



Women and girls

How epilepsy affects women
and girls.

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epilepsysociety.org.uk/women-and-girls

For a printed copy, or for a large print version, call our helpline on 01494 601 400.

How epilepsy affects women and girls

Some issues around epilepsy and its treatment are specific to women and girls. These include links between epilepsy and hormones, puberty, contraception, pregnancy, and the menopause.

Hormones, menstrual cycles, and periods

Epilepsy can be different for everyone, and changing hormone levels in the body may affect some women and not others. For some women with epilepsy, there may be a close link between hormones and epileptic seizures.

Hormone levels change throughout a woman's life and may affect when her epilepsy starts, how often her seizures happen, and if and when she stops having seizures.

Visit [epilepsysociety.org.uk/epileptic-seizures](https://www.epilepsysociety.org.uk/epileptic-seizures)

Changes in hormone levels can make managing epilepsy different for women to how it is managed for men. It may also explain why epilepsy treatment for women may need to change over time.

Oestrogen and progesterone are hormones naturally produced in a woman's body, which bring about sexual development, menstruation, and pregnancy. They can speed up or slow down brain activity and can affect when a woman has seizures.

Talk to your doctor or epilepsy specialist nurse (ESN) if you have questions about how your hormones could affect your epilepsy.

Puberty

Puberty is the time in life when hormonal changes in the body cause sexual development to begin. It can also be a common time for epilepsy to start.

Puberty can be a time when you don't want to feel different from your friends, and having epilepsy can be an added challenge. Some women or girls may be concerned about how hormones may affect their epilepsy, periods, or their menstrual cycle.

Most people are prescribed anti-seizure medication (ASM) to try and stop seizures from happening. As with any medication, ASM can cause side effects in some people. Side effects may differ from one person to another. Some side effects can affect an unborn baby in pregnancy (see page 12).

[Visit epilepsysociety.org.uk/anti-seizure-medication](https://www.epilepsysociety.org.uk/anti-seizure-medication)
[and epilepsysociety.org.uk/are-there-risks-my-baby](https://www.epilepsysociety.org.uk/are-there-risks-my-baby)

Catamenial epilepsy

Because of the changes in hormone levels that happen throughout the menstrual cycle, one in three women with epilepsy finds that their seizures are affected by their periods.

Some women regularly have their seizures just before or during their period, or at ovulation (mid menstrual cycle). Women who have their seizures only at these specific times during their menstrual cycle (and at no other time), may have catamenial epilepsy.

Keeping a seizure diary and noting down periods can help to see if there are any patterns to when they happen.

Visit epilepsysociety.org.uk/seizure-diaries

Women with catamenial epilepsy may be prescribed a contraceptive injection, such as Depo Provera. This may reduce seizures for some women as it stops their regular cycle.

An extra ASM, in addition to their regular ASMs, may be prescribed for the week before and during the first few days of their period.

If you think you may have catamenial epilepsy, you can discuss what treatment options may be suitable for you with your specialist or (ESN).

Polycystic Ovary Syndrome

Polycystic Ovary Syndrome (PCOS) is a common hormonal condition where eggs from the ovary do not develop properly. Eggs are usually released each month during ovulation. For women with PCOS, eggs are not released in the usual way but stay in the ovary forming non-harmful cysts.

PCOS may be more common in women with epilepsy. It may also be more common in women who take certain ASMs such as sodium valproate, or who gain weight, which can be a side effect of some ASMs.

If you are concerned about PCOS, talking to your specialist might help, as changing your ASM can sometimes stop or reverse these effects. As for everyone with epilepsy, it is recommended that you talk to your specialist before making any changes to your ASM.

Visit verity-pcos.org.uk

Contraception

Some methods of contraception may be less effective in preventing pregnancy for women taking certain ASMs. This is because some ASMs affect how well different methods of contraception work.

ASMs are either enzyme-inducing or non-enzyme-inducing, although topiramate and perampanel can be either, depending on the dose.

Enzyme-inducing ASMs

Enzyme-inducing ASMs may affect methods of contraception that contain hormones, such as the Pill, or contraceptive implants, because they increase the amount of enzymes that break down hormones in the body.

This means the hormones in contraceptives are broken down more quickly than usual, so they stay in the body for less time and are less effective in preventing pregnancy.

If you take an enzyme-inducing ASM, you may be advised by your doctor to use a method of contraception that is not affected by your ASM, such as a barrier method, or to use more than one method to help prevent pregnancy.

Enzyme-inducing ASMs (generic name)

| | |
|-------------------------|---------------|
| carbamazepine | phenobarbital |
| cenobamate | phenytoin |
| eslicarbazepine acetate | primidone |
| fenfluramine | rufinamide |
| oxcarbazepine | topiramate |
| perampanel | |

Non-enzyme-inducing ASMs

Non-enzyme-inducing ASMs are unlikely to affect any form of contraception. However, see page 8 for details on lamotrigine.

Non-enzyme inducing ASMs (generic name)

| | |
|---------------|------------------|
| acetazolamide | perampanel |
| brivaracetam | piracetam |
| clobazam | pregabalin |
| clonazepam | sodium valproate |
| ethosuximide | stiripentol |
| everolimus | tiagabine |
| gabapentin | topiramate |
| lacosamide | vigabatrin |
| lamotrigine | zonisamide |
| levetiracetam | |

Perampanel and Topiramate are on both lists as it depends on the dose.

Lamotrigine – a special case

There is evidence that **the Pill lowers lamotrigine levels in the blood**, and this could lead to seizures happening.

Research suggests that lamotrigine can lower the amount of progestogen from the combined oral contraceptive pill in the blood, but not the oestrogen. However, there is no conclusive evidence that lamotrigine reduces the effectiveness of the Pill.

If you take lamotrigine, it is important to talk to your doctor before starting any contraception that contains the hormones progestogen and oestrogen.

What is best for me?

You may want to talk to your neurologist, ESN, or a family planning advisor about the combination of ASM and contraception that is best for you.

[Visit nhs.uk/conditions/contraception](https://www.nhs.uk/conditions/contraception)

Starting a family

Having epilepsy does not necessarily mean that starting a family will be any more difficult for you than for anyone else.

However, it may mean that you have a few more things to consider before, during, and after your pregnancy.

Preconception counselling

If you are thinking of starting a family, it is essential to talk to your neurologist about planning your epilepsy treatment for your pregnancy and for when your baby arrives.

It is important that you do this **before** you become pregnant.

You may have questions about the type of medication you take, the dose, how being pregnant could affect your seizures, and how seizures could affect your unborn baby.

Because women with epilepsy have a slightly higher risk of complications than women who don't have epilepsy, forward planning can help keep these risks to a minimum.

If you have seizures, you are likely to be advised to keep taking your ASM throughout your pregnancy.

Your doctor may suggest adjusting your ASMs so you take the lowest possible dose that will still control your seizures. However, some ASMs are used up more quickly in the body during pregnancy, so the dose may need to be increased during your pregnancy to keep your seizures under control (see page 20).

Your doctor might suggest a change to the type of ASMs that you take, as some are more risky to unborn babies than others.

Women with epilepsy who take ASM during pregnancy have a higher risk of having a baby with a birth abnormality than women with epilepsy who don't take ASM.

Because of the possible effects of ASM on an unborn baby, having your ASM reviewed before you become pregnant can help you and your neurologist make sure that you are taking the most appropriate ASMs and at the most suitable dose during your pregnancy. See page 12 for more about the effects of ASMs on an unborn baby.

Some women prefer not to take ASM during their pregnancy and may want to discuss this option with their neurologist. If you have seizures during pregnancy there is a risk of injury to yourself and your baby. This risk could be higher (depending on the type and frequency of seizures you have) than the risk of the ASMs affecting your baby. See page 21 for more about these risks.

If you have been seizure-free for two or three years, your doctor might suggest slowly stopping your ASM before you try for a baby. However, if your ASM is stopped there is a risk that your seizures could start again.

Having seizures could affect your home or work life, and if you are currently driving and have a seizure, you will need to stop driving and tell the DVLA. How long you will need to stop driving for may depend on the type and number of seizures you have had.

Visit [epilepsysociety.org.uk/driving](https://www.epilepsysociety.org.uk/driving)

Making decisions about your medication is not always easy and preconception counselling can give you the chance to ask any specific questions or talk about concerns you have.

Physical birth abnormalities

For any woman there is a small ('background') risk that her baby may be born with a birth abnormality or malformation. Physical birth abnormalities are problems that happen when the development of a baby is affected while it is in the womb. There are different types of birth abnormality, which can affect different organs in the body, and can happen for different reasons. Birth abnormalities can be classed as 'minor' and 'major'.

Minor malformations are those that do not need surgery, for example small fingers and toes, and eyes set wide apart.

Major malformations are those that need surgery to correct them. These include a hole in the heart, problems with the kidneys or genitals, cleft lip, and cleft palate (where the roof of the mouth is not correctly joined). They also include problems with the development of the spine and nervous system (neural tube defects), such as spina bifida (where part of the spinal cord is exposed).

Sometimes the child's arms or legs, or the way their face looks, may also be affected.

If you are pregnant, avoiding the following will all help reduce the risk of birth abnormalities: alcohol, smoking, unprescribed medication, and illegal drugs. This is because all these substances can be passed through your bloodstream to your baby and so may affect your baby's development.

Women with epilepsy have a higher chance of having a baby with a birth abnormality than women who don't have epilepsy. This may be due to an underlying genetic condition which also caused the epilepsy. Or risks can be due to injury to your unborn baby if you have seizures during pregnancy, or from taking some types of ASM.

Can ASM affect an unborn baby?

For a woman with epilepsy who takes ASM during pregnancy, her baby will be exposed to ASM in the womb. While she is pregnant, a mother's bloodstream is kept separate from her unborn baby's. However, some substances can pass from her blood into her baby's blood via the placenta. These substances include nutrients, oxygen, alcohol, and medication including ASM.

Some ASMs can affect how the baby grows and develops inside the womb, particularly in the first 12 weeks of pregnancy when the main organs and skeleton are developing.

ASMs and birth abnormalities

Different ASMs vary in the risk they pose, and the risk of abnormalities rises with higher doses of the drug and if you already have a child with a birth abnormality. Taking more than one ASM increases the risks, especially if this includes sodium valproate.

- 2 – 3 women in every 100 (2 – 3%) in the general population will have a baby with a major malformation (the 'background risk').
- 3 women in every 100 (3%) who have epilepsy and don't take ASMs will have a baby with a major malformation.
- 4 – 10 women in every 100 (4 – 10%) who have epilepsy and who take an ASM will have a baby with a major malformation.
- Recent studies show that lamotrigine (Lamictal), and levetiracetam (Keppra) are safer to use during pregnancy than other ASMs. They have low rates of physical birth abnormalities, in line with the background risk (2 – 3%). Again, for each drug the risks increase with higher doses.

The Medicines and Healthcare products Regulatory Agency (MHRA) has produced more guidance on the risks for ASMs in pregnancy.

[Visit epilepsysociety.org.uk/are-there-risks-my-baby](https://www.epilepsysociety.org.uk/are-there-risks-my-baby)

Sodium valproate – Important information

Sodium valproate (brand names include Epilim, Episenta, Epival and Dyzantil) has greater risks in pregnancy than other ASMs, with 7 women in 100 (7%) having a baby with a major abnormality, rising to 1 in 10 women (10%) if they take more than 1000mg (1g) per day.

Also, up to 4 children in 10 (up to 40%) whose mothers took sodium valproate have problems with development and learning.

There is also evolving information about potential risks in men.

The (MHRA) states that sodium valproate should not be prescribed to anyone under the age of 55, **unless** it is the only effective drug for them, and if they are a woman, they are on a pregnancy prevention programme (see page 15). They also recommend that treatment with sodium valproate should only be started by a doctor experienced in managing epilepsy.

Sodium valproate is an effective drug for epilepsy and, for some people, it is the best or only drug that controls their seizures.

Whichever ASM you are taking, **do not suddenly stop taking it**, but talk to your doctor or ESN about any specific risks, and the best options, for you individually.

Visit [epilepsysociety.org.uk/sodium-valproate](https://www.epilepsysociety.org.uk/sodium-valproate)

Pregnancy prevention programme (PPP)

Current MHRA advice states that sodium valproate must not be prescribed for any woman or girl under the age of 55, unless she has a pregnancy prevention programme (PPP sometimes called PREVENT) in place.

- Your specialist will discuss the risks of taking sodium valproate with you, and whether or not you are planning to become pregnant. This will help to decide if the PPP is right for you.
- They will explain the risks to an unborn child if the mother takes sodium valproate during pregnancy. (See page 14 for risks of taking sodium valproate during pregnancy).
- Before you start to take sodium valproate, you will need to have pregnancy tests.
- Your specialist will explain the options for highly effective contraception.
- Your specialist will carry out reviews of your treatment at least annually. You and your specialist will complete an annual risk acknowledgement form at each review. This confirms that you have been given appropriate advice, which you have understood.

For more information visit [gov.uk/government/news/update-on-mhra-review-into-safe-use-of-valproate](https://www.gov.uk/government/news/update-on-mhra-review-into-safe-use-of-valproate)

Fetal anti-convulsant syndrome

Some ASMs are thought to affect a child's development after they are born – this is called Fetal anti-convulsant syndrome (FACS). The risk of this happening is higher with sodium valproate than with other ASMs.

Problems with the child's development and learning can include: delayed walking and talking, poor speech and language, and problems with memory, attention, lower intelligence, and behaviour. Often these effects are not seen until the child gets older, for example when they start nursery or school.

Children exposed to sodium valproate in the womb may also be more likely to be on the autism spectrum.

There are organisations which provide information and support to families affected by Fetal anti-convulsant syndrome.

Visit infactuk.com and oacscharity.org

What do these risks mean for me?

Most women with epilepsy have over a 90% chance of having a healthy baby. Any individual risks for you will depend on many factors, including your type of epilepsy, the ASMs and dose you take, and any other medical conditions.

If you stop taking your ASMs, your seizures may increase, or become more severe. Seizures may cause more harm for you and your baby than any risks associated with the ASMs themselves.

You and your specialist can discuss any specific risks, and the best options, for you individually.

Getting pregnant

Many people with epilepsy have children and a normal family life. Having epilepsy doesn't usually make it harder for a woman to get pregnant. However, anxieties around having epilepsy, taking medication, and the possibility of seizures can all affect how you may feel about starting a family.

Certain anti-seizure medications (ASMs) may reduce the production of sperm for some men, which could lower a man's fertility.

Reduced sperm production and PCOS (see page 5) are treatable but they can make becoming pregnant more difficult.

Although you may be concerned that ASMs might affect your chances of becoming pregnant, it is important **not** to stop taking ASMs suddenly and without the medical guidance of your neurologist or GP.

Some people with epilepsy have a low sex drive. Some men say they struggle to get an erection. Low sex drive and problems with arousal can happen for a number of different reasons including anxiety, depression, or side effects of some ASMs.

Both of these problems can be common for people who have focal impaired awareness seizures in the temporal lobe, as this area of the brain is related to sex drive.

These problems can make it difficult for a woman to become pregnant. If you are concerned about your sex drive or sexual response you can ask your doctor for advice.

Visit [epilepsysociety.org.uk/relationships-and-sex](https://www.epilepsysociety.org.uk/relationships-and-sex)

What is pre-natal screening?

Pre-natal screening is the name for a number of different checks that all women have done during pregnancy, to see how their baby is developing in the womb. These include ultrasound scans which are done at certain intervals throughout pregnancy, commonly at 12 weeks (known as the 'dating scan') and at 18 – 20 weeks (known as the 'anomaly scan').

Women are also offered blood tests that measure a number of things including alphafetoprotein (AFP) levels.

AFP is a type of protein which is passed from an unborn baby to its mother. The levels of AFP in a mother's blood can indicate the risk of their baby being born with certain disorders including spina bifida. Screening does not show for certain if a baby will be born with or without any birth abnormalities. However, it can help to determine the risk of a baby being born with birth abnormalities.

Why is taking folic acid recommended?

Folic acid (vitamin B9) helps a developing baby's spine to form, and reduces the risk of neural tube defects, for example spina bifida.

The Department of Health recommends that all women planning to have a baby take 0.4 µg (400 micrograms) of folic acid daily, and throughout the first 12 weeks of pregnancy.

It is strongly recommended that women with epilepsy take a higher dose of 5mg of folic acid daily, as soon as they start trying for a baby and for at least the first 16 weeks of their pregnancy, or for the whole pregnancy if their doctor feels this is appropriate. This strength of folic acid is only available on prescription but will be free of charge.

Pregnancy

Most women with epilepsy have no change in their seizure frequency during pregnancy. However, you might find that your seizures are better controlled during pregnancy, or that you have more seizures than is usual for you. This could be because of the common side effects of pregnancy such as tiredness, or the effects of morning sickness on your ASMs.

If you are having more seizures while pregnant than you normally do, you can talk to your neurologist about how to manage the situation safely for you and your baby.

Could pregnancy affect my ASMs?

During pregnancy your body may use up more of your ASMs than usual. This means that the amount of ASM you normally take may not be enough to stop your seizures from happening. This is especially true for the ASM lamotrigine (Lamictal).

Routine monitoring of ASM levels in pregnancy is not generally necessary. However, your neurologist might ask you to have blood tests to make sure that the amount of ASM you take is at the right level for you and your baby throughout your pregnancy, especially if your seizures increase or are likely to increase.

Testing the levels of the ASM in your blood helps your neurologist decide if the dose needs to be changed. If your dose needs to be changed, it will usually be slowly reduced back to its original level after you give birth. However, if the higher dose has led to better seizure control after the birth, and there is no evidence that this dose is causing you problems, then you and your neurologist may decide to leave your ASM at this new dose.

Can morning sickness affect my ASMs?

Despite the name, morning sickness can happen at any time of the day and affects some women during the first 12 weeks of pregnancy, although it can last longer. If you are sick after taking your ASMs, the medication may not have a chance to work properly.

Changing the time of day you take your ASMs, for example taking them when you've stopped feeling sick, may be helpful. However, it is important (as far as possible) to keep the length of time between doses the same. Your doctor should be able to advise you on how best to manage your ASMs.

Can seizures affect an unborn baby?

There is no evidence that the seizure activity in focal aware, focal impaired awareness, absence, or myoclonic seizures are harmful to an unborn baby. However, if you injure yourself during any type of seizure, this can carry risks. Tonic clonic seizures could potentially cause miscarriage or serious harm to you and your baby. In rare cases, women with epilepsy have died during pregnancy, mostly due to poor seizure control.

To reduce any risks to you and your baby, the aim is for you to be as seizure-free as possible during your pregnancy. Taking your ASMs as prescribed, and telling your doctors or midwife about any seizures you have, can be helpful.

What if I'm already pregnant?

If you become pregnant without having the chance to have preconception counselling, it is recommended that you:

- keep taking your ASM as normal;
- ask your doctor to prescribe daily folic acid supplements of 5mg (see page19); and

- make an appointment to see your neurologist as soon as possible.

The UK epilepsy and pregnancy Register

If you have epilepsy and want to try for a baby, or you are already pregnant, you might like to contact the register.

This is a long-term study looking into the outcomes of children born to women with epilepsy, including the possible effects of ASMs on unborn babies.

If you join the register, you will be asked about your epilepsy and any ASMs that you take, and the register research team will contact you after your baby is born at set time points to find out how you and your baby are doing.

It is free of charge to be part of the study and over 11,000 women have taken part so far. Participating in the register includes follow up of your baby's development and it is hoped that the findings from the study will provide some answers and guidance for other women in the future.

Visit epilepsyandpregnancy.co.uk

Will epilepsy affect the birth?

Most women with epilepsy have normal deliveries and healthy babies. Your doctors may advise you to give birth in hospital so that you and your baby can have extra care if needed. If a seizure happens during labour, your baby's oxygen supply may be reduced.

Drugs may be given to stop the seizure.

You can discuss your individual risk of having a seizure during labour with your neurologist or ESN.

It can be useful for the midwife and medical team who will be at the birth to know about your epilepsy, including what type of seizures you have, which ASMs you take, and when you take them. Ideally, ASMs are taken as normal during labour.

If you want to have a home birth, you need to carefully consider the possibility of having a seizure during labour, which could lead to complications. If you would like to have a water birth, you may also need to consider the possible risks if you become confused or lose awareness during your seizures.

Generally, a caesarean section (C-section) is only necessary if it is in the best interests of you and your baby.

What pain relief can I have?

Women with epilepsy can use most types of pain relief during labour. These include:

- an epidural (an anaesthetic into the spine);
- breathing techniques; and
- gas and air (called Entonox).

Another way to relieve pain is to use a TENS (transcutaneous electrical nerve stimulation) machine, which uses electrical impulses to stop pain signals getting to the brain.

There is no evidence that TENS machines are not safe for use in epilepsy, but many manufacturers still include a warning in their instructions and advise women with epilepsy to speak to their doctor before using a TENS machine.

Pethidine, a strong painkiller, has been thought to trigger seizures in some women with epilepsy and, if possible, should be avoided.

It is helpful to tell the midwife and the medical team if your seizures have particular triggers. For example, if over-breathing, tiredness, or pain have triggered seizures in the past.

After your baby is born

Why is vitamin K prescribed?

Vitamin K plays an important part in making our blood thicken (clot). A very small number of newborn babies are born without enough vitamin K. This can cause nose bleeds, mouth bleeds, and in some cases internal bleeding. Some ASMs can reduce a mother's vitamin K levels, and this can increase the risk of their baby having low vitamin K levels.

The Department of Health recommends that all newborn babies are given extra vitamin K at birth, or within the first month of being born.

Can I breastfeed my baby?

The Department of Health recommends that every woman is encouraged to breastfeed her baby if at all possible. Breastmilk usually provides all the nutrients a baby needs for the first six months of their life.

If you take ASMs, your baby will have become used to the drugs while in your womb. If you breastfeed, then a small amount will be passed to your baby in your breastmilk. Breastfeeding can be a useful way of weaning your baby off the medication that they have become used to.

Some drugs, such as phenobarbital and primidone, can pass more easily into breastmilk and can make a baby sleepy, so it may be a good idea to alternate between formula milk and breastfeeds.

The patient information leaflet that comes with your ASM often includes information about breastfeeding and that particular drug. You can also talk to your neurologist, midwife, or health visitor about any concerns you may have.

The Breastfeeding Network has a helpline run by volunteers.

Visit breastfeedingnetwork.org.uk

Can my child inherit epilepsy?

Most parents with epilepsy do not have children with epilepsy, and the chances of inheriting epilepsy are generally low.

The risk for any child to develop epilepsy by the age of 20 is around 1 in 100 (1%), and the risk may increase to around 2 to 5 in 100 (2 – 5%) for most children whose parents have epilepsy.

However, the chances of your child inheriting epilepsy may depend on various factors, including: whether your epilepsy has a genetic cause, what type of epilepsy you have, at what age it started, and whether your partner or another child of yours has epilepsy. Your neurologist may be able to give you more information about your epilepsy.

Epilepsy can be a symptom of an inherited medical condition, passed from parent to child. These include the rare conditions tuberous sclerosis and neurofibromatosis.

Seizure thresholds

Another genetic factor is our 'seizure threshold', which is the brain's natural resistance to seizures and part of our genetic make-up. As we all have a seizure threshold, any of us could have a seizure under certain circumstances.

If a child inherits a low seizure threshold they are more likely to start having seizures. If they inherit a high seizure threshold then seizures are less likely to start unless an outside factor happens, for example a severe head injury.

[Visit epilepsysociety.org.uk/what-epilepsy](https://www.epilepsysociety.org.uk/what-epilepsy)

The menopause

The menopause is when a woman's periods stop and she can no longer become pregnant. During the menopause, a woman's body stops making natural hormones and this can cause symptoms such as hot flushes and mood swings. Hormone replacement therapy (HRT) is sometimes used to treat these symptoms.

HRT contains either oestrogen or a combination of oestrogen and progestogen. Oestrogen is known to have a pro-convulsant (seizure causing) effect for some women, but the amount of oestrogen in HRT is small and usually not enough to cause seizures to happen. However, if you take HRT and you do have more seizures than usual, this could be related to the oestrogen in HRT.

If this happens it might be helpful to discuss the HRT with your neurologist to consider any possible alternatives or different combinations of oestrogen and progestogen.

Having information and regular medical reviews with your neurologist or GP can be important during the menopause. This is an opportunity to discuss any concerns you may have.

Osteoporosis

The mineral calcium is important for our bones. Vitamin D helps calcium to get into the bones, and the calcium helps to make the bones strong.

When calcium is lost, bones become thinner, more brittle, and break more easily. This is called osteoporosis. Anyone can develop osteoporosis, but it is more common in women, especially after the menopause when levels of oestrogen start to decrease.

Having epilepsy and taking ASM may contribute to the risks of developing osteoporosis, but how much they contribute to this risk is not clear, and will vary from person to person.

Taking high doses of several different ASMs for many years may contribute to the risk of developing osteoporosis. Studies have shown that some enzyme-inducing ASMs may increase levels of chemicals in the liver that destroy vitamin D, reducing the amount of vitamin D in the body.

The NICE (National Institute for Health and Care Excellence) guideline (2022) called 'Epilepsies in children, young people and adults', recommends that, for some people, their neurologist may suggest taking vitamin D and calcium supplements.

Calcium and vitamin D supplements can help replace the natural loss of calcium.

If you have concerns about osteoporosis, talking to your neurologist about the possibility of vitamin D level checks or having a bone density scan might help.

If osteoporosis happens when a woman goes through the menopause, HRT containing oestrogen, or a combination of oestrogen and progestogen, may be prescribed. HRT is generally used to relieve the symptoms of the menopause, but it might also help to protect against osteoporosis at this time.

Visit [epilepsysociety.org.uk/menopause-and-epilepsy](https://www.epilepsysociety.org.uk/menopause-and-epilepsy)

Call the Royal Osteoporosis Society helpline on 0808 800 0035 or visit [theros.org.uk](https://www.theros.org.uk)

Further information

National Institute for Health and Care Excellence.

[nice.org.uk/guidance/ng217](https://www.nice.org.uk/guidance/ng217)

Guidance on the diagnosis and treatment of epilepsy.

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epilepsy society

Helpline

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Confidential, national call rate.

Information and emotional support.

Visit epilepsysociety.org.uk/helpline
for opening hours.

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**[epilepsysociety.org.uk/women
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