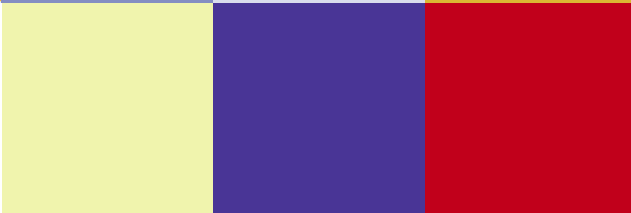
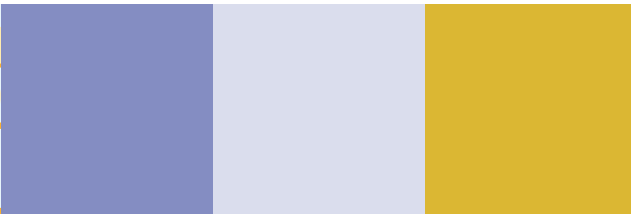
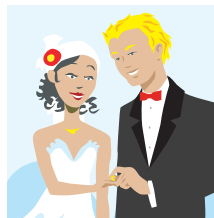


Women and Epilepsy

Information for women with epilepsy



Other booklets and information available from



- What is Epilepsy?
- Living Well with Epilepsy
- Children, Adolescents and Epilepsy
- Elderly and Epilepsy
- Epilepsy Diary & Information Booklet
- Baby Sitter Information
- Consultation Checklist
- My Epilepsy Information Card

Epilepsy is the most common disorder of the nervous system affecting about 50 million people world wide but they live, work, have leisure occupations, enjoy normal sexual relations and are active members of society.

They are living proof that epilepsy, if managed well, does not have to stop the person from realising their goals in life.

What is Epilepsy?

Epilepsy can be caused by injury to the brain, due to trauma – such as a car accident or a head injury, a high fever caused by an infection, or as they get older some people develop epilepsy due to vascular disease, strokes, tumours and Alzheimer’s disease. However, for many people, the cause of their epilepsy is never known.

Epilepsy is diagnosed when there are repeated seizures (sometimes called fits) during a certain period in a person’s life. If you only have one seizure it is often not epilepsy.



What is a seizure?



A **seizure** is the result of a **temporary disturbance** to the brain's electrical activity. This results in the brain's messages becoming temporarily halted or mixed up. The number of seizures can vary from less than one a year to several times a day. Seizures can happen at any time. They generally last only a matter of seconds or minutes, after which the brain cells return to normal.

Our brains are responsible for most of our bodily functions, so what someone experiences during a seizure will depend on the part of the brain affected and how widely and rapidly it spreads. For this reason, there are many different types of seizure, and everyone will experience epilepsy in a way that is unique to them.

Seizures are classified into two types - generalised seizures and partial seizures.

- Generalised seizures involve most or all of the brain.
- Partial seizures involve a limited part of the brain, and can be either **Simple** or **Complex**.

Although the vast majority of seizures do not cause accidents, their existence causes uncertainty and insecurity in people with epilepsy, their family and friends. A series of relatively simple recommendations are sufficient to reduce the risk of injury. It is important to follow this advice especially if you have seizures that are more frequent or severe.

How is epilepsy treated?

The aim of epilepsy treatment is to stop seizures completely but without causing problems (reactions to the medication).

Most people with epilepsy are prescribed **Antiepileptic drugs** to re-establish the electrical balance of the brain. There are several antiepileptic drugs available today. They are used to control or, for some people, even stop seizures by reducing the sensitivity of the neurons that cause them.



The choice of treatment with an antiepileptic drug is not a random decision. It will depend on various factors, including

- your age,
- type of epilepsy,
- your response and tolerance to the medication,
- medicines you may also need to take (e.g. contraceptive pill, medicines for high blood pressure or high cholesterol etc.).

Treating epilepsy isn't easy. Quite a lot of people continue to have seizures despite trying many of the different medications and treatments currently available. However, with the choice of drugs available, it is possible that around seven out of 10 people with epilepsy could become seizure-free, once the most appropriate drug and the correct dose for them have been identified, even if this could take some time to achieve.

Only your neurologist can establish the type of treatment and the correct dose for you. It is important that you take your medication as instructed to give yourself the best chance of controlling the seizures and being able to live your life.

Epilepsy and Women

The female sexual hormones can affect the excitability of the neurons (the cells in the brain), and the uncontrollable discharge which lead to epileptic seizures. Generally speaking, oestrogen increases the likelihood of seizures and progesterone acts as an anticonvulsive (reducing the seizures). Thus, it should come as no surprise that some women with epilepsy may suffer fluctuations in the control of the seizures in relation to the hormonal changes that take place during the menstrual cycle. This phenomenon is known as catamenial epilepsy.



This means that there are two points of particular risk with regard to seizures:

- During ovulation, (the first half of the menstrual cycle) when the female body produces oestrogen and the progesterone levels are low.
- After ovulation (which takes place around halfway through the menstrual cycle) the body starts to produce progesterone. Just before or during the first few days of menstruation, the concentrations of progesterone are lowest which may increase the risk of seizures.

It is not uncommon for many women with epilepsy to have anovulatory cycles (where ovulation does not occur). In these women the high concentrations of oestrogen up until a few days before menstruation, leads to a higher chance of suffering seizures during this period. Your neurologist may also decide to carry out a hormonal study or analysis to assess the concentrations of the antiepileptic drug in your body just before menstruation.

You may find writing a 'seizure diary' is particularly useful in keeping track of when your seizures occur in general and in relation to menstruation. This may be of help to your neurologist to adjust the treatment. Although there is no specific therapeutic recommendation to alleviate this problem some women with seizures relating to menstruation can take extra antiepileptic drugs in the days when they are more likely to suffer seizures, but this should always be recommended by your neurologist.



It is known that many women with epilepsy may suffer other reproductive problems: irregular cycles, heavy or very short bleeding, gynaecological syndromes such as polycystic ovaries, etc. Should these problems affect you it is important to follow the usual controls carried out by both your neurologist and gynaecologist, who can advise you on what action to take and the ways to overcome them.



What should I know about contraceptives?



Women with epilepsy can use any kind of contraceptive method (oral and non-oral hormonal contraceptives, barrier methods, those based on the calculation of the menstrual cycle, etc.). The hormonal contraceptives are believed to be the most effective for most women.

The decision regarding which method of contraception to use will depend on the choice of antiepileptic drug that best controls your seizures, with least side effects.

Other relevant considerations will include:

- your individual situation,
- your age,
- the frequency of sexual relations,
- existence or not of other illnesses.

This decision should always be taken together with your gynaecologist and neurologist.

As a woman with epilepsy, you should be aware that some antiepileptic treatments can reduce the effectiveness of contraceptives (enzyme inducers can cause the contraceptive pill to be removed more quickly from the body which could lessen the protection against pregnancy).



This means that women using anti-epileptic drugs known to be enzyme inducers should be taking contraceptive pills with higher levels of oestrogen.

- If you notice “break-through bleeding” between your periods it may be a sign of the reduced effectiveness of your oral contraceptive pill. In this case, speak to your doctor about adjusting the dosage of oestrogen in the contraceptive.
- During this period of adjustment in your contraception you should use a barrier method or kits to detect possible ovulations and continue with the pill until there is no risk of pregnancy.

Contraceptive pills may also lessen the concentrations of certain antiepileptic medicines in the blood, increasing the chances of seizures.

- If you notice “break-through seizures” during the first three weeks of your period, it may be a sign of the reduced effectiveness of your antiepileptic medicine. In this case, speak to your doctor about adjusting the dosage of the antiepileptic medicine or a change of the contraceptive method.

A benefit of non-oral contraceptives (such as implants, patches or intramuscular) is that due to their high levels of progesterone, they can help reduce seizures in some women. However, these non-oral contraceptives will also be affected if your anti-epileptic drug is an enzyme inducer. Your doctor may adjust the dose of these contraceptives to increase protection against pregnancy.

A more permanent contraceptive is tubal ligation. Once this has been done it is difficult to reverse.

Your decisions regarding contraceptive choice should always be taken together with your gynaecologist and neurologist.

I Would Like to Have Children



Planning your Pregnancy

Pregnancy brings hormonal, metabolic and psychological changes in all women. In the case of women with epilepsy, it can lead to changes in the frequency of seizures, changes in the concentrations of your antiepileptic drugs and can affect your baby.

It is advisable that all pregnancies in women with epilepsy are planned whenever possible together with your neurologist and gynaecologist. This means that if you are between the age of 12 and 45 years that you are given detailed information on the possible complications and risks in terms of pregnancies as soon as you are diagnosed with epilepsy.

Women with epilepsy can have children. If you are planning to become pregnant talk to your neurologist and gynaecologist as soon as possible as only he or she can assess the optimal conditions for a successful pregnancy.

The risk of birth defects in the children of women with epilepsy is slightly higher than that for women without epilepsy. The most common birth defects are cleft lips and palate, cardiac defects, small alterations in hands and feet, and spina bifida. Taking a folic acid supplement before and during the pregnancy can sometimes reduce the risks involved.





This is due to factors related to your epilepsy as well as factors related to your antiepileptic drug. There seems to be a greater risk if you are taking more than antiepileptic drug and if there are high dosages involved. If your pregnancy is planned you and your neurologist can discuss the possibility of reducing the amount of antiepileptic drugs to find the smallest effective dose to avoid seizures. You will also be prescribed a vitamin substitute with folic acid

2 months before conception and during the first 3 months of pregnancy to further reduce any risks of birth defects.

There are antiepileptic drugs that represent a higher risk in terms of birth defects. If you are taking one of these it will need to be changed before pregnancy following discussion with your neurologist and gynaecologist. During pregnancy it is not recommended that the medication be changed in an attempt to find one that represents a lower risk to the baby. If your anti-epileptic drug is stopped suddenly you may have seizures that are more damaging to both yourself and your baby than the anti-epileptic drug itself.

If you have an unplanned pregnancy, you should continue to take your anti-epileptic drugs, start to take folic acid as soon after you know you are pregnant and visit your neurologist as soon as possible.

- Arrange more regular visits with your neurologist and gynaecologist.
- Continue to take your anti-epileptic drug, vitamin supplements and folic acid as instructed by your doctor.

Pregnancy and your Epilepsy

Pregnancy can affect your epilepsy by increasing the number of seizures (in about 15% to 30% of women with epilepsy). This is probably due to the

- reduced number of hours of sleep,
- the increased stress and anxiety brought on by the pregnancy,
- the changes in the concentrations of the antiepileptic medicines (caused by the changes to your body during pregnancy).

Many women fail to keep to their medication for fear of the effects it might have on the baby not realising that temporarily stopping their antiepileptic drug could lead to severe seizures, which could be serious both for themselves and their child. Seizures may represent an important risk for your baby, as they can lead to a lack of oxygen for the baby. During your pregnancy, your neurologist will be carrying out tests to ensure the level of anti-epileptic drug is sufficient to control your seizures whilst at a low enough dose so as not affect your baby. He may have to increase the dose of your antiepileptic medication during pregnancy and decrease it again around birth.

There is a greater risk of complications (such as increased risk of bleeding and nausea, and the possibility of falls and injuries due to seizures) in women with epilepsy. However better control of the seizures, closer observation of the pregnancy by the neurologist and gynaecologist and measures necessary to correct any problem that may occur during the pregnancy have greatly reduced these complications.

- During pregnancy take special care of your nutrition by keeping to a balanced diet, with plenty of fruit and vegetables, and vitamin supplements.
- Try to get enough rest and, where possible, follow a programme of moderate exercise.

Birth and your Epilepsy

Some antiepileptic medicines can increase the possibility of bleeding in mothers and newborn babies. In these cases, a vitamin K supplement is prescribed during the weeks before the birth and for the newborn child.

Most seizures (around 90%) take place in the period around the birth; however, the risk is low and if it occurs, the medical team can take care of you and your child. Caesarean sections are only required for those women who have not been able to gain a good level of control over their seizures in the last three months of the pregnancy. If this happens to you, your neurologist may still choose to prescribe you extra medication before the birth.



- Prepare for labour by taking account of your epilepsy and limit fast shallow breathing exercises.
- As with any pregnancy epidural anaesthesia can be used, as long as the anaesthetist is informed that you have epilepsy and told what medication you are on.
- The arrangements for labour are identical to that for all women.
- Be reassured, just because you have epilepsy does not mean that your child will need more supervision than any other child.

Breast-feeding

Some antiepileptic medicines can enter your breast milk and pass to your baby. Therefore the possibility to breast-feed will depend on the antiepileptic drug you are taking.

Before breast feeding, speak with your neurologist.

- Keep an eye on your baby, if he/she is very sleepy. It may be that he/she is affected by your antiepileptic drug.
- If you find you suffer from more seizures due to lack of sleep at night you may prefer to bottle feed at night.
- If you are worried about anything talk to your neurologist and paediatrician.

What should you know about the menopause?



Given the importance of the sexual hormones in the excitability of the neurons, the hormonal changes that take place during the menopause can affect the frequency of epileptic seizures in some women, especially those with catamenial epilepsy. This is thought to lead to a worsening just before the menopause and an improvement during the menopause. However, studies are still required.

The effect that hormone replacement therapy may have on women with epilepsy during the menopause is unknown. However one beneficial effect of hormone replacement therapy during the menopause is the prevention of osteoporosis which is particularly important for women on antiepileptic treatments, as the risk of fractures due to the fragile nature of their bones is higher.

Importance of Regular Reviews with your Specialist



Inform your doctor if you find that you have problems with the medication, or if you notice:

- side effects that are having an impact on your day to day life,
- an increase in seizures,
- a new type of seizure,
- your seizures last a longer time.

Your doctor may decide an appointment with an epilepsy specialist is appropriate. This will be an opportunity for you to find out about any treatment options that could offer improved seizure control and fewer side effects.

Even if you and your specialist decide not to change your medication, there may be ways of reducing the side effects you are experiencing, or the control you have over your seizures. Your specialist should be able to discuss those options with you.





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