# Contraception & Anti-seizure Drugs

Women who take anti-seizure drugs need to carefully consider their birth control options.

## The problem:
In most cases, anti-seizure drugs can make hormonal birth control less effective, but in some cases hormonal birth control can make anti-seizure drugs less effective. So...

## What should you do?

### Option 1
Change the anti-seizure drug

<table>
<thead>
<tr>
<th>Likely to cause hormonal failure</th>
<th>Less likely to cause hormonal failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbamazepine</td>
<td>Brivaracetam*</td>
</tr>
<tr>
<td>Eslicarbazepine</td>
<td>Clobazam</td>
</tr>
<tr>
<td>OXCARBAZEPINE</td>
<td>ethosuximide</td>
</tr>
<tr>
<td>Perampanel (≤12mg/day), including levo-norgestrel</td>
<td>Gabapentin</td>
</tr>
<tr>
<td>Phenobarbital</td>
<td>Lacosamide</td>
</tr>
<tr>
<td>Phenytoin</td>
<td>Levetiracetam</td>
</tr>
<tr>
<td>Primidone</td>
<td>Lamotrigine</td>
</tr>
<tr>
<td>Rufinamide</td>
<td>pregabalin</td>
</tr>
<tr>
<td>Topiramate</td>
<td>vigabatrin</td>
</tr>
</tbody>
</table>

*No effect on estrogen at 100mg/day. Does decrease estrogen concentrations at 400mg/day but does not appear to affect ovulation.

### Option 2
Change the contraception

In Canada, birth control options that are safer with anti-seizure drugs include:

1. Levonorgestrel/copper intrauterine device (IUD)
2. Medroxyprogestrone depot injection every 10 - 12 weeks + condoms/vaginal diaphragms
3. Continuous cycle estrogen-progestin pill
   - Containing at least 30ug of estrogen
   - Taken every day of the month
   - With a 4 day break every 3 months
   - Plus condoms/vaginal diaphragms

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## Anti-seizure drugs can cause birth defects if taken during pregnancy.

- Neural tube defects (e.g., spina bifida)
- Cleft lip and plate
- Urogenital defects
- Lower IQ scores
- Heart malformations
- Low birth weight

Did you know? Estrogen makes the body break lamotrigine and valproate down faster, which can lead to more seizures. In women taking lamotrigine and/or valproate, use a higher dose or choose a birth control that doesn’t contain estrogen.

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3. Ducasse S et al. Epilepsia Cased 2014; 10, 409 – 432
5. Schonevik M et al. Seizure 2008; 17: 145 – 150

Developed by: Kelly Omidvar, PharmD; Troy Fedor, PharmD. Design by Adrian Poos, IA; Alyssa Musola.