

# Epilepsy and the perimenopause and menopause

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Menopause Specialist Nurse/ANP/IP

# Declarations of interest

- No declarations of interest.
- I am a Menopause Specialist Nurse and work for Newson Health.

# Overview

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1. What is the menopause? Definition, history and current picture

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  2. The impact of hormones through the lifespan


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  3. Menopause symptoms and long-term health risks

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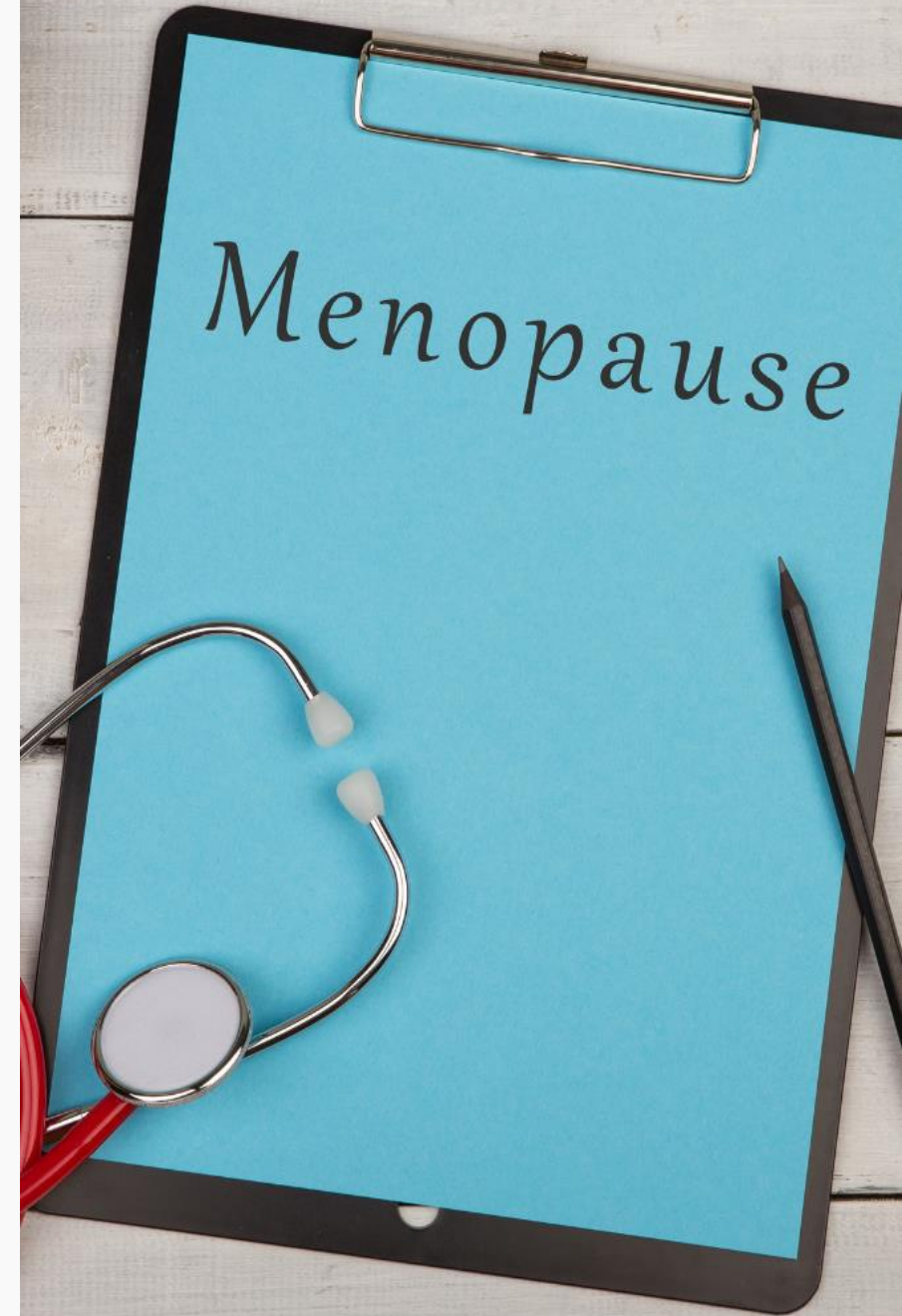
  4. How can menopause affect women with epilepsy?

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  5. Menopause management: treatments and lifestyle changes
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# What is the menopause?

- Meno–pause
- Natural/induced (surgical)
- Perimenopause
- Average age 51 years
- Range 45–55 years
- Early menopause
- Premature ovarian insufficiency (POI)



# History of the menopause

- 1900s
  - Age menopause = 51 years
  - Life expectancy = 59 years



# History of the menopause

## Now

- 30% of a woman's life is postmenopausal
- Leads to low oestradiol and testosterone levels
- Numerous health risks with menopause

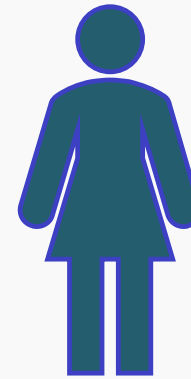
**'Female hormone deficiency with long term health risks'**



# Scale of the problem

**47 million**

women reach the  
menopause every year



Although **25%** suffer  
severe menopause symptoms

**77%** do not realise their  
symptoms are due to the  
menopause

**79%** had visited their GP about their symptoms

Of which, **7%** had to visit their GP more than

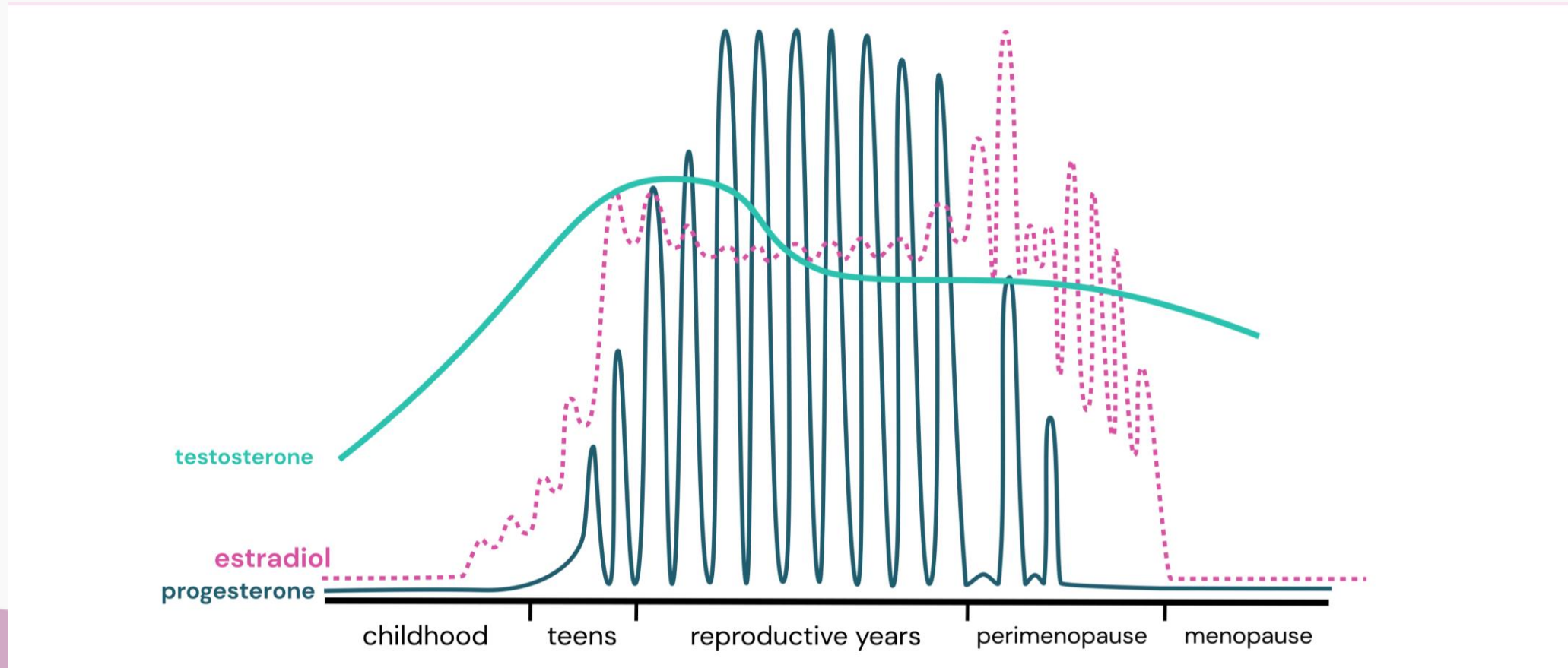
**10 times** before receiving adequate help or advice

**44%** of women who eventually received  
treatment had to wait for a year or more

**12%** had to wait more than 5 years



# Ovarian hormones through the lifespan







# The influence of oestrogen

## The influence of oestrogen

### Brain

- Anti-inflammatory
- Improves blood flow in brain
- Improves mood and reduces anxiety
- Helps with learning
- Body temperature control
- Improves memory and concentration
- Increases levels of other neurotransmitters including dopamine, serotonin, acetylcholine, noradrenaline, melatonin
- Improves sleep
- Increases connections between brain cells
- Improves energy

### Heart

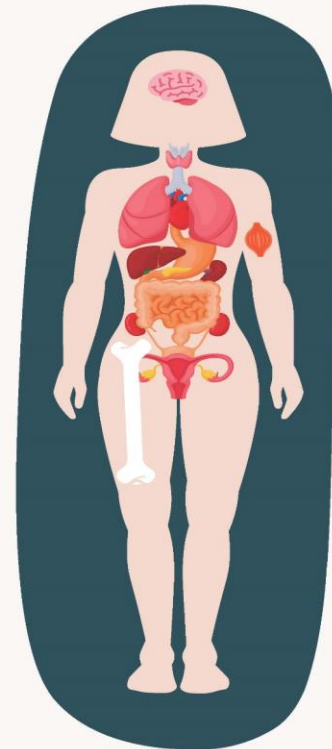
- Controls heart rate
- Keeps endothelium (cells lining interior surface of blood vessels) healthy
- Lowers blood pressure

### Liver

- Improves cholesterol regulation
- Improves glucose metabolism
- Increases breakdown of fat
- Improves liver function

### Skin

- Increases collagen production
- Reduces moisture loss
- Improves elasticity
- Increases blood supply to skin



### Bones

- Increases bone mineral density
- Reduces inflammation in joints
- Increases muscle strength
- Improves flexibility
- Lubricates joints

### Joints and muscles

- Anti-inflammatory
- Muscle strength and flexibility
- Joint lubrication

### Bowel

- Maintains function
- Maintains balance of friendly bacteria
- Reduces heartburn

### Nerves

- Improves nerve transmission

### Bladder

- Reduces risk of infection
- Improves bladder function

### Vagina/vulva

- Increases lubrication
- Maintains balance of friendly bacteria in vagina
- Keeps tissues healthy

# The influence of progesterone

## The Influence of progesterone

### Brain

Helps brain cells to communicate better, which helps improve mood, memory and brain health

Helps nerve functioning

### Breasts

Tempers the effect of oestrogen and reduces breast cysts

### Immune system

Reduces inflammation

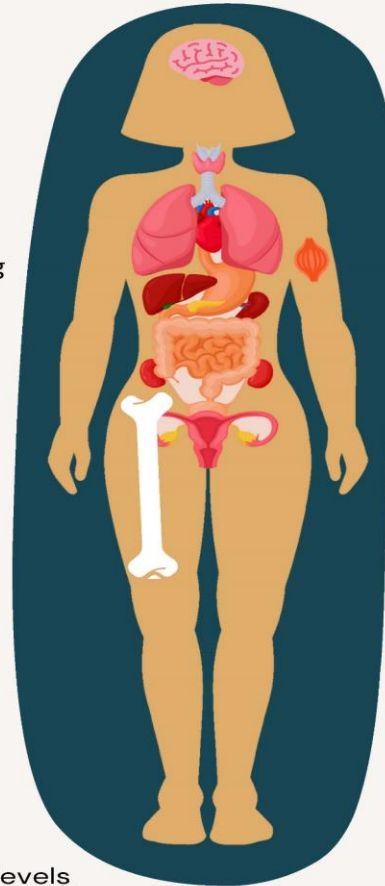
Lowers risk of autoimmune disease

### Bones

Builds bone

### Metabolism

Regulates blood sugar levels



### Psychological wellbeing

Promotes sleep

Relieves anxiety

Helps use fat for energy

### Muscles

Stimulates growth of new muscle

Reduces muscle spasm

### Reproductive/sexual function

Regulates menstruation

Supports pregnancy

Reduces bleeding

# The influence of testosterone

## The influence of testosterone

### Eye health

Improves meibomian gland function and lubrication

Reduces dry eyes

### Cardiovascular health

Lowers triglyceride and cholesterol

Improves cardiac capacity and output – makes your heart stronger and more efficient

Improves endothelial function – helps the lining of your blood vessels work better, increasing blood flow

### Circulation

Red blood cell production

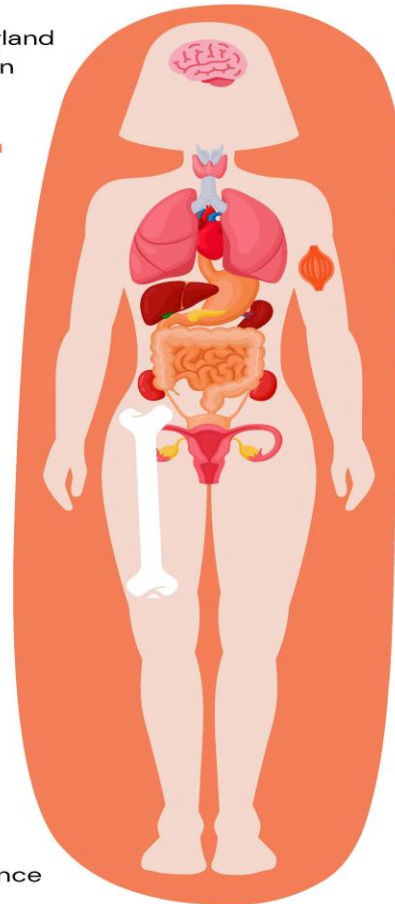
### Reproductive and sexual function

Libido, arousal and orgasm

Urogenital health

Improves urinary symptoms including urgency and incontinence

Reduces symptoms related to vaginal dryness and soreness



### Brain function

Improves concentration

Improves memory, verbal learning and spatial abilities

Sleep quality improves

### Mood

Psychological wellbeing

Improves energy

### Muscle

Improves muscle mass and strength

### Metabolism

Maintains normal metabolic function (blood pressure, lipids, glucose metabolism)

### Bone health

Increased bone mineral density

### Bladder

Reduces risk of infection

Improves bladder function

### Vagina/vulva

Increases lubrication

Keeps tissues healthy

# Common symptoms of perimenopause and menopause

- Most people associate menopause with **hot flushes** and **night sweats**.
- But **psychological** symptoms are common.
- Can throw up some **surprising** symptoms too...

Top 20 symptoms
Brain fog
Anxiety
Low libido
Memory problems
Low mood or depression
Joint pain
Tired or low energy
Difficulty sleeping
Hot flushes
Weight gain
Headaches
Bloating
Low motivation
Night sweats
Irritability
Difficulty concentrating
Mood swings
Feeling tense
Lack of interest in things
Feeling nervous

# Psychological symptoms of the menopause

- Anxiety
- Irritability
- Panic attacks
- Feeling low
- Mood swings
- Feeling frustrated
- Tearful
- Loss of self-esteem
- Loss of self-confidence



# Surprising symptoms

- Dry or burning mouth
- Dry eyes
- Tinnitus
- Joint swelling
- Palpitations
- Shortness of breath
- Internal tremors
- Heartburn
- Thinning hair/hair loss



# Risks to health with menopause

- Bone loss
- Osteoporosis
- Type 2 diabetes
- Obesity
- Cognitive decline and early dementia
- Clinical depression, psychosis, suicide
- Heart disease





# How might **epilepsy** be affected by menopause?

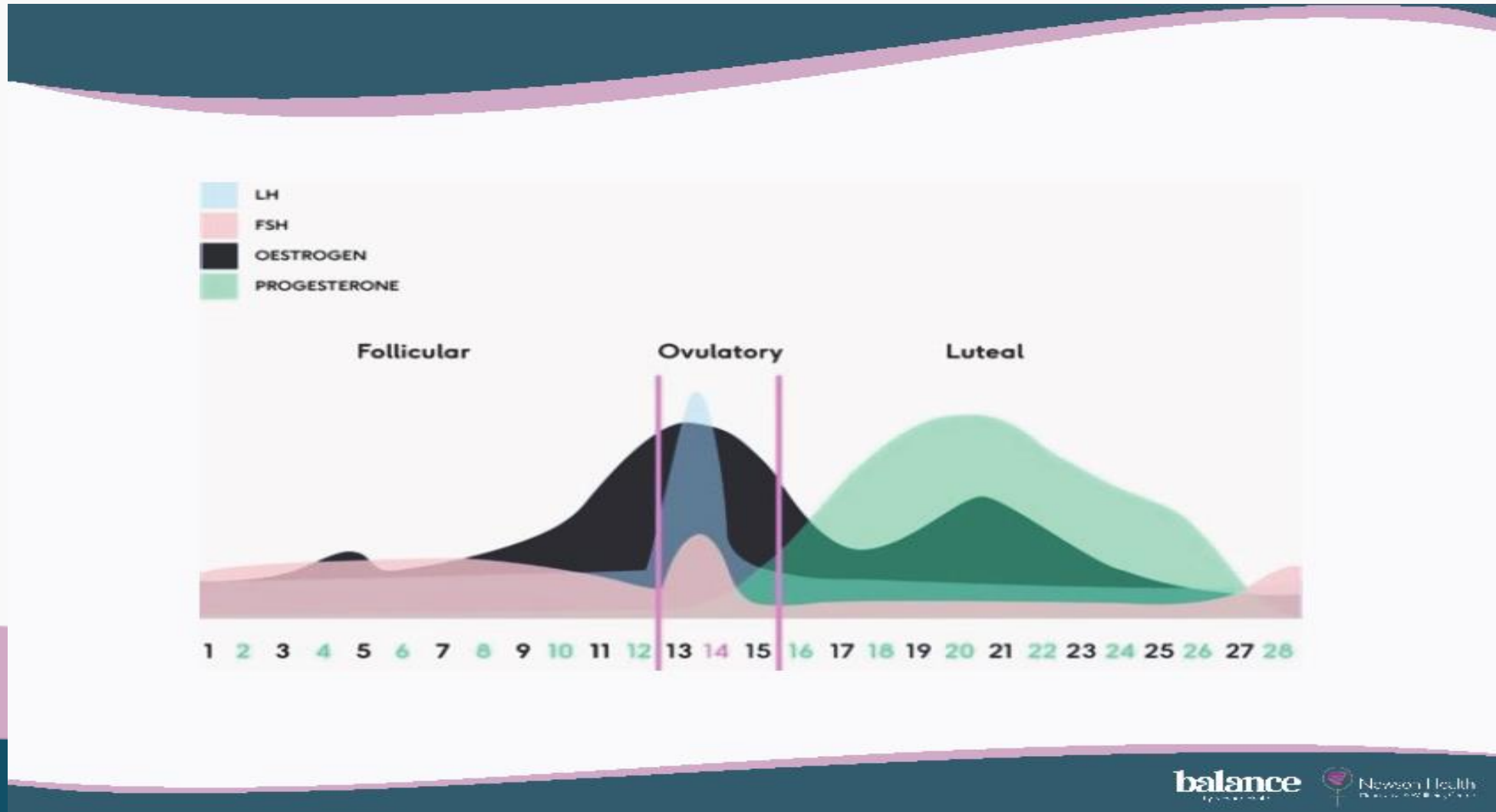
- Potential change in **seizure pattern** – more or fewer
- Menopause symptoms such as **night sweats, disturbed sleep, anxiety, low mood** could also affect seizure control
- Some studies suggest frequent seizures can be linked with earlier menopause

Harden C.L. et al. (2003), Klein P. et al. (2001)





# Menstrual Cycle





# Catamenial (or cyclical) epilepsy

- **1 in 3** women with epilepsy are affected by catamenial epilepsy (or cyclical epilepsy)
- Often women will have fewer seizures in **the mid-luteal phase** (second half) of their menstrual cycle due to **higher levels of progesterone**
- Increased seizures may be seen in the **follicular phase** of the menstrual cycle (first half of the cycle), coinciding with **higher oestrogen levels**
- Those with catamenial epilepsy may experience an increase in seizures during the perimenopause and menopause due to fluctuating hormones, and may have fewer seizures after menopause

Epilepsy Research UK (2022), 'Women's Health Strategy: what it means for women with epilepsy', Harden, C.L. et al (1999)

# Case Study

- 42-year-old lady
- Perimenopause aged 40
- Many perimenopausal symptoms
- Increase in seizures due to fluctuating hormones
- Started HRT aged 44
- Feels back to her normal self, has energy, focus, more alive

# HRT and other treatments

# What is HRT?

- Hormone replacement therapy is the **first line** treatment.
- HRT relieves symptoms by replacing hormones.
- Benefits for long term health.

NICE ng23 (2015)



# Who takes HRT?

- 75% women say they don't know enough about HRT to make an informed choice
- 2000 around 26% took HRT
- 2022 around 14% women take HRT
- Women and healthcare professionals are worried about perceived risks



## Data from Newson Health clinics

Number of patients seen from Nov to date	19398
Number of patients who have Epilepsy recorded as medical history in Semble	20
Number of patients who entered Epilepsy in their questionnaire	18
Number of patients ON HRT	35
Number of patients NOT on HRT	3
Total number of patients	38
% of Total	0.20

# Benefits of HRT

- **Improves** symptoms and quality of life
- **Reduces** risk of:
  - Osteoporosis
  - Diabetes
  - Heart disease
  - Osteoarthritis
  - Dementia in younger women
  - Depression
  - All cause mortality





Newson Health

# HRT comes in different forms

- Not a 'one size fits all'
- Numerous different preparations
- Oestrogen/progesterone/testosterone
- Pills/patches/gels/creams/spray



# NICE/IMS/ESHRE guidelines

**NICE** National Institute for Health and Care Excellence

**NICE**  
guideline

## Menopause: diagnosis and management

NICE guideline  
Published: 12 November 2015  
[www.nice.org.uk/guidance/ng23](http://www.nice.org.uk/guidance/ng23)



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International **IMS**  
Menopause Society

## IMS Recommendations on women's midlife health and menopause hormone therapy (MHT)

The IMS Writing Group

2018 IMS Recommendations. *Climacteric*: 2018;19:109-150



## Management of women with premature ovarian insufficiency

Guideline of the European Society of Human Reproduction and Embryology

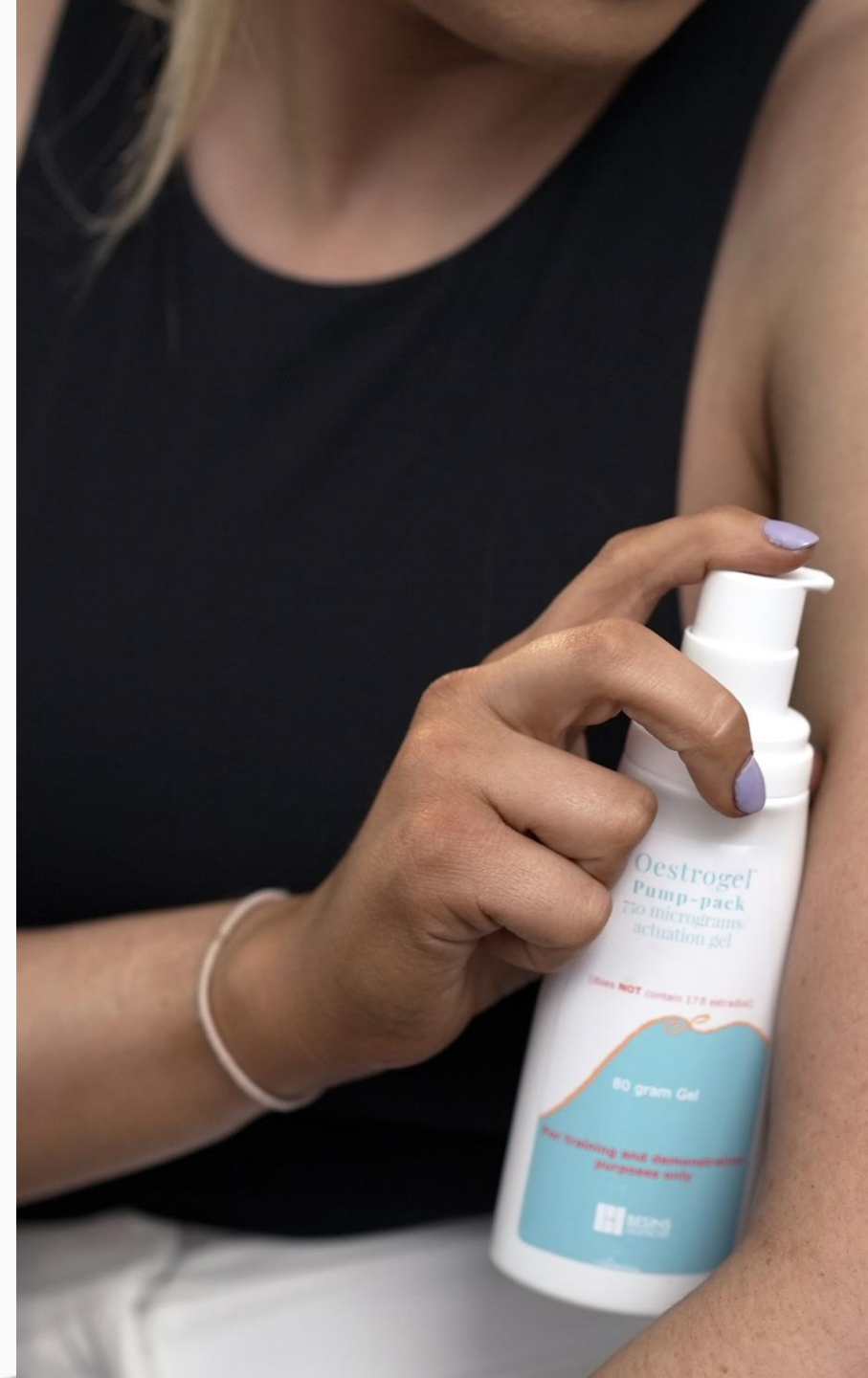
POI Guideline Development Group  
December 2015

# Summary of guidelines

- Individualised care
- Young women need to have hormones at least until 51 years
- For the majority of women, the benefits of HRT outweigh any risks
- There is no maximum length of time for taking HRT

# So why are so few women taking HRT?

- Women are worried
- Healthcare professionals are worried
- Can be even more complex for women with epilepsy as we have already discussed





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Holiday tragedy: Rebecca Morris, 40, with her wife, Carly Eaton, died from a suspected heart attack after reading her daughter Ruby, nine, from rough seas off the Costa del Sol, the hotel her aunt as strong currents pushed them overboard. Page 11

**HRT can triple risk of breast cancer**

By Sarah Knapp, Health Editor

Hormone replacement therapy can triple the chance of breast cancer, making it more than twice as risky as previously thought, according to the most accurate estimate yet.

A British study of 52,000 women must be told the true risk of HRT before they decide whether to undergo the treatment, researchers said.

— the biggest of its kind to date — scientists concluded that taking combined oestrogen and progestogen HRT raised the risk of breast cancer. HRT

patients were 210 per cent more likely to get the disease compared with previous estimates that the risk rose by about 10 per cent. The chance increased the longer women took HRT, with those using it for 15 years 3 times more likely to develop breast cancer.

The findings, in the British Journal of Cancer, suggest that although 14 out of every 1,000 women will ordinarily develop the disease in their early 50s, the number would rise to 34 if they all took combined HRT. This is an increase of 240 per cent, according to Breast Cancer Now, which helped to fund the study.

The National Institute for Health and Care Excellence (NICE) said yesterday that it may have to change its advice to women going to the menopause. HRT has long been thought to help hot flashes, low mood and other patients are also likely to be taking hormone therapy as periods stop. In the most effective treatment but could be a decade ago after studies showed the risk of breast cancer had increased. NICE said that women were still in silence.

Continued on page 2

levels. For the well- and higher educated, the gender wage gap is essentially the same as for less educated women.

“The gender pay gap is a reflection of the fact that women are not doing all in the past 20 years,” said Robert Joyce, now late director of the IFS and now the report’s author.

“The reduction in the overall gender wage gap has been the result of more women becoming highly educated, and a decline in the wage gap among the lower educated.”

The IFS’s research also highlighted that the wage gap after childhood is associated with working fewer hours. Women do not

**Combined HRT triples risk of breast cancer, study shows**

By Sarah Knapp, Health Editor

Women who rely on the most commonly used form of hormone replacement therapy are actually three times more likely to develop breast cancer, according to a study that says the risk has been previously underestimated.

Those using the combined HRT therapy, a combination of oestrogen and a progestogen, were found to have a 210 per cent greater risk of breast cancer than those taking oestrogen alone, according to a study published today by scientists at the Institute of Cancer Research.

Previous investigations may have underestimated the increased risk by as much as 100, the study added.

Anthony Swerdlow, professor of epidemiology at the Institute, said: “What we found is that the risks with combined HRT are higher than those of the hormone therapy alone.”

The study leaders added that HRT was not a medical choice, but one for which women often felt no control.

An estimated one in 10 women in their 50s use HRT, which can be taken in tablet form, as a skin patch, pills and implants, to deal with vasomotor symptoms such as hot flashes, night sweats, insomnia, mood swings and tiredness. The treatment is effective but controversial because studies published in 2002 and 2005 also suggested there was a link with breast cancer and an elevated risk of heart disease and stroke.

In November, the NICE watchdog, the National Institute for Health and Care Research, sought to reassure women about the safety of the treatment, which is recommended to be given for up to five years.

Most women take combined HRT because taking oestrogen alone can increase the risk of heart disease, and taking progestogen alongside oestrogen helps to minimise this risk. HRT using oestrogen alone is usually recommended for women who have had a hysterectomy.

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**THE DAILY TELEGRAPH**

European lead

**HRT triples risk of cancer**

Chances of disease found to increase the longer women take hormone treatment

By Sarah Knapp, Health Editor

HORMONE replacement therapy can triple the risk of breast cancer, the

Swerdlow, professor of epidemiology at the Institute of Cancer Research in London. “We found that combined HRT increases the risk of breast cancer by up to threefold, compared with hormone therapy alone.”

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**they have achieved**

“The women who have achieved this have been following the same path as the men, but they have been doing it in a different way.”

“The women who have achieved this have been following the same path as the men, but they have been doing it in a different way.”

“The women who have achieved this have been following the same path as the men, but they have been doing it in a different way.”

**BOLT BEDS CRIME GIRL**

By ANNABEL HOWARD

HEALTH experts may have “seriously” underestimated the breast cancer risk in women on hormone replacement therapy, a study shows.

It found those taking oestrogen plus progestogen HRT were 210 times more likely to develop the disease.

And those who had been using the combined HRT for 15 or more years had a 317 times increased risk.

Further research is needed.

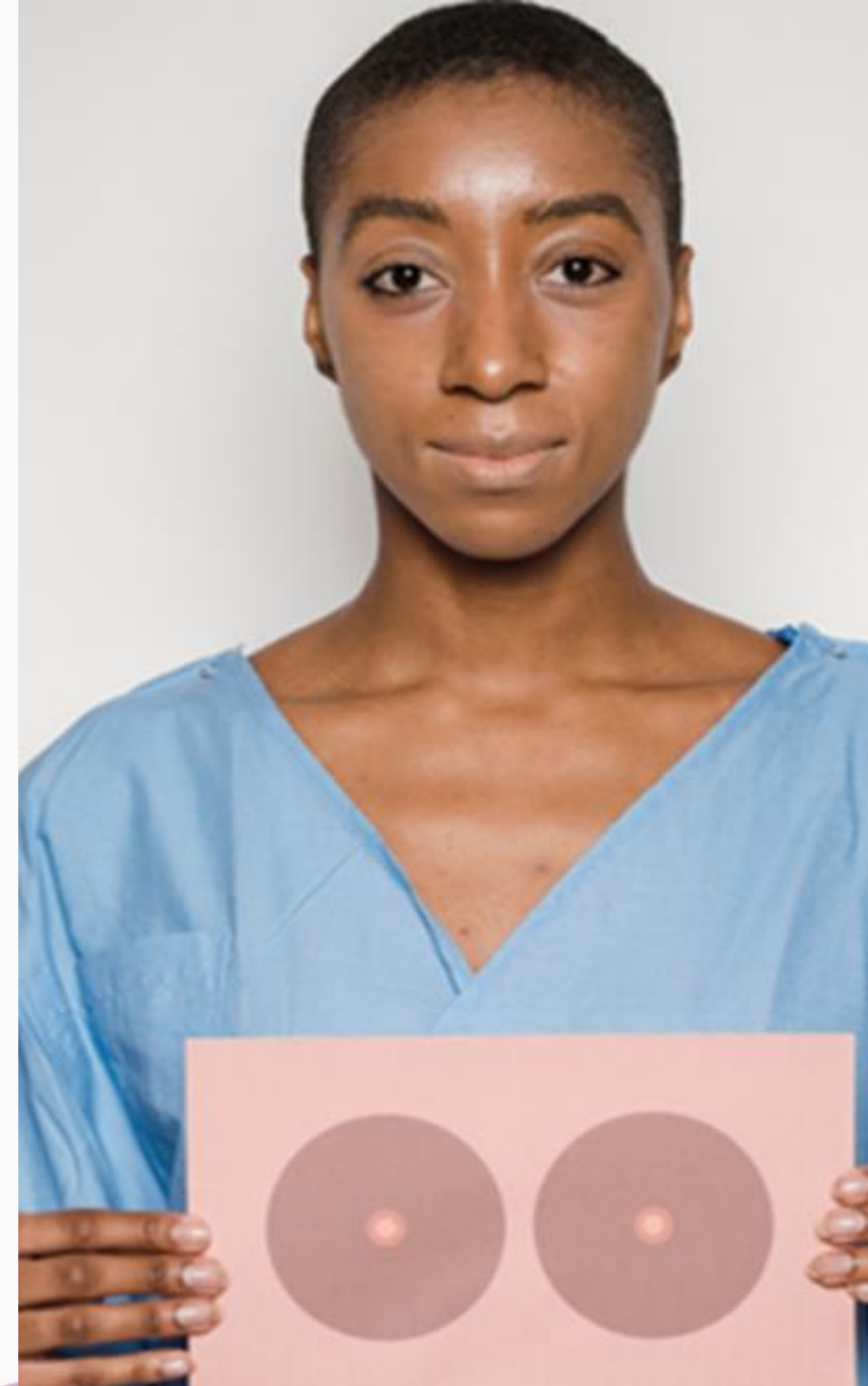
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**COPI**

**Just 1**

# Breast cancer and HRT

- No increased risk of breast cancer in women who are young
- Lower risk of breast cancer in women who only take oestrogen
- Not all progestogens have the same risk
- Any risk is associated with the older progestogens
- But this risk is very LOW



# Clot risk of HRT

- No clot risk if oestrogen given through the skin as a patch, gel or spray
- Micronised progesterone is not associated with an increased risk of blood clot



# Can women with epilepsy take HRT?

For most individuals, the benefits of taking HRT outweigh any risks – important to have an **individualised conversation** with a patient about the right treatment approach for **them**



# Consider risk of osteoporosis

- Estimated three million people in the UK
- More common in women, especially after the menopause – oestrogen helps to protect the bones and maintain bone density
- High-dose use of certain ASMs can also increase the risk of osteopenia, osteoporosis and increased fractures
- Vitamin D helps the body absorb calcium: NICE recommends all adults taking enzyme-inducing AEDs have their vitamin D levels checked every two to five years
- As well as easing menopause symptoms, HRT can protect bones from weakening due to lack of oestrogen and reduce the risk of fragility fractures as well as reduce future risk of developing osteoporosis

Svedbom A. et al. (2013)



# Lifestyle changes

- Diet
- Exercise
- Stop smoking
- Reduce alcohol
- Calcium and vitamin D



# Alternatives to HRT: what you need to know

- **Prescription medication** – Antidepressants, Gabapentin/Pregabalin Clonidine, Oxybutynin can help to decrease hot flushes and night sweats
- **CBT/hypnotherapy** – can improve anxiety and hot flushes
- **Herbs** – not regulated? Safety and lack of evidence
- **Over the counter/internet (no evidence and unregulated)**
  - Black cohosh
  - Red clover
  - Ginkgo biloba
  - St John's wort
  - 'Natural' progesterone creams
  - Non-regulated Bio-identical hormones

# Take home messages

- The menopause is more than just hot flushes.
- Low hormone levels cannot be replaced without taking HRT.
- HRT provides more benefits than risks for most women.
- Women should receive individualised advice.
- Be mindful of psychosocial stressors, impact of poor sleep, weight loss or weight maintenance, looking at diet and movement.



# Balance resource for patients on epilepsy and the perimenopause and menopause



Menopause Library ▾

Get the App ▾

About balance ▾

## Epilepsy and the perimenopause and menopause





# Resources and further support

## The balance app



## Newson Health



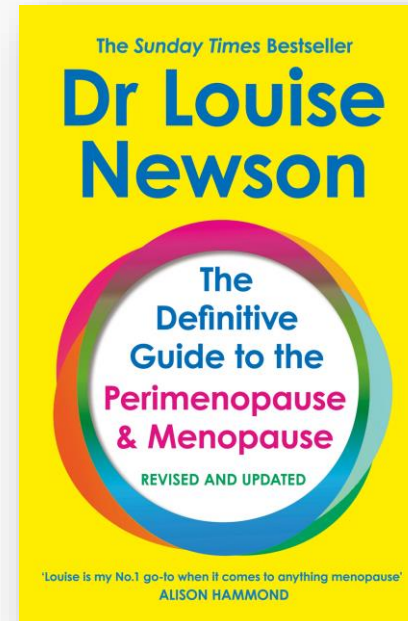


# Resources and further support

Confidence in the Menopause  
online education programme



The Definitive Guide to the  
Perimenopause and Menopause



# Questions?