

## Fact Sheet 28

# Epilepsy and Women

Some women living with epilepsy face many challenging issues simply because of their hormones, oestrogen and progesterone. Oestrogen makes the neurons in the brain produce more electrical discharge, and is seen as an excitatory hormone, whilst progesterone calms them down and is the inhibitory hormone. If a woman's body is producing more oestrogen than progesterone then the central nervous system is more excitable and a woman is at greater risk of seizures. The hormones are not causing the seizures themselves; rather they influence when the seizures occur.

About 12% of women discover that their seizures are affected by their menstrual cycle and this is called **catamenial epilepsy**. Tracking seizures to know when they are happening helps with a treatment plan and so a discussion with the neurologist becomes important. It may be decided that seizures can be simply controlled by anti-epileptic medications whilst in other situations hormone treatment may be deemed necessary. Since no two people are the same, there will be different solutions to the same problem.

Research has shown that for most women with catamenial epilepsy, their seizures occur towards the end of the menstrual cycle (i.e., just before, or at the start of menstruation when progesterone levels have dropped), whereas for a small number of women their seizures are taking place at, or just before, ovulation in the middle of the cycle when there is a lot of oestrogen.

A normal menstrual cycle is about 28 days when the lining of the womb is shed, but for many women with epilepsy they live with menstrual cycle disorders when periods become irregular and the egg is not released from the ovary. This situation is called an anovulatory cycle and it means that pregnancy cannot occur. One of the major causes of menstrual abnormalities is **polycystic ovary syndrome (PCOS)** and it poses a great burden for about 5-10% of women with epilepsy in the reproductive age group.

The epilepsy connection and PCOS may be related to the left temporal lobe, which may have certain hormonal abnormalities that prevent the follicles in the ovary from maturing. Research has also shown that in some cases there is a relationship between young women taking sodium valproate (Epilim) and PCOS. PCOS can worsen seizure activity and anxiety levels, because a woman is producing more oestrogen than progesterone. Always consult with your neurologist to discuss treatment options, which may include medication and life-style changes such as exercise and weight loss, which can help mitigate PCOS.

The definition of having a polycystic ovary is when the thickened ovary contains 10 or more cysts measuring about 2-8 mm across. Not all women with polycystic ovaries will have PCOS.

**Contraceptive** use for women with epilepsy can be problematic simply because of the effects of contraceptives, anti-epileptic medications (AEDs), and seizures. Some AEDs can interfere with the contraceptive pill and some women will fall pregnant because of this interference. At other times

the contraceptive pill may interact with the AED by reducing the amount of the AED in the blood, therefore resulting in more seizures. Bleeding between periods is a sign that the contraceptive pill is not providing enough protection against pregnancy. A conversation with a neurologist is important in finding the best anti-epileptic and contraceptive combination for a woman with epilepsy and for a woman to have informed consent when using them. It is preferential that women should be offered two effective forms of contraceptives, such as the Depo Prevera injection or IUD and condoms, which are two contraceptive methods not affected by anti-epileptic medications.

Having epilepsy does not affect a woman's ability to have children or to have a healthy pregnancy. However, it is advisable to see the neurologist at least 6–12 months before becoming pregnant. Continuing to use the two forms of contraceptives and taking anti-epileptic medications is important whilst in this planning stage since it may be necessary to have a medication change. Some anti-epileptic medications such as sodium valproate (Epilim) can be harmful to the unborn baby and so the neurologist may suggest a change in medication whilst maintaining seizure control. The neurologist will also likely suggest taking folic acid, also known as folate, which is a vitamin that is important in the development of the neural tube in the foetus. As the foetus grows, the neural tube develops into the brain and the spinal cord. Folic acid helps reduce the risk of a baby developing tube defects such as spina bifida. If a woman falls pregnant unexpectedly, it is important not to stop, or even change the dosage of anti-epileptic medications, as it could be dangerous to do so. Making lifestyle choices such as eating a healthy diet, exercising regularly, getting enough sleep, and avoiding smoking, alcohol and illegal drugs are also optimum ways to manage a healthy pregnancy.

Babies born with birth defects as a result of a mother taking anti-epileptic medications during pregnancy are said to have **foetal anti-convulsant syndrome (FACS)**. Babies can display a range of congenital and neurodevelopmental problems. For more information on anti-epileptic medications and the effect of them on some unborn babies, please follow this link: [www.facsnz.com](http://www.facsnz.com)

Most women with epilepsy do not experience seizures during **pregnancy** but many will experience morning sickness (i.e., nausea and vomiting) usually within the first 12 weeks, but it can also last for much longer. Morning sickness can happen at any time of the day and so gauging when to take AEDs can be tricky. Get support from your neurologist and healthcare team as to when it is best to take your medications. A solution is to maybe alter the time of day when you take medications but remember to try to keep the length of time between the doses the same to maintain the dose effectiveness. If you should vomit within one hour of taking medications, and you can still see the tablets in the vomit, then it will normally be possible to retake them.

If seizures do break-through during pregnancy, or they become severe or change, then a conversation with the neurologist becomes essential since a medication change may be suggested. Staying safe for both the mother-to-be and the unborn baby is paramount, but it may help to know that many women who have seizures during pregnancy do deliver healthy babies.

During the pregnancy, women with epilepsy will be offered the same ultrasound scans to detect any developmental problems in the baby, and they may be offered more clinical support along with more blood tests to check medication levels, depending on the AED taken. A healthy pregnancy typically lasts 40 weeks and a woman with epilepsy can look forward to the milestones found in all three trimesters. There will be teams of midwives and specialists working together in managing both the mother's health and that of the unborn baby.

Getting ready for the birth of a baby is a period of mixed emotions for all women but there are many ways to mentally and physically prepare for labour. Attending ante natal classes will provide a lot of support, and friendships are often made during this time. Knowing when to go to the hospital, and who will be assisting in the birth, will contribute to a greater peace of mind in those final weeks of pregnancy. Seizures usually do not happen during labour and so most pregnant women will deliver their babies without complications. If there should be a seizure during labour then the healthcare team may deliver your baby by caesarean section. Remembering to take your AED medications during labour is still important and you may have to be reminded to take them.

The baby is born and a new life adventure begins for you all. Please view fact sheet #19 on [epilepsy and motherhood](#) for suggestions on how to manage a new baby whilst having epilepsy. By following a few simple safety precautions it may significantly reduce the risk of accidents and minimise your anxiety.

It is normally appropriate to breast feed your baby whilst taking AEDs and you should be encouraged to do so, but it is up to you in your choice of feeding method. Do whatever is best for you and what suits your family/whanau. You should feel supported in whatever choice you make. The decision to breastfeed and the AED that you use is made between you and your neurologist and is based on weighing the benefits of breastfeeding against the potential risks of the medication affecting your baby and your seizure control.

Anywhere from the age of 45 (and sometimes younger for women with epilepsy) a woman's menstrual cycle can stop and **menopause** can begin, bringing along its unpleasant symptoms that may include hot flushes, night sweats, poor sleep, and possibly depression. Some women will choose to use hormone replacement therapy (HRT) to alleviate these symptoms but the HRT may affect AED medication and increase seizure frequency. A good conversation with a neurologist will help navigate this tricky problem.

In menopause there is a hormonal shift as both oestrogen and progesterone levels in the body decrease. This shift could cause a woman to experience epilepsy for the first time in her life (if there is no other known cause for it). For those already living with epilepsy, some women will experience worsening seizures, whilst most, especially those with **catamenial epilepsy**, will experience fewer or no change whatsoever. The epilepsy treatment plan need not necessarily be changed or adjusted as women age, but depends entirely on the number and severity of seizures happening at the time.

The biggest burden affecting menopausal women is the increased risk of bone fractures, osteoporosis and osteomalacia (softening of the bones due to a lack of vitamin D) as a result of taking AED medication. Moderate weight-bearing physical exercise and vitamin D and calcium supplements can help counter the effects of such bone loss or softening.

Disclaimer: this fact sheet is for education purposes only. Please consult your doctor or other health professional for advice regarding your epilepsy.