

Many women with epilepsy find that their seizures are affected by hormonal changes. The female hormones, oestrogen and progesterone, have a clearly established link with seizures.

Seizures and hormones

Oestrogen and progesterone act on certain brain cells. Oestrogen excites the brain cells and can make seizures more likely to occur, whereas progesterone may inhibit the brain cells preventing seizures in some women. This is why some women have seizures or can experience changes in seizure patterns at times of hormonal fluctuations such as puberty, ovulation, menstruation or menopause.

When seizures are exacerbated or occur exclusively during ovulation or just prior to or during menstruation it is termed *catamenial epilepsy*.



Keeping a diary is a good way to identify if hormones trigger seizures

Puberty

Puberty is a time of many changes. Fluctuating hormone levels during puberty can affect seizure control. The physical changes and growth can also happen so quickly that the dose of antiseizure medication which worked previously may no longer be enough to control seizures. This is a good time to have medication reviewed to determine if the dose needs to be changed.

Menstruation

Many women with epilepsy have a tendency to have more seizures at certain times of the menstrual cycle. This can be due to:

- Hormonal fluctuations
- Fluid retention
- Reduced blood levels of antiseizure medications before menstruation
- Sleep disruption
- Stress and anxiety

Menstrual changes have been identified in 30-50% of women with temporal lobe epilepsy as compared to 7% of women without epilepsy. These can include irregular menstrual cycles ranging from several months without menstruation to prolonged or shortened menstrual cycles.

Discuss concerns about menstruation and seizures with your doctor



Contraception

Some antiseizure medications and hormonal contraceptives may affect each other and how they work. Women with epilepsy need epilepsy treatment prescribed with consideration of birth control.

If you take medication that interacts with hormonal contraception, then additional contraceptive precautions may be necessary.

For more specific information about your antiseizure medication and how it interacts with hormonal contraception, speak with your doctor.

The morning after pill

Women who are taking antiseizure medications may require a higher dose of the morning after pill. It is advisable to discuss this with the doctor or pharmacist.

Non-hormonal contraception

Epilepsy and antiseizure medications do not hinder the effectiveness of non-hormonal contraception such as intrauterine contraceptive device (IUD), cervical cap, diaphragm or condoms.

Polycystic ovary syndrome (PCOS)

Women with epilepsy have features of both polycystic ovaries (PCO) and polycystic ovary syndrome (PCOS) at a higher than usual rate.

- Polycystic ovaries means multiple ovarian cysts are seen on ultrasound
- PCOS is a metabolic condition that may or may not come with having polycystic ovaries.

If you have these symptoms, speak to your doctor:

- Excessive hair growth on the face, chest, abdomen
- Obesity, particularly central obesity
- Infertility or reduced fertility
- Hair loss, in a classic “male baldness” pattern
- Acne
- Irregular or absent menstrual periods

Fertility

Epilepsy diagnosis and treatment does not appear to affect fertility. In the absence of an underlying fertility problem, such as PCOS, women with epilepsy do not appear to have differences in the likelihood of conceiving and live birth rate compared with women without epilepsy.

Is epilepsy inherited?

Genetics are believed to play a role in many forms of epilepsy, but this does not always mean it will be inherited. The role of genetics in epilepsy is complex and the risk of passing on epilepsy to your child is usually low.

Accurate diagnosis of your epilepsy may give more idea about risk. Several types of epilepsy are passed on through families, but many forms of these inherited epilepsies are age-limited often outgrown by adolescence and easily managed.

Speak to your doctor about genetic counselling and testing if you have concerns about this.



Can some medications for epilepsy affect an unborn baby?

Some medications for epilepsy are associated with a higher risk of birth defects than others. Sodium valproate in pregnancy has a higher risk of birth defects and developmental problems for the baby than other antiseizure medications. It is advised that sodium valproate should not be used:

- In females of childbearing potential unless other treatments are ineffective or not tolerated.
- During pregnancy for the treatment of epilepsy unless there is no suitable alternative treatment.

Sodium valproate should only be used in women of childbearing potential when all other treatments are ineffective or not tolerated and women must use effective contraception while taking sodium valproate.

Pre-pregnancy planning is essential, and it is important to have your medications reviewed before falling pregnant, so you are on the best possible regime that is safest for you and your baby.

Can anything be done to reduce the risk of birth defects?

Whilst antiseizure medication can slightly increase the risk of birth defects, most (over 94%) babies exposed to these medications are born healthy and free of abnormalities .

We know that not all birth defects can be prevented. But you can increase your chances of having a healthy baby by getting the best seizure control possible and adopting a healthy lifestyle before becoming pregnant. Make a commitment to yourself to do this by planning ahead, avoiding harmful substances, choosing a healthy lifestyle, and discussing any concerns with your doctor.

Talk to your neurologist and obstetrician about risks and any screening tests that may be done.

Pre-pregnancy counselling

Pre-pregnancy counselling is very important so medication and seizure management can be reviewed well before falling pregnant to have the best seizure control on the lowest but effective dose of suitable medication. By working with your doctor, you can reduce risks to you and your baby.

This is the time to ask important questions.

Pregnancy

Planning before falling pregnant is advised. If you have an unplanned pregnancy, it is important not to panic and change your medication but talk to your doctor as soon as possible. Briefly:

- It is desirable to have the best possible seizure control before falling pregnant
- If possible, have your medications reviewed before falling pregnant
- Less than 16% of women will have an increase in seizures during pregnancy. Most will see no change in their seizure frequency
- Women who have seizures associated with menstruation, tend to have less seizures during pregnancy
- Tonic clonic seizures can be potentially harmful to both mother and baby but there is little evidence that focal or absence seizures are a risk to the unborn baby
- Since medication absorption may change during pregnancy, it may be necessary to monitor blood levels and adjust medication.



Women are invited to enrol with the Australian Pregnancy Register for Women to assist with research into antiseizure medication & pregnancy. For more information call **1800 069 722** (free call).

This is an important ongoing study which provides valuable information in relation to antiseizure medication, pregnancy & breastfeeding.

Australian
Pregnancy
Register



Breastfeeding

Breastfeeding has many benefits. The presence of antiseizure medication in breast milk is unlikely to harm baby's development and most appear to be acceptable to use during breastfeeding if taken as a single medication. If you are taking more than one medication, then you will need to discuss this with your doctor.

All babies with mothers take antiseizure medication should be monitored for side effects such as apnoea, drowsiness, sufficient weight gain, and developmental milestones, especially in younger exclusively breastfed babies and when the mother is taking combinations of medications. There is also risk of hypersensitivity reactions, especially in children, so baby should be watched carefully for rashes.

Breastfeeding can be a tiring process for mothers, and lack of sleep may trigger seizures in some people. These aspects should be fully discussed with your doctor.

Menopause

Menopause can bring about many symptoms including hot flushes, sleep difficulties and mood swings.

There is some conflicting evidence about seizure frequency and changes in women with epilepsy during menopause. The hormonal changes may influence seizures in some women, for instance, some women seizures stop while others may experience an increase in seizures, and many women have no change in seizures. Sometimes the common symptoms of menopause, such as sleep difficulties, and depression can also increase the risk of seizures.

Women with catamenial epilepsy may have an increase in seizures during the perimenopause and a decrease after menopause. So, predicting what may happen can be difficult.

Menopause symptoms are sometimes managed with menopause hormone treatment (MHT). If you take MHT and find you are having an increase in seizures, you will need to discuss this with your neurologist to consider possible alternatives or different combination of MHT oestrogen and progestogen, plus a review of your antiseizure medication..

If you don't want to take MHT, research and discuss with your doctor any supplements you may be considering, to make sure they are safe to take with epilepsy.

NOTE: Menopausal women with epilepsy also have an increased risk of osteoporosis because some antiseizure medications can reduce bone density. The role of MHT in preventing osteoporosis is particularly important for women with epilepsy.

This is a significant change in life and is a good opportunity to see your specialist to discuss managing your seizures and menopausal symptoms effectively.



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