



Newson Health

balance

The role of female hormones and mental health

Dr Louise Newson BSc(Hons) MBChB(Hons) MRCGP FRCGP



Declarations

- No financial conflicts
- Director of Newson Health
- Director of Newson Health Research and Education (not-for-profit)
- Founder of Newson Health Menopause Society
- Director of Balance Ltd – free **balance** menopause app
- Founder of The Menopause Charity
- Member of the UK Government Menopause Taskforce
- Visiting Fellow of Murray Edwards College, Cambridge University
- **I take HRT...**

Stratford-upon-Avon



Previous experience of menopause care

16%

stated that they had been refused HRT by their GP

38%

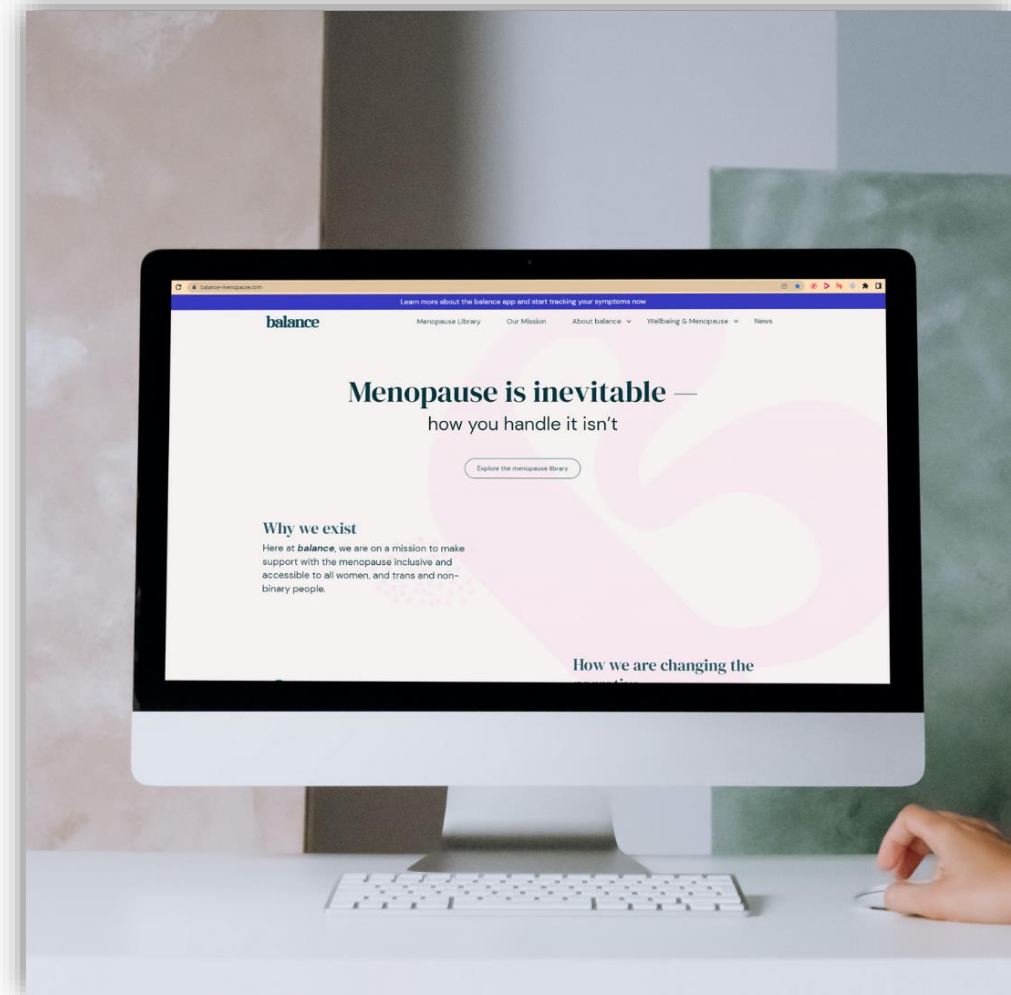
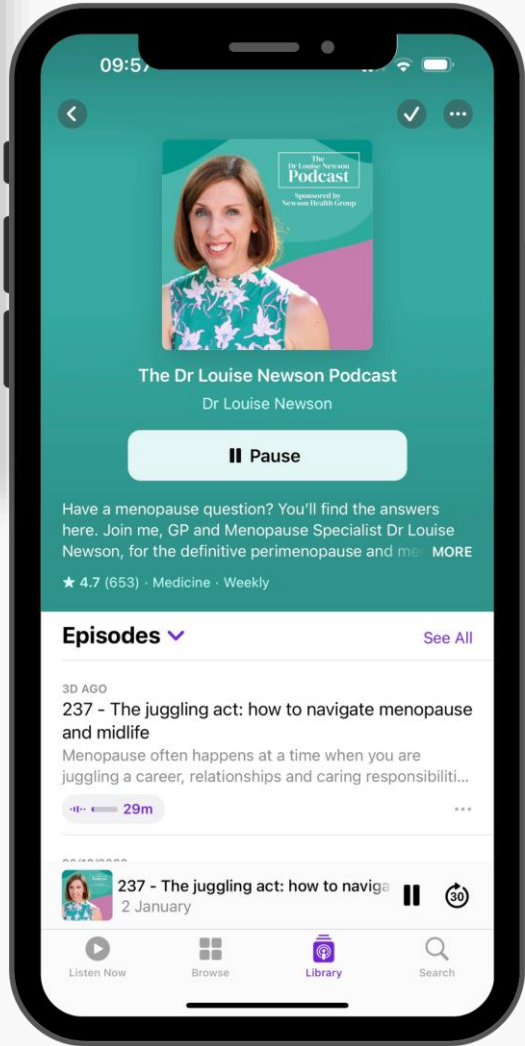
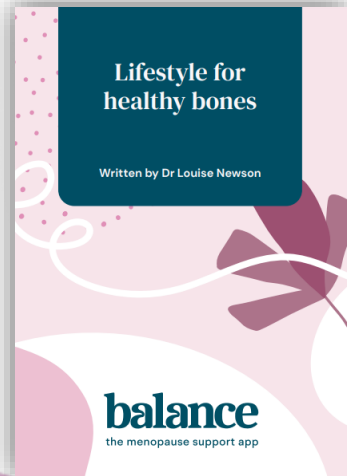
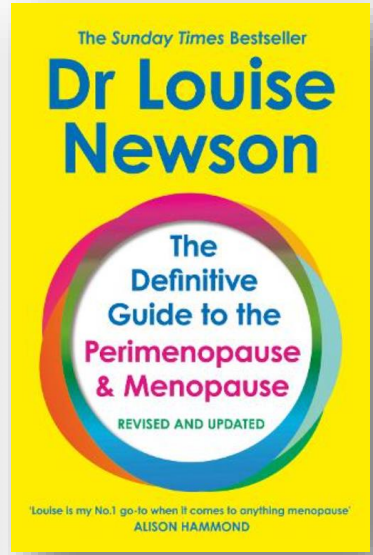
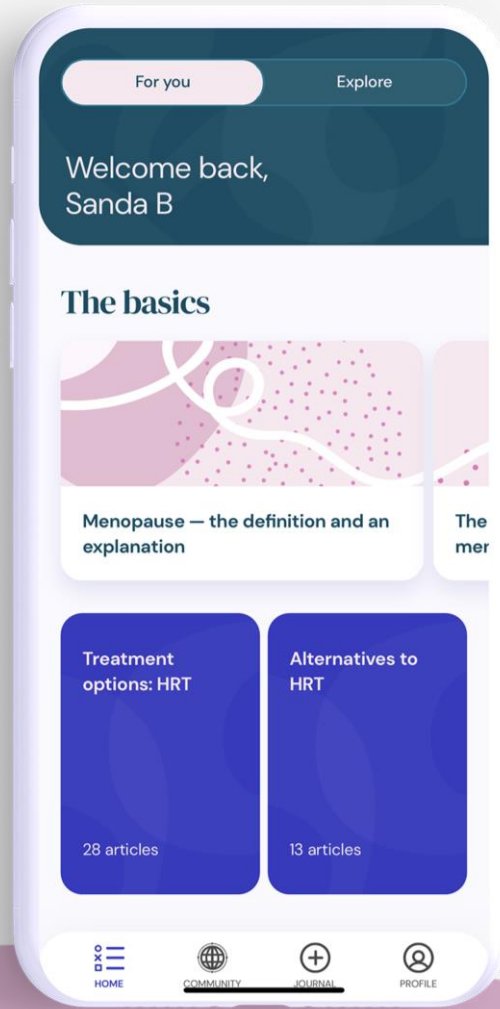
already taking HRT

32%

had been offered antidepressants

Newson Health is more than just a clinic

- Clinic
- Balance app
- Education
- Research
- Outreach work
- Media
- Social media
- Podcast



Been through Breast Cancer
Did someone mention menopause?



A GUIDE TO ALL THINGS MENOPAUSE
IF YOU'VE HAD BREAST CANCER

A GUIDE TO
MENOPAUSE
FOR WOMEN
LIVING WITH HIV



WE ARE HERE
still
OLDER WOMEN WITH HIV

Cancer treatment
Did someone mention menopause?



A YOUNG WOMAN'S GUIDE
TO MENOPAUSE
AFTER TREATMENT FOR CANCER

HRT for those with
high inherited
risk of cancer

Written by Dr Louise Newson
& Ovarian Cancer Action

ovarian
cancer action

balance

the menopause support app

All about the
perimenopause
and menopause

Easy read



balance
by Newson Health

Produced in association with
dimensions

balance
the menopause support app



ADHD and
the perimenopause
and menopause

Mental health and
emotional wellbeing
in the perimenopause
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balance

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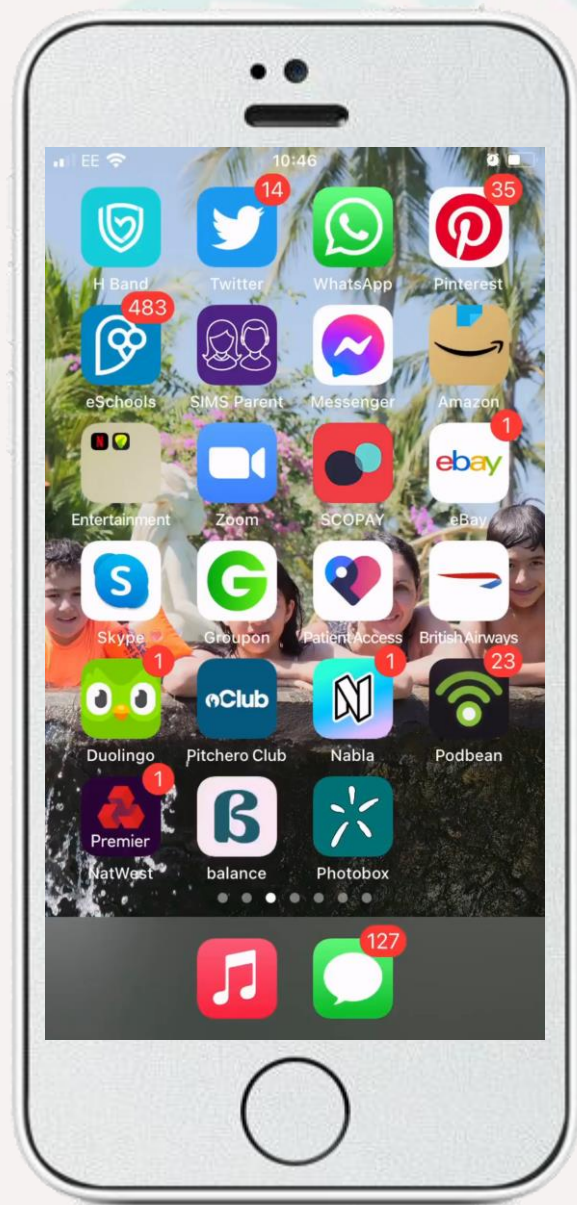
balance

MENOPAUSE
AND
PERINEAL
TEARS

Newson Health

MASIC
Mothers with Anal Sphincter Injuries & Children

Leigh Day



Free balance app

- The basics on perimenopause and menopause
- Journal insights
- Expert articles
- Log symptoms regularly

balance



Case Study – Laura

- Now aged 42
- Past 3 years:
 - Poor sleep
 - Anxiety
 - Low mood
 - More argumentative
 - Self harming
 - Memory problems
 - Not wanting to socialise





Case Study – Laura

- Diagnosed with depression
- Given sertraline
 - Not improve her mood
- Mirtazepine added
 - Sleep slightly better
- Anxiety and low mood gradually worsened
- Prescribed quetiapine



Case Study – Laura

- Worsening migraines and headaches
- Memory awful
- Constantly tired
- No self-motivation
- Muscle and joint pains
- Recurrent urinary tract infections
- Some incontinence at times



Case Study – Laura

- Given painkillers / strong medication for her migraines
- Numerous antibiotics
- Referred to hospital for numerous tests
 - Brain scan
 - Heart investigations
 - X-rays
 - Bladder scans

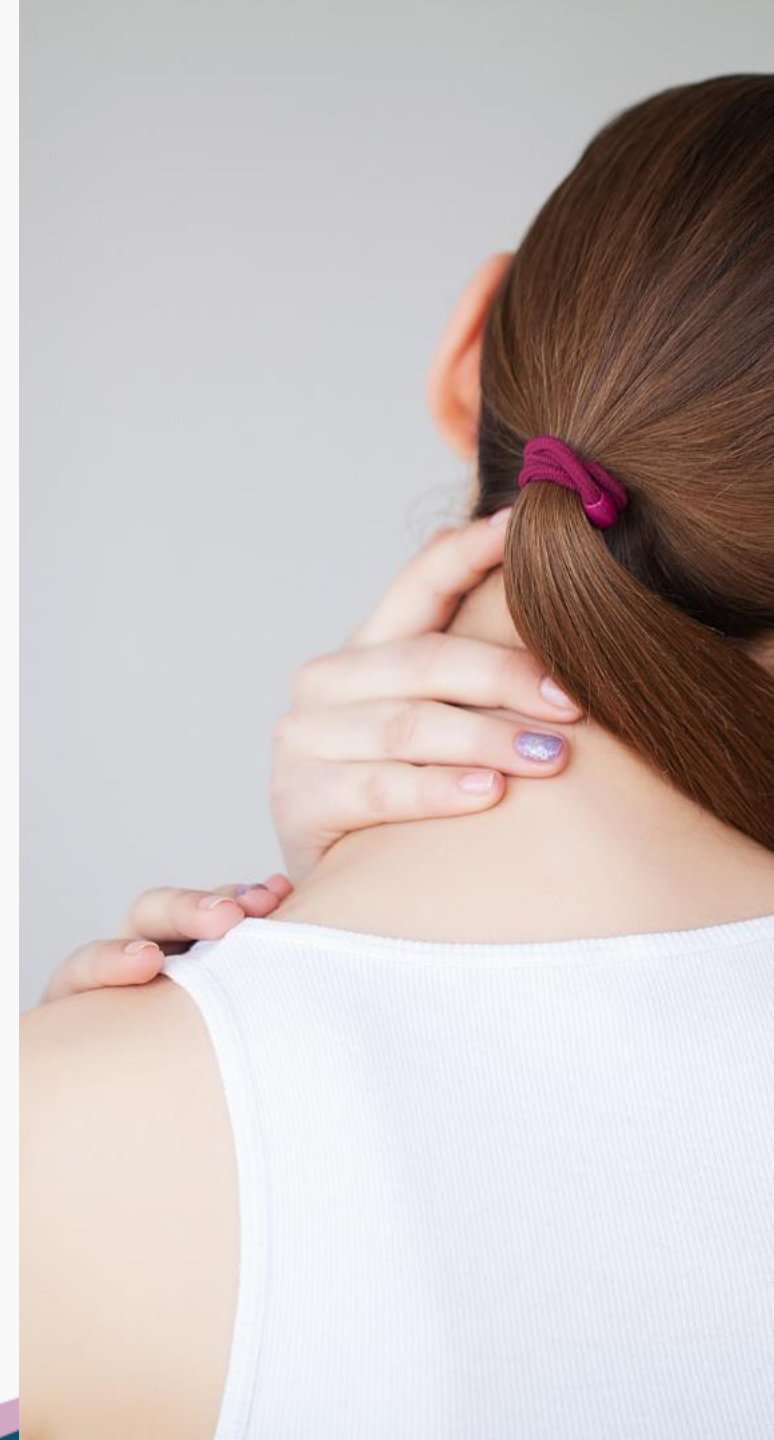




Case Study – Laura

All tests normal

- Starting drinking more alcohol
- *“I feel that I am now addicted to painkillers because of my symptoms – I use them to help with pain but also to reduce my stress, anxiety and insomnia”*



Laura – What is her diagnosis?



Perimenopause

+/- Clinical depression



What should or could have been prescribed for Laura?

NICE / IMS / ESHRE Guidelines



NICE National Institute for
Health and Care Excellence



Menopause: diagnosis and management

NICE guideline
Published: 12 November 2015
Last updated: 5 December 2019

www.nice.org.uk/guidance/ng23

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International Menopause Society

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

The IMS Writing Group

UNIVERSITY OF SYDNEY

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

eshre
SCIENCE MOVING
PEOPLE
MOVING SCIENCE

Management of women with premature ovarian insufficiency

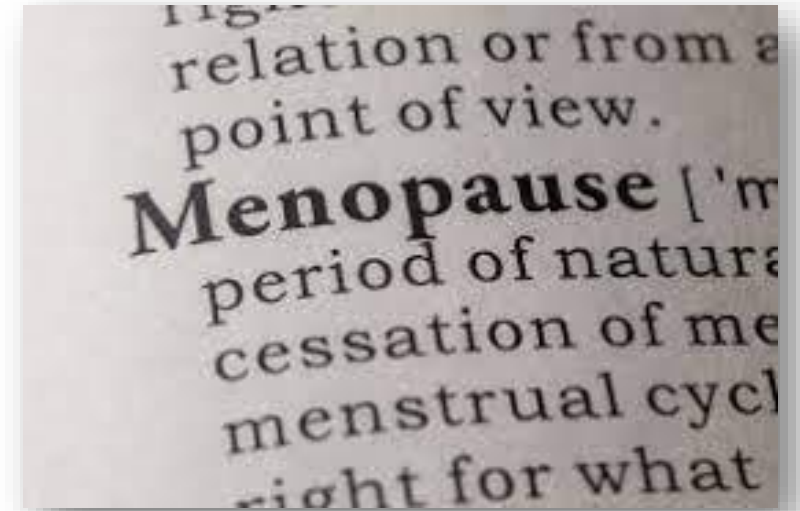
Guideline of the European Society of Human
Reproduction and Embryology

POI Guideline Development Group
December 2015



What is the definition of menopause?

- One year since last menstrual period
- End of a woman's reproductive age
- Consider PMS / PMDD / Perimenopause
- **When levels of oestrogen (oestradiol), progesterone and testosterone decline**



"Women's Hormone Insufficiency (WHI)"

The problem



of women affected globally





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

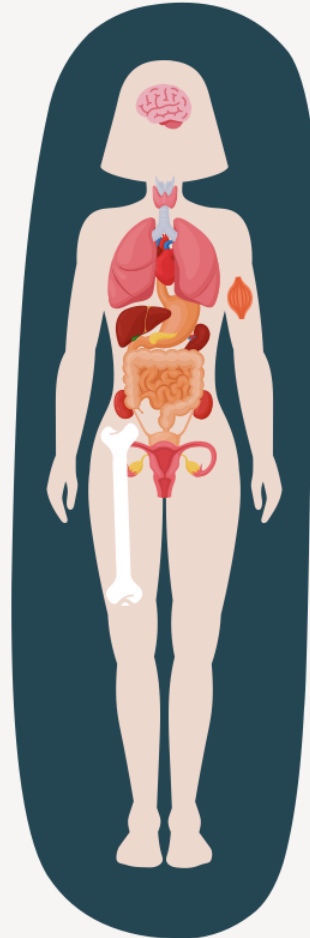
- Controls heart rate
- Keeps endothelium (cells lining interior surface of blood vessels) healthy
- Lowers blood pressure

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



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by Newson Health

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



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

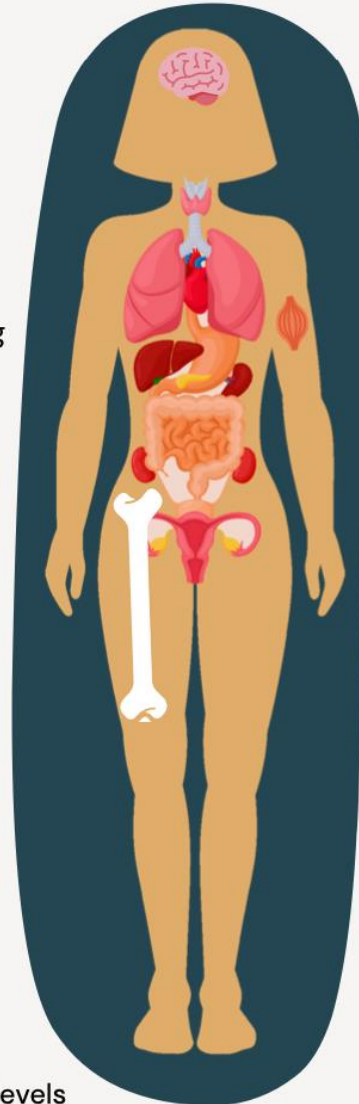
Reduces inflammation
Lowers risk of autoimmune disease

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

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

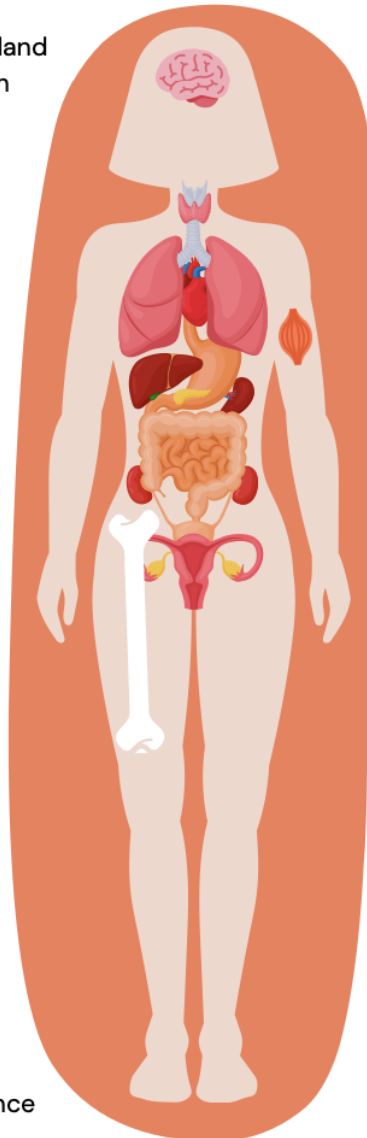
Reproductive and sexual function

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

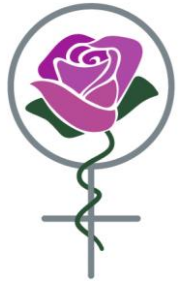
Improves bladder function

Vagina/vulva

Increases lubrication

Keeps tissues healthy

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How do we diagnose perimenopause and menopause?

Hormone blood tests are not helpful





Women often make the diagnosis when they have the right information

Download the balance Health Report[©]

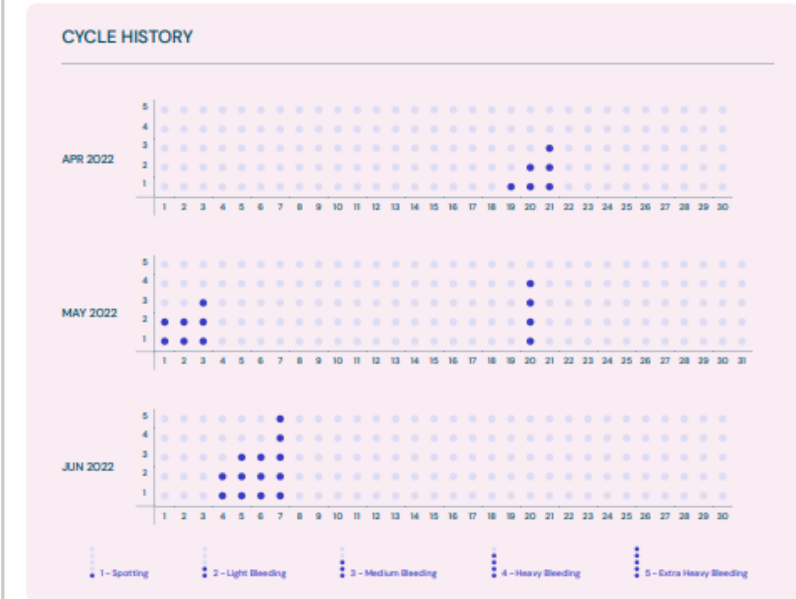


balance HEALTH REPORT DATE
10 June 2022

Sandra D.O.B
27 July 1966

Age
55

GENERAL INFO	MEDICATION	
BMI 22.1 kg/m2	ALCOHOL Occasionally	CONTRACEPTION Oral pill (combined)
PROCEDURES I've had one ovary removed	HRT Progesterone tablets - other	
HEALTH CONDITIONS Migraine	OTHER Warfarin	



BALANCE MENOPAUSE SYMPTOM QUESTIONNAIRE[©]

PHYSICAL	FEB 2022	MAR 2022	JUN 2022
Heart beating quickly or strongly	●●●●●	●●●●●	●●●●●
Feeling tired or lacking energy	●●●●●	●●●●●	●●●●●
Feeling dizzy or faint	●●●●●	●●●●●	●●●●●
Pressure or tightness in your head	●●●●●	●●●●●	●●●●●
Tinnitus (Ringing/Buzzing in the ear)	●●●●●	●●●●●	●●●●●
Headaches	●●●●●	●●●●●	●●●●●
Muscle and joint pain	●●●●●	●●●●●	●●●●●
Pins and needles in the body	●●●●●	●●●●●	●●●●●
Breathing difficulties	●●●●●	●●●●●	●●●●●
Symptoms due to vaginal dryness	●●●●●	●●●●●	●●●●●
Urinary symptoms	●●●●●	●●●●●	●●●●●

PSYCHOLOGICAL	FEB 2022	MAR 2022	JUN 2022
Feeling tense or nervous	●●●●●	●●●●●	●●●●●
Difficulty sleeping	●●●●●	●●●●●	●●●●●
Memory problems	●●●●●	●●●●●	●●●●●
Attacks of anxiety or panic	●●●●●	●●●●●	●●●●●
Difficulty concentrating	●●●●●	●●●●●	●●●●●
Loss of interest in most things	●●●●●	●●●●●	●●●●●
Feeling unhappy or depressed	●●●●●	●●●●●	●●●●●
Crying spells	●●●●●	●●●●●	●●●●●
Irritability	●●●●●	●●●●●	●●●●●
Loss of interest in sex	●●●●●	●●●●●	●●●●●

VASOMOTOR	FEB 2022	MAR 2022	JUN 2022
Hot flashes	●●●●●	●●●●●	●●●●●
Sweating at night	●●●●●	●●●●●	●●●●●

●●●●● Not at all
●●●●● A little
●●●●● Quite a bit
●●●●● Extremely

KEY SYMPTOMS

PHYSICAL Feeling tired or lacking energy

PSYCHOLOGICAL Difficulty sleeping
Attacks of anxiety or panic
Loss of interest in most things

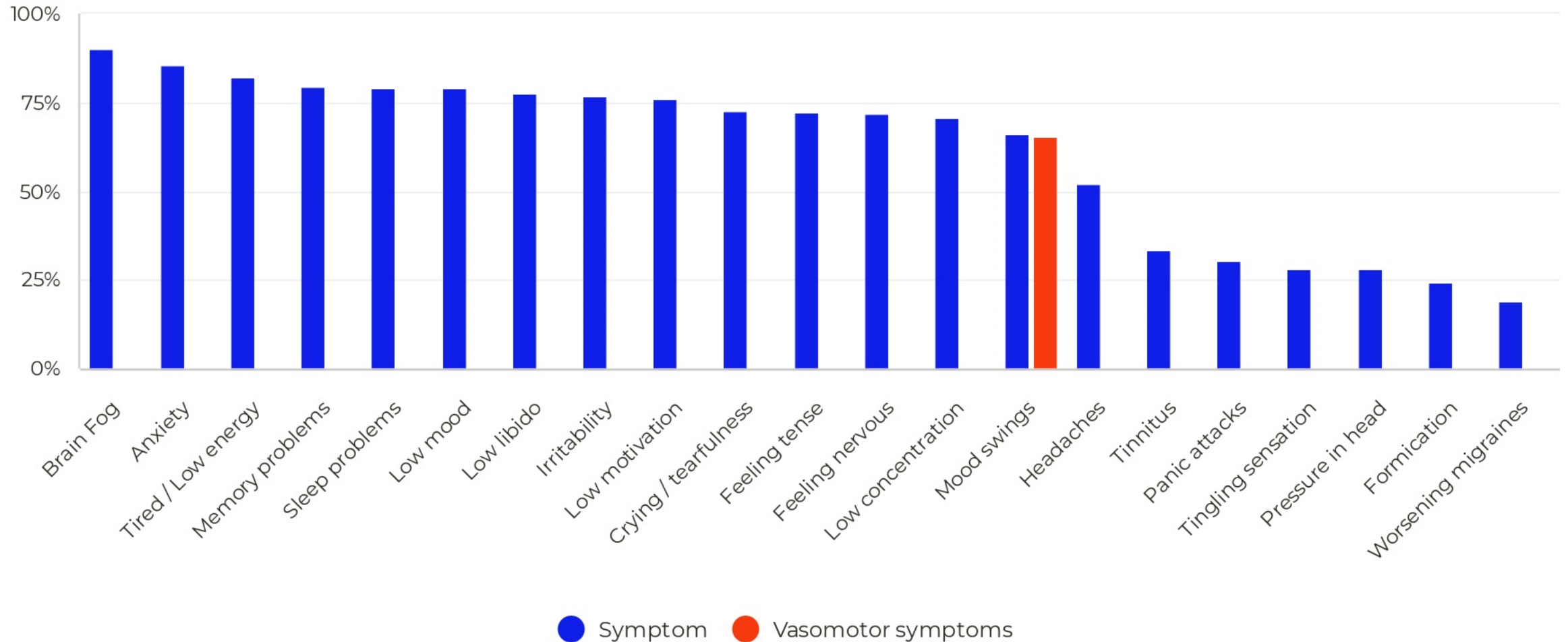
VASOMOTOR Sweating at night

PATIENT NOTES



What are the symptoms of perimenopause and menopause?

Symptoms affecting brain / nervous system



Quotes from women



I don't know who
I am anymore

This is just not like
me

I feel like I have
lost myself

I feel like a dead
person who is just
existing

I can't live like
this anymore

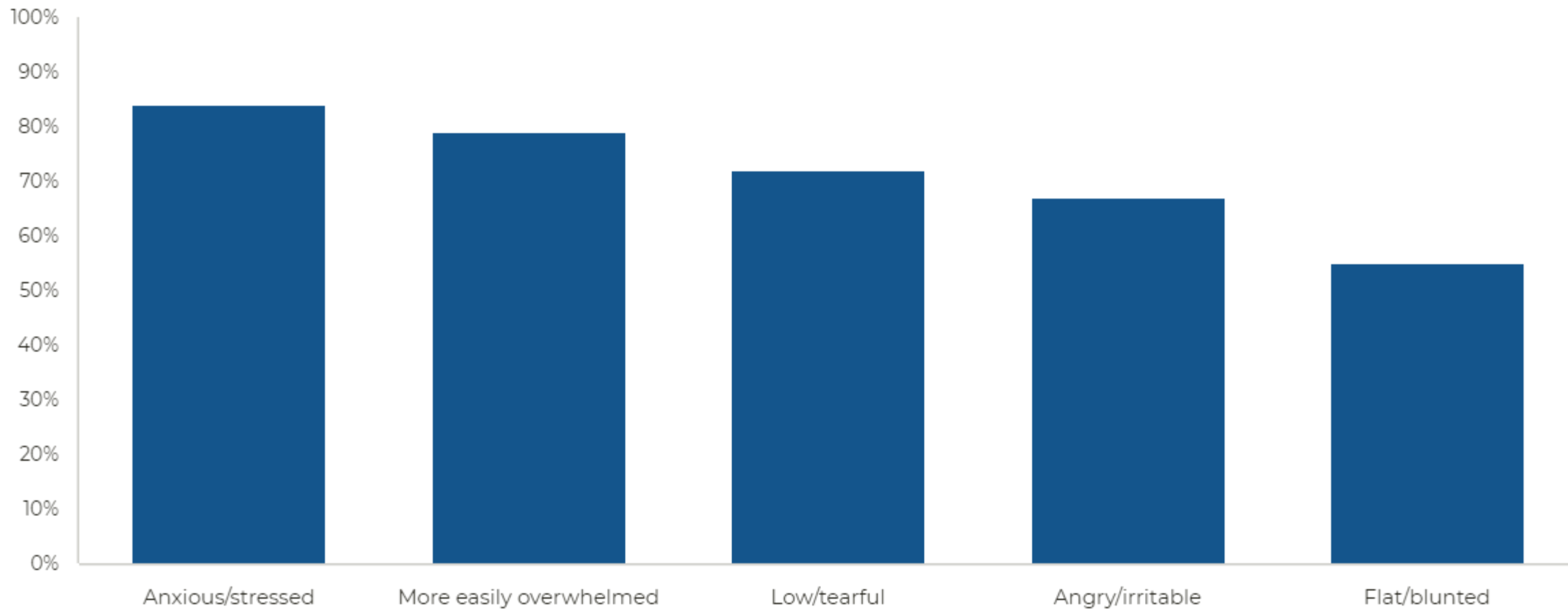
I feel like a
black fog is
hanging
over me all
the time

I don't like who I
have become

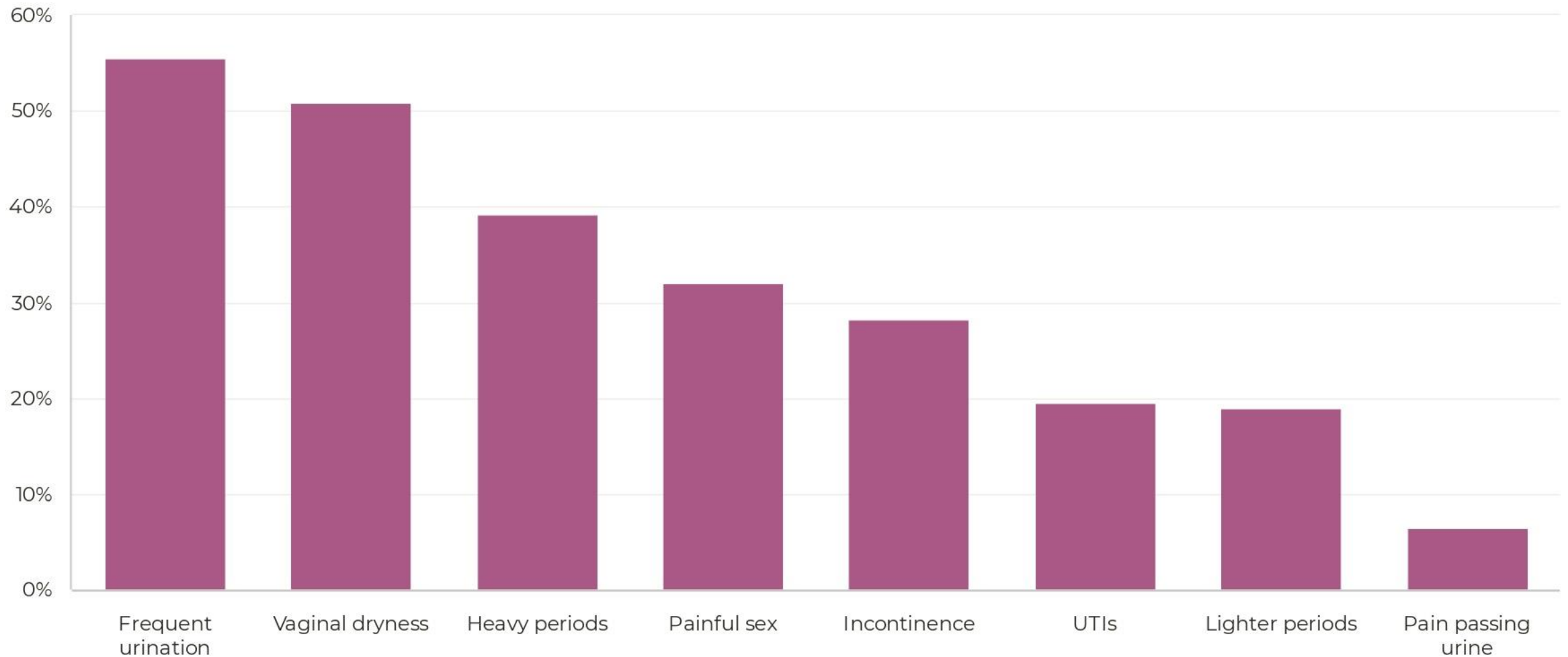


Mental Health

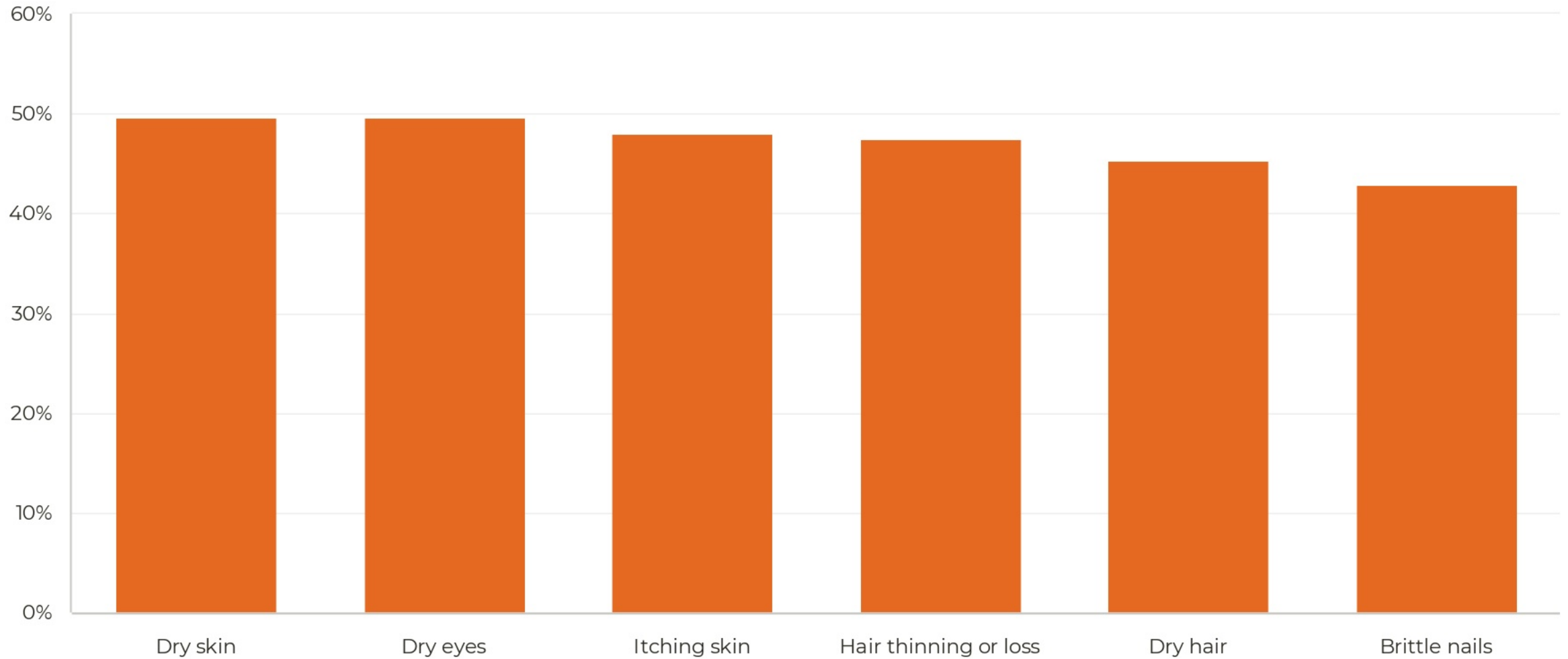
Change in mood and emotions



Symptoms affecting genitourinary system



Symptoms affecting skin, hair and nails



Oestradiol and female brain

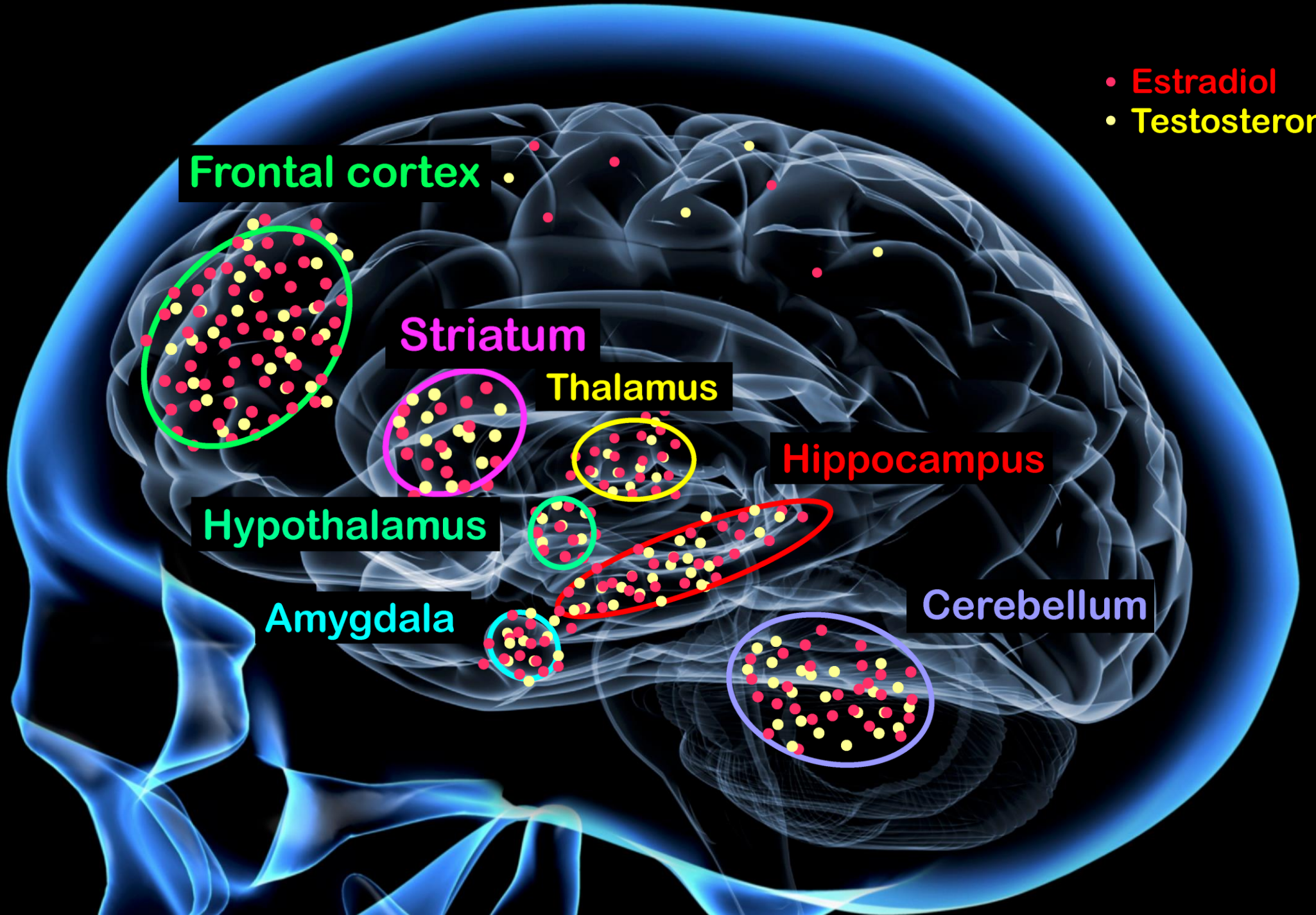


- *“Nature’s psychoprotectant”*
- Oestradiol can:
 - Promote neural sprouting and myelination
 - Enhance synaptic density and plasticity
 - Facilitate neuronal connectivity
 - Act as an anti-inflammatory and antioxidants
 - Inhibit neural cell death
 - Improve cerebral flow
 - Improve glucose metabolism
 - Improve mitochondrial function

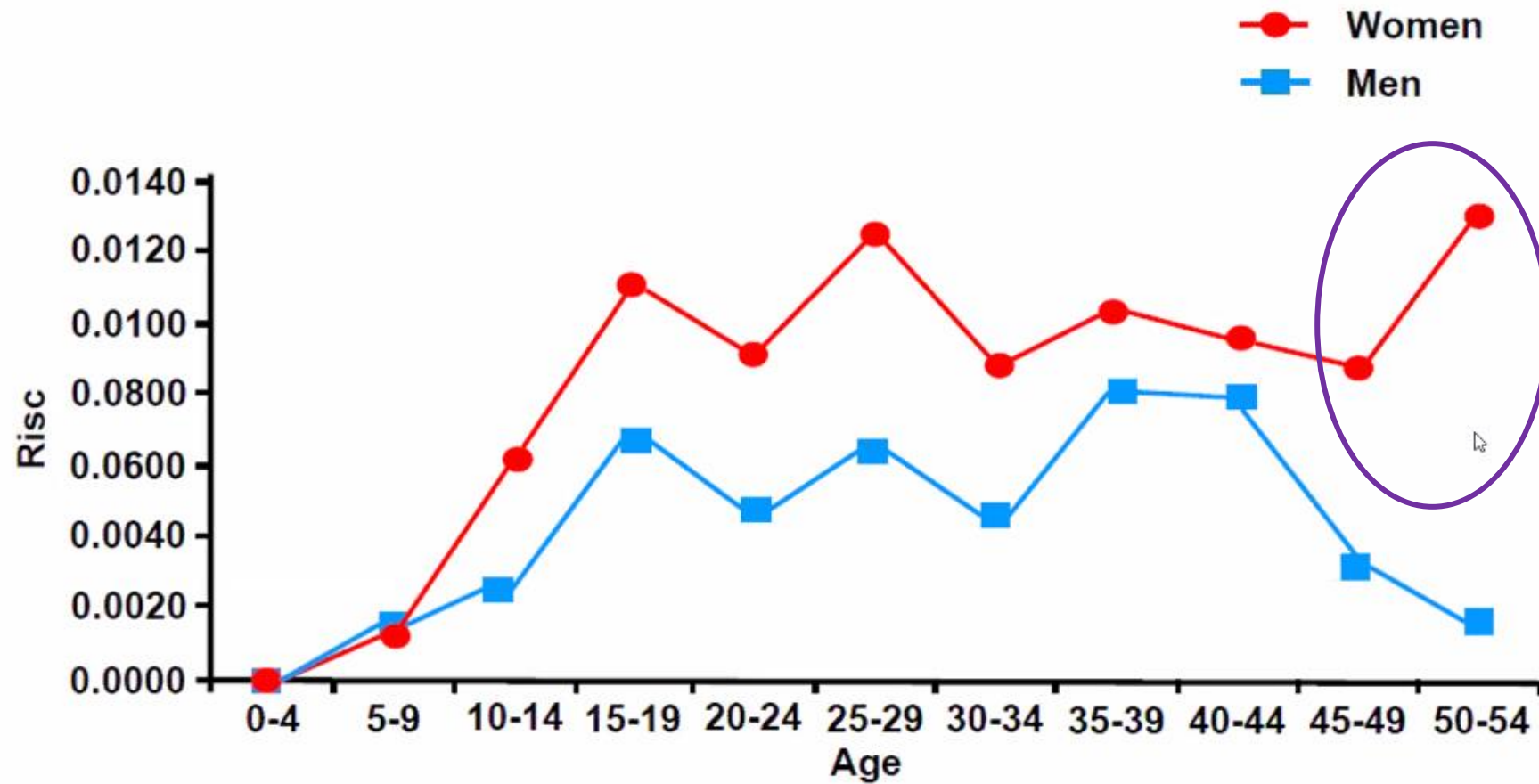
Oestradiol and neurotransmitters



- Oestradiol can increase levels of these important neurotransmitters:
 - Acetylcholine
 - Dopamine
 - Glutamate
 - GABA (Gamma-aminobutyric acid)
 - Serotonin
 - Norepinephrine (noradrenaline)
 - Epinephrine (adrenaline)
 - Endorphins



Depression during life



Perimenopausal depression

- 16-fold increase in depression in women aged 45-52
- 7-fold increase in suicide in women aged 40-50

Journal of Affective Disorders 2009;116:144-147
J Womens Health 2019;28:117-134
Psychol Med 2011;1879-1888



Diseases associated with menopause



- Cardiovascular disease
- Cognitive decline and dementia
- Type 2 diabetes
- Osteoporosis
- Clinical depression
- Kidney disease
- Cancer
- Obesity
- Earlier death

PERIMENOPAUSE / MENOPAUSE AND ADDICTION SURVEY

- On line survey
- Social media
- 1,178 respondents



'I had many perimenopausal symptoms, saw so many different doctors. Not one of them made the connection and I was clueless. I had no idea I was perimenopausal.

I was prescribed painkillers for my migraines, sleeping tablets for my sleepless nights, antiacids for my indigestion, antidepressants for my depression and anxiety. I was told I had bad hygiene for my recurring cystitis.

I was broken, lost, confused. I hated what I'd become. I lost way my humour, my lust for life. I considered ending it all.

I had dark thoughts. Worse time of my life. I thought I was going mad. Prescription drugs and therapy didn't help me.'



Reasons for drinking more alcohol during perimenopause or menopause

70%



Due to increased anxiety, stress or depression

29%



Drank to manage their menopausal symptoms

13%

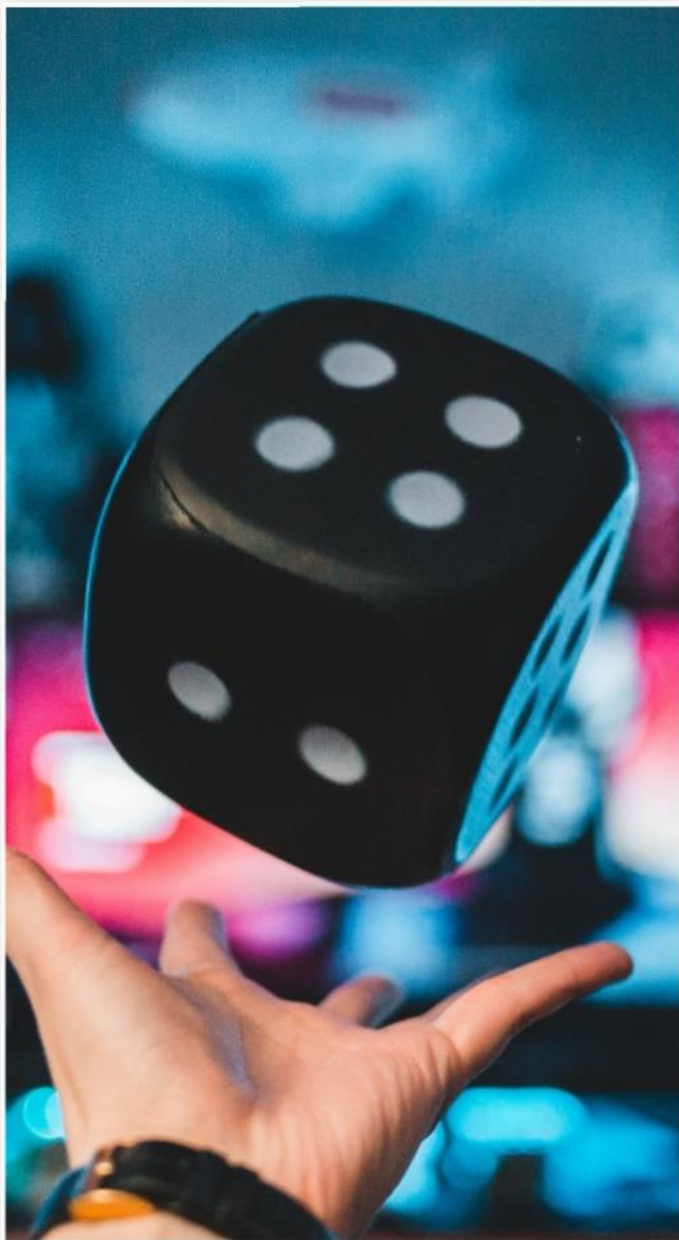


To increase their confidence

5%



Due to lack of access to perimenopause / menopause treatments



83%



Gamble more



“IT ACTS AS A DISTRACTION FROM MY SYMPTOMS”

Petra

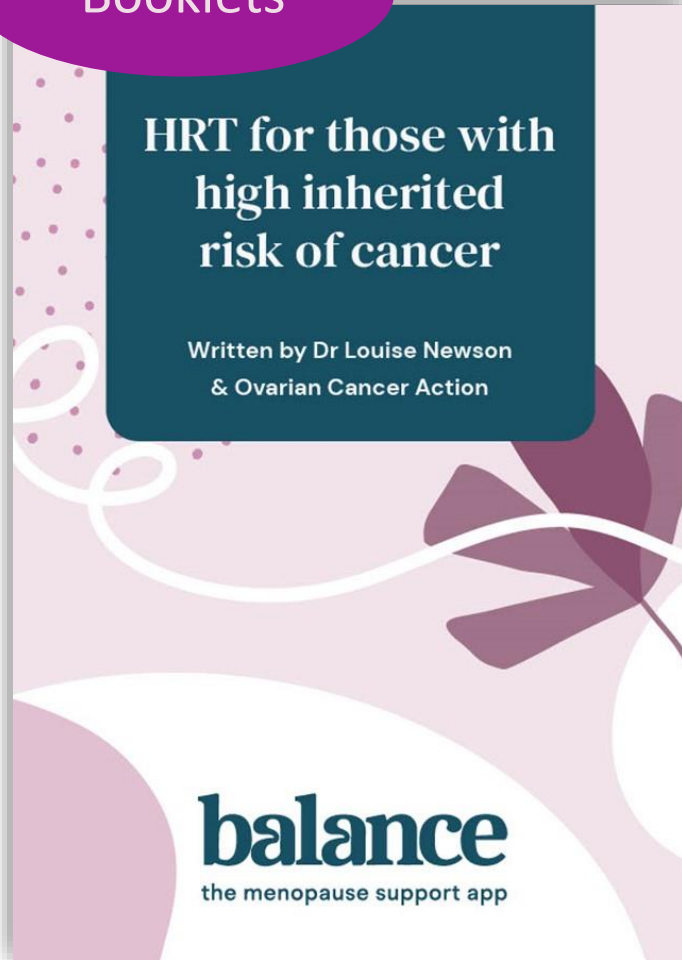


Treatment for perimenopause and menopause

Patient Information



Booklets



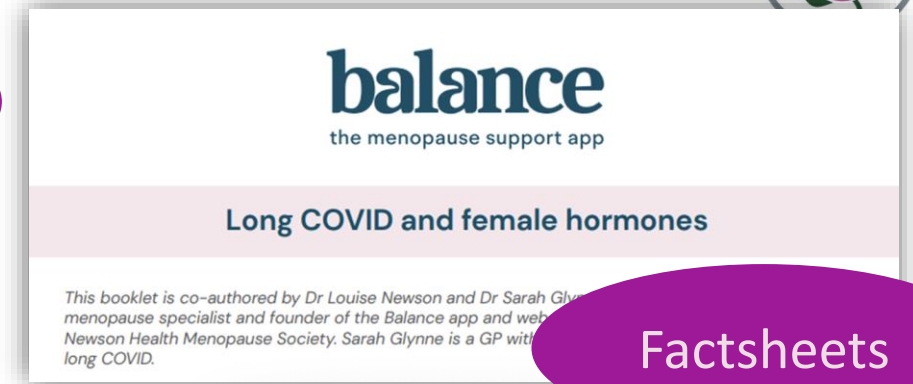
Podcasts



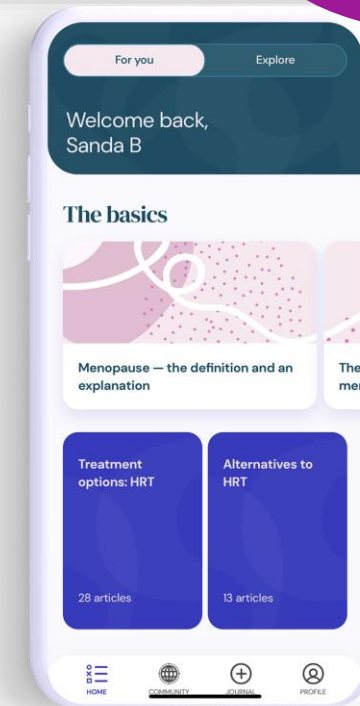
Suicide Awareness and the Menopause Live Q&A (video)



Videos



Factsheets



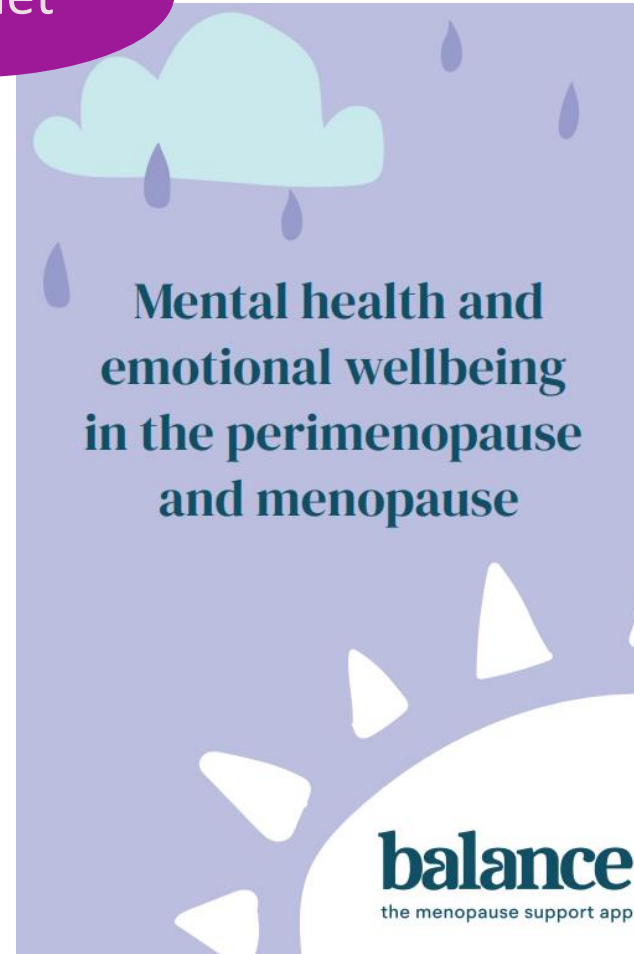
www.balance-menopause.com

Free balance menopause support app

Patient Information



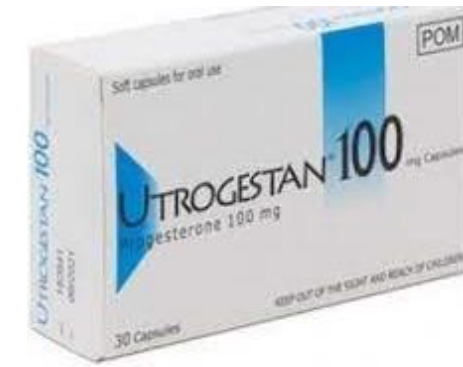
Booklet



HRT – Hormone Replacement Therapy



- Not a “one size fits all”
- Numerous different preparations
- Oestrogen / Progesterone / Testosterone
- Pills / Patches / Gels / Spray





Does HRT treat depression?

- Double blinded randomised placebo controlled trial giving perimenopausal women 100mcg oestradiol patches or placebo for 12 weeks
- Remission of depression was achieved in 68% of women treated with oestradiol compared to 20% in placebo group

ORIGINAL ARTICLE

Efficacy of Estradiol for the Treatment of Depressive Disorders in Perimenopausal Women

A Double-blind, Randomized, Placebo-Controlled Trial

Claudio de Novaes Soares, MD, PhD; Osvaldo P. Almeida, MD, PhD; Hadine Joffe, MD; Lee S. Cohen, MD

Background: Results of previous studies suggest that estrogen improves somatic and mild depressive symptoms experienced by perimenopausal women. This study investigated the efficacy of 17 β -estradiol for the treatment of clinically significant depressive disorders in endocrinologically confirmed perimenopausal women.

Methods: Perimenopausal women (aged 40-55 years, with irregular menstrual periods and serum concentrations of follicle-stimulating hormone >25 IU/L), meeting criteria for major depressive disorder, dysthymic disorder, or minor depressive disorder, according to DSM-IV, were randomized to receive transdermal patches of 17 β -estradiol (100 μ g) or placebo in a 12-week, double-blind, placebo-controlled study. A 4-week washout period followed the 12-week treatment phase. Outcome measures were the Montgomery-Asberg Depression Rating Scale and Ellett-Kupperman Menopausal Index scores.

Results: Fifty women were enrolled in the study; 26 met DSM-IV criteria for major depressive disorder, 11 for dysthymic disorder, and 13 for minor depressive disorder. Remission of depression was observed in 17 (68%) women treated with 17 β -estradiol compared with 5 (20%) in the placebo group ($P = .001$). Subjects responded similarly to estradiol treatment, regardless of DSM-IV diagnosis. Patients treated with estradiol sustained antidepressant benefit of treatment after the 4-week washout period, although somatic complaints increased in frequency and intensity. Treatment was well tolerated and adverse events were rare in both groups.

Conclusion: Transdermal estradiol replacement is an effective treatment of depression for perimenopausal women.

Arch Gen Psychiatry. 2001;58:529-534

DEPRESSIVE symptoms are common during the transition to menopause.¹⁻³ Cross-sectional surveys describe high rates of depressive symptoms among women treated in menopause clinics.^{4,5} We recently reported depressive disorders (major depressive disorder [MDD], dysthymic disorder, and minor depressive disorder) in 30 of 101 endocrinologically confirmed perimenopausal women attending a gynecological clinic.^{6,7} Unlike clinic-based surveys, community-based studies found that perimenopause may be a period of risk for mood disturbance for some women but does not necessarily represent a time of risk for major depression.⁸⁻¹⁰

The use of estrogen replacement for the treatment of menopausal symptoms has been shown to enhance "psychological well-being."¹¹ However, clinical studies using diverse forms of estrogen replacement for the treatment of depression produced mixed results. Three estrogen treatment studies in perimenopausal and newly postmenopausal women failed to demonstrate superiority over placebo for the treatment of mood symptoms.¹²⁻¹⁴ In contrast, 2 double-blind, placebo-controlled studies using transdermal patches of 17 β -estradiol^{15,16} and case series in which patients were treated with sublingual estradiol¹⁷ suggested that estrogen improves mood in women with postpartum depression and severe premenstrual syndrome.

See also page 537

More recently, Schmidt and colleagues¹⁸ described that perimenopausal women with major (n=8) or minor depression (n=26) with or without hot flashes experience greater relief of depressive symptoms with estrogen than with placebo. However, data confirming these preliminary findings are lacking, particularly in a larger group of perimenopausal women with major depression.

The present study was designed to determine the efficacy of 17 β -estradiol for the treatment of depressive disorders in endocrinologically confirmed perimenopausal women. Based on the results of previous reports,^{15,16} we hypothesized that the use of transdermal 17 β -estradiol would have a greater antidepressant benefit than placebo.

From the Institute of Psychiatry, University of São Paulo Medical School, São Paulo, Brazil (Dr Soares); the Department of Psychiatry and Behavioral Science, University of Western Australia, Perth (Dr Almeida); and Perinatal and Reproductive Psychiatry Clinical Research Program, Massachusetts General Hospital, Harvard Medical School, Boston (Drs Soares, Joffe, and Cohen).

(REPRINTED) ARCH GEN PSYCHIATRY/VOL 58, JUNE 2001
WWW.ARCHGENPSYCHIATRY.COM
529
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Oestradiol and antidepressants

- Oestrogen can **enhance the efficacy of antidepressant medication** in menopausal women
- 17β -oestradiol can augment the modulatory effects of escitalopram on hippocampal levels of brain-derived neurotrophic factor and serotonin reuptake transporter



What are the benefits of women taking HRT??



Benefits of HRT

- Improves symptoms!
- For the majority of women, the benefits of taking HRT outweigh any risks
- Reduces risk of:
 - Cardiovascular disease
 - Cognitive decline and dementia
 - Type 2 diabetes
 - Osteoporosis
 - Clinical depression
 - Kidney disease
 - Cancer
 - Obesity
 - Earlier death
- **Only around 14% menopausal women in UK take HRT**

Cochrane Database Syst Rev. 2015;(3):CD002229
Alzheimers Dement. 2021;7(1):e12174
Menopause. 2016;23(4):461-70
JAMA Psychiatry. 2018;75(2):149-157
Climacteric. 2022;25(4):362-368
Endocr Rev. 2017;38(3):173-188

The bigger problem



of women globally receive hormones

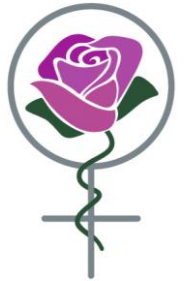


Laura

- Started on 75mcg Evorel patch – changing twice a week with 200mg Utrogestan at night for 2 out of 4 weeks
- Also Estring inserted (changed every 3 months)

- Happier
- Sleeping better
- Calmer
- Physically more active
- Periods lighter and more regular
- No more UTIs





“Most of my symptoms have completely improved. I am enjoying my life again and feel happy. I no longer have joint pains and I can sleep all night. I have not felt this good and well for many years.

I have now stopped taking so many other medications.”





“Take Home” Messages

- Diagnosis of perimenopause and menopause is clinical
- Symptoms can be very debilitating
- HRT is safe
- Antidepressants work better in oestrogenised women
- Consider HRT with testosterone

RCPsych's online learning resource for mental health professionals

Mental health during the perimenopause and menopause



[Find out more](#)

This module looks at the perimenopause and menopause in the context of mental health, the hormonal and neurotransmitter changes that occur, perimenopausal mood disorders and prescribing hormone replacement therapy (HRT). We are pleased to offer this module free to those without a paid subscription.



Modules

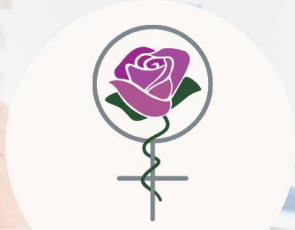
By Dr Abbie Laing, Dr Gina Waters, Dr Louise Newson and Dr Olivia Jones

1.5
CPD
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Confidence in the Menopause Newson Health

Designed to enhance your knowledge of the perimenopause and menopause

Downloaded by more than 30,000 people worldwide since 2021, we're back with a fresh new look and exciting new content on a new platform

Our course is designed for everyone – regardless of gender or profession. Whether you're a woman looking for information to help you make the right decisions, or you're a partner, friend, or colleague who simply wants to know more.

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