

## Fertility and Birth Outcomes in Women With Epilepsy Seeking Pregnancy. - PubMed

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### **Importance:**

Prior studies report lower birth rates for women with epilepsy (WWE) but have been unable to differentiate between biological and social contributions. To our knowledge, we do not have data to inform WWE seeking pregnancy if their likelihood of achieving pregnancy is biologically reduced compared with their peers.

### **Objective:**

To determine if WWE without a prior diagnosis of infertility or related disorders are as likely to achieve pregnancy within 12 months as their peers without epilepsy.

### **Design, Setting, and Participants:**

The Women With Epilepsy: Pregnancy Outcomes and Deliveries study is an observational cohort study comparing fertility in WWE with fertility in control women (CW) without epilepsy. Participants were enrolled at 4 academic medical centers and observed up to 21 months from November 2010 to May 2015. Women seeking pregnancy aged 18 to 40 years were enrolled within 6 months of discontinuing contraception. Exclusion criteria included tobacco use and a prior diagnosis of infertility or disorders that lower fertility. Eighteen WWE and 47 CW declined the study, and 40 WWE and 170 CW did not meet study criteria. The Women With Epilepsy: **Pregnancy Outcomes and Deliveries electronic diary app was used to capture data on medications, seizures, sexual activity, and menses.** Data were analyzed from November 2015 to June 2017.

### **Main Outcomes and Measures:**

The primary outcome was proportion of women who achieved pregnancy within 12 months after enrollment. Secondary outcomes were time to pregnancy using a proportional hazard model, pregnancy outcomes, sexual activity, ovulatory rates, and analysis of epilepsy factors in WWE. All outcomes were planned prior to data collection except for time to pregnancy.

**Results:**

Of the 197 women included in the study, 142 (72.1%) were white, and the mean (SD) age was 31.9 (3.5) years among the 89 WWE and 31.1 (4.2) among the 108 CW. Among 89 WWE, 54 (60.7%) achieved pregnancy vs 65 (60.2%) among 108 CW. Median time to pregnancy was no different between the groups after controlling for key covariates (WWE: median, 6.0 months; 95% CI, 3.8-10.1; CW: median, 9.0 months; 95% CI, 6.5-11.2; P = .30). Sexual activity and ovulatory rates were similar in WWE and CW. Forty-four of 54 pregnancies (81.5%) in WWE and 53 of 65 pregnancies (81.5%) in CW resulted in live births. No epilepsy factors were significant.

**Conclusions and Relevance:**

Women with epilepsy seeking pregnancy without prior known infertility or related disorders have similar likelihood of achieving pregnancy, time to pregnancy, and live birth rates compared with their peers without epilepsy.