of new research demonstrating the ill effects on cognition, language, and movement in children since very little in known about most of the anticonvulsants approved within the last 15 years or so. The American Epilepsy Society and the American Academy of Neurology have published several guidelines and practice parameters recommending that women with epilepsy avoid taking valproate during pregnancy and avoid use of multiple drugs at a time (polytherapy) during pregnancy, if possible. Further, women should not discontinue medication on their own but should do so with the help of their health care practitioner during pregnancy, or in case they become pregnant.

Please visit [The Epilepsy Foundation](#) for more information and take into consideration the following steps recommended by them:

- Discuss with the doctor on the best medication to take before becoming pregnant
- Consult on anticonvulsant risks and benefits with health care providers
- Discuss medicine changes before start of pregnancy or considering pregnancy
- Take folic acid and prenatal vitamins before and during pregnancy
- Always remain vigilant and monitor drug levels during pregnancy
- Abrupt discontinuation of anticonvulsant should be avoided
- Explore alternative ways of preventing negative effects on quality of life
- Always question new research and findings and be aware at all times