



EPILEPSY MEDICINES AND PREGNANCY

This safety leaflet is to help support you in understanding the risks for epilepsy medicines in pregnancy. Please keep it in a safe place.

- Some epilepsy medicines can harm the way an unborn baby grows and develops during pregnancy. This might be a factor in deciding which epilepsy medicine is right for you, either when you start a treatment or when you start planning a pregnancy
- If you are planning a pregnancy, tell your GP, specialist, or epilepsy specialist nurse. Start this discussion as soon as possible as it can take some time to change treatments in a safe way and you may need to start taking folic acid before you become pregnant
- Seek advice urgently if you become pregnant or think you might be pregnant
- **Do not stop taking your epilepsy medicine until you have talked to your specialist, GP or epilepsy specialist nurse**
- We have reviewed the risks with epilepsy medicines and found that some are safer to use during pregnancy than others – the key conclusions are provided on page 3
- Continue to regularly discuss with your specialist whether your existing epilepsy medicine remains the right one for you

Epilepsy medicines and risk to the unborn baby

Epilepsy medicines (also known as antiepileptic drugs or antiseizure medicines) are used to control or manage seizures in people with epilepsy. Some epilepsy medicines are also used to treat other conditions – the information in this leaflet has been written specifically for patients with epilepsy.

Epilepsy is a long-term condition that can affect people throughout their lives. It is estimated that 2,500 women with epilepsy in the UK have a baby every year. Untreated epilepsy can cause harm to both the mother and the unborn baby. This makes it important that women with epilepsy do not stop taking epilepsy medicines without medical advice.

Epilepsy medicines taken during pregnancy may increase the chance of having a baby who is born with a physical birth abnormality or may harm the baby's growth or development. The chance of an epilepsy medicine harming an unborn baby depends on many different things.

Some epilepsy medicines have a higher risk of harming a baby during pregnancy than others and harm can occur even in early pregnancy. Taking a higher dose or more than one epilepsy medicine at the same time may also increase the risk of harm.

Planning a pregnancy

If you are planning a pregnancy, you should have a pre-conception counselling discussion with your specialist, GP or epilepsy specialist nurse before you get pregnant. This is an appointment, or series of appointments, with a doctor or nurse who knows about pregnancy and epilepsy. This discussion should include a review of your epilepsy, your epilepsy medicines, and the possible effects of epilepsy medicines on the unborn baby.

Your specialist might suggest you change your epilepsy medicine to one that has a lower risk, before you get pregnant. Or they might change your epilepsy medicine to try to get your seizures under better control. Their advice will depend on your circumstances, and how you feel about making any changes. Before you start any changes, they will make sure you are taking highly effective contraception.

Do not stop taking your epilepsy medicine or your contraception until you have agreed a plan with your healthcare professional.

Reason for new information

Taking the epilepsy medicine valproate or valproic acid (brand names Epilim, Depakote, Convulex, Episenta, Epival, Kentlim, Syonell, Orlept and Valpal) can cause serious harm to an unborn baby. Latest figures suggest that if 100 women take valproate medicines during their pregnancy about 10 of the babies will be born with physical birth abnormalities. This compares with 2 to 3 out of 100 in the general population. And about 30 to 40 of the 100 children will go on to have lifelong difficulties with learning and thinking abilities, including autism (also called neurodevelopmental disorders).

Due to the serious harms, the valproate pregnancy prevention programme ('prevent') aims to reduce and eventually stop the use of valproate during pregnancy. There are also restrictions to how valproate can be used in girls and women of childbearing potential. If you are taking valproate or valproic acid to treat your epilepsy, further information on the pregnancy prevention programme and patient support networks can be found on the MHRA's website <https://www.gov.uk/guidance/valproate-use-by-women-and-girls>

The restrictions to the use of valproate followed a review of the research from studies in animals and in women who are pregnant.

The MHRA has now done similar reviews for other epilepsy medicines to make sure that the information available to girls and women who need treatment is based on the most up-to-date evidence. We are also making changes to the leaflet that accompanies epilepsy medicines to help girls and women decide with their specialist on the most suitable epilepsy medicine or medicines for them.

Epilepsy medicines included in the review

- Carbamazepine (brand names Curatil, Tegretol)
- Gabapentin (brand names Lecomig, Neurontin)
- Lamotrigine (brand name Lamictal)
- Levetiracetam (brand names Desitrend, Keppra)
- Oxcarbazepine (brand name Trileptal)
- Phenobarbital (brand names Phenobarbital Accord, Phenobarbital Elixir)
- Phenytoin (brand name Epanutin)
- Pregabalin (brand names Alzain, Axalid, Lecaent, Lyrica)
- Topiramate (brand name Topamax)
- Zonisamide (brand name Zonegran)

This is not a complete list of all available brand names for the epilepsy medicines considered in this review. Your pharmacist may be able to help you if you are unsure about which epilepsy medicine you are taking.

Safety information considered in the review

The studies included in this review examined the effects of epilepsy medicines on the risk of:

1. physical birth abnormalities
2. harmful effects on the growth of the unborn baby
3. autism and attention deficit hyperactivity disorder (ADHD) and adverse effects on learning and thinking abilities.

We considered information from clinical studies of women during pregnancy and also from studies in animals.

Human studies usually compare risks to the 'general population' – this means a group to represent all people. Babies can be born with birth abnormalities in any pregnancy. Comparing rates in studies in women taking epilepsy medicines with rates in the general population allows the calculation of an 'increased risk' in the group taking the epilepsy medicines.

Key conclusions of the review

- Lamotrigine (brand name Lamictal) and levetiracetam (brand name Keppra) are safer to use during pregnancy than other epilepsy medicines. Information shows that they do not increase the risk of physical birth abnormalities compared with the general population
- Carbamazepine, phenobarbital, phenytoin or topiramate use during pregnancy increases the risk of physical birth abnormalities compared with the general population

Risk of having a baby born with a physical birth abnormality

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| General population | 2 to 3 out of 100 babies |
| Carbamazepine | 4 to 5 out of 100 babies |
| Phenobarbital | 6 to 7 out of 100 babies |
| Phenytoin | about 6 out of 100 babies |
| Topiramate | 4 to 5 out of 100 babies |
| Valproate | about 10 out of 100 babies |

- Phenobarbital or phenytoin taken during pregnancy increases the risk the child may have difficulties with learning and thinking ability. Although the exact risk is not known, it is not as high as for valproate
- Phenobarbital, topiramate, or zonisamide taken during pregnancy increase the risk of the baby being born smaller than expected compared with the general population

For some of the epilepsy medicines there is not enough information about their use in pregnancy to allow conclusions on their safety. There is some very limited information for these other drugs:

- Gabapentin and pregabalin – the risks of taking these during pregnancy are not yet fully understood. Some research suggests that taking pregabalin during pregnancy may slightly increase the risk of a baby being born with physical birth abnormalities
- Zonisamide – more research is needed to understand whether taking zonisamide during pregnancy increases the risk of having a baby being born with a birth abnormality or a learning or thinking disability
- Clobazam – some research suggests that clobazam may slightly increase the risk of a baby being born with physical birth abnormalities. However, the research that is available does not allow firm conclusions to be reached and the risk of harming a baby cannot be confirmed or ruled out.

For the medicines listed below there is not enough information on their use in pregnancy to make any conclusions about their safety when used during pregnancy. This means the risk of harming a baby cannot be confirmed or ruled out.

- Brivaracetam
- Clonazepam
- Eslicarbazepine
- Ethosuximide
- Lacosamide
- Perampanel
- Primidone
- Rufinamide
- Tiagabine
- Vigabatrin