

THE WORKBOOK

Menstrual *Health*

MADE EASY

*Talking Periods
Beyond the Bleed*



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THE WORKBOOK



The Talking Periods Workbook

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The following pages contain transcripts of each audio file and a set of visual guides to complement the series.

AUDIO 1 - WHY DON'T WE TALK ABOUT PERIODS?

How do we talk about periods?

When your period arrives in style with little or no pain, it's like getting a huge thumbs up from your hormones. Period self-love is completely free of charge. It simply takes time and space. The more time, and energy, we invest in our personal wellness, the more we treasure this incredibly valuable marker for how well our efforts are paying off.

Tuning into you and your cycle is incredibly powerful and certainly needs to be at the top of your to-do list.

During the series, we will be uncovering all sorts of menstrual mysteries but let's start with 'Why don't we talk about periods?' or 'Why can't we talk about periods?'

History, misogyny, religion, and misunderstanding all play a role.

At any one time, 26% of the global population will be in the age range of bleeding.

Another quarter will reach that point or will have either been there done that bought the tee shirt, which is the category that I fall into.

So perhaps what we need to be asking is, how do we talk about periods?

And then, if we really are going to make lasting change we need to address the elephant in the room and talk about Menstrual Health with a lifetime filter, not just the days when we bleed, and not just from a monthly perspective.

I want to address certain words and phrases as we go along in each episode, so let's start with Menstrual health – this is every single second, whereas your period is the time frame you bleed

Reproductive age –

The wording relates to the anatomy associated with menstruation – such as the ovaries and uterus, not whether you are able to or plan to reproduce or not. Females are considered to be of reproductive age from the day they start their periods to the day they stop at the typical menopause.

Just to clarify, even though I'm referring to women or females throughout the series, periods are not exclusive to women alone. Plenty of people who identify as women do not have periods and plenty of people who have periods do not identify as women.

I actually like to use the word menstruator for those who have a uterus and bleed or have bled at some point in their life.

That way I can introduce the term co-menstruator.

A co-menstruator is a person who does not and never has had a uterus and so therefore will not experience what it means to menstruate.

Then if we add the lifetime filter we move from menstruator to menopauser, and comenstruator to comenopauser.

Job done, we are now all talking about periods like we've been doing it forever. Before you listen to the next episode why don't you try that on for size and let me know how it goes.



AUDIO 2 - THE 5TH VITAL SIGN

Why tracking menstrual health matters

The menstrual cycle is a complex mix of hormone changes, physical and mental shifts, that reflects a person's overall health status.

It can be thought of as a "fifth vital sign," along with blood pressure, body temperature, heart rate, and respiratory rate.

Menstrual irregularities can indicate hormonal imbalances, gynaecological diseases, or infections. Stress, changes in weight or diet, certain medications, and other lifestyle factors can cause temporary changes in the menstrual cycle.

Despite the fact that 50% of the World's population experience menstruation it was only in 2021 that an official definition of Menstrual Health was agreed upon.

Recently published in the journal Sexual and Reproductive Health Matters, menstrual health is defined as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in relation to the menstrual cycle."

The definition also emphasises that whilst the majority of those who experience a menstrual cycle are women and girls, menstrual health is essential for all those who experience a menstrual cycle, regardless of their gender identity and the context in which they live.

Missed periods, heavy periods, painful periods or no periods at all, are all events that mean your body is saying 'hello I need some help here'.

We need to learn how to speak the language of menstrual health?

During the time we spend together over the coming episodes you will have gone through approximately 2 cycles, so take the opportunity right now to start mapping your menstrual health and learn along the way how to optimise your windows of strength and smooth the zones of vulnerability.

The hormones that drive your period are sensitive to what's going on elsewhere in your body, all cycle long. In fact, the real hormonal magic really happens during the parts you can't see.

The part we call 'beyond the bleed'.

Identifying the best way to support your menstrual health starts with collecting information on yourself.

In the lesson notes there's a simple printable sheet you can use or design your own, or use a digital tracking system like an app, but whichever way you choose it needs to be intuitive and habit forming, so pick a way that suits you best.

I was never really a journaling kind of person but what I did find easy to do was grab my phone and use the notes app. Super simple. In due course I'll show you how to start use this information you are recording. But get started now. It may take a couple of cycles to build a clear picture, as some things will be retrospective.



AUDIO 3 - THE MENSTRUAL HEALTH MOSAIC

It's simple, biological commonsense

In previous episodes, I flipped the switch from Why don't we talk about periods, to how do we talk about periods?

The way you and I are going to talk about them is primarily in terms of overall health and how the changing levels of hormones each day as part of menstrual health impact your entire physiology. It's simple biological commonsense.

It's all about you. So therefore it has to be relevant and meaningful to you. Each and every menstrual cycle is different for the individual and when compared to another individual.

I discovered menstrual mapping way too late in my lifetime during perimenopause, but what I learned and began to understand about my hormone health as a result changed my life, and is now one of the drivers behind this series and the work I do.

How is your Menstrual map going and which method have you chosen? I know it probably feels a bit abstract right now, but keep journaling and recording and all will be revealed soon.

Start to annotate mood each day, or a score for the day. It could be a symbol, emoji, or a number. The aim of the daily score is to get a deeper sense of you and how you feel. On the inside and the outside.

How was your day today on a scale of 1 to 5?

How many marks out of 5 would you give your food and movement choices?

And of course the day in your cycle or the week. To start with you may not know so give an approximate indication and gradually you'll be able to join the dots.

Warning: This is not about weight management. Some of you may want to adjust how you record the way you track if this could be a trigger.

The benefits of doing all this will enable you to spot the big patterns, and just like in a mosaic when you look really closely you can see the smaller patterns too.

A generalised example of what you are listening for is –

One weekend you may have some takeaway food and feel fine. Had some wine, done some partying

The next weekend you do exactly the same thing, but end up feeling meh..

Where are you in the cycle?

One fitness session you are breaking records the next you are not

Where are you in the cycle?



THE MENSTRUAL HEALTH MOSAIC (CONT)

It's simple biological commonsense

I'll be telling you more about the role of each hormone in the series which will help you build your Menstrual Health vocabulary.

How are you talking about periods since you started listening?

Have you tried out menstruators and co-menstruator since I mention it in the first episode?

By the way I confess I did not invent that idea, you need to look up a great Tedtalk by Cordelia Röders-Arnold called Unfuck Menstruation

The link is in the lesson notes.

<https://youtu.be/I0iF4h3c0rA>

I absolutely loved the idea of how we can enable a confident conversation around menstrual health by including everyone in the conversation around



AUDIO 4 - THE INVISIBLE MAGIC

Reproductive mechanics

The invisible magic that takes place in the uterus is amazing at a cellular level.

However, we don't need to dive that deep right now, let's simply clarify what physical bits and pieces that will be referenced when talking *all things menstrual*.

The womb is a heart-shaped and pale pink in colour, muscular organ, at the centre of the pelvic space. The fallopian tubes are very thin and floppy extensions on either side of the womb.

At the end of the tube you find the ovaries, but not always attached to the fallopian tubes, just very nearby. A piece of magical wizardry allows the 'fingers' of the fallopian tubes to wave around, just at the right time, to encourage the egg released from the ovary to travel in its direction and coax it down the tube.

The ovaries, white and walnut-sized, contain every ounce of life you are potentially able to conceive as millions of follicles, which ultimately may become eggs.

From the outside looking in we would first pass the vulva, followed by the vagina, and then reach the cervix. A fascinating small structure which regulates whether sperm can get in or out and has the capacity to ward off infection, to keep the uterus a safe environment for a growing fetus.

The inside of the womb is called the endometrial lining, an amazing tissue, which has the capacity to change dramatically, from the beginning to the end of the cycle.

Receptive, cushion-like at one point and inflamed, red, and wounded at other times, with the incredible capability of repair and regeneration.

The womb has the power to be wounded yet heal, to nurture and protect, to evict and expand.

It is the endometrial lining that sheds at the point of week 1 in the cycle. The time of bleeding you will know as the period.

The way it is expelled is via the contractions of the uterus. The menstrual flow from the vagina is a mixture of blood and tissue from the inner lining of the uterus. This then travels down through the cervix and leaves the body by passing along the vagina.

There are a variety of ways in which the menstrual Fluid is then collected, and now there are so many options to choose from.

Many people invest in clothing to use for 1 year or so, or maybe a special outfit for one day, but considering that during a lifetime a menstruator will spend approx 2190 days or 6 years bleeding, investing time in menstrual products price, design (plastic free), comfort and general practicalities is a really good idea.



AUDIO 5 - WHAT IS HAPPENING IN PHYSICAL TERMS

Menstrual health mechanics

What is happening in physical terms during the menstrual cycle?

A menstrual cycle may not be the same length every cycle, but variation is normally with a 4-6 day window.

By this we mean one month you may have a 21-day cycle and your next one may be anything between 22 to 27 days and still be considered within a normal range of difference.

A study using data from the Flo app published in 2020 actually showed that only 40% of women have cycles 27-29 days in length.

Things that can affect the cycle length are lifestyle characteristics such as smoking, caffeine and alcohol consumption, age and BMI.

Longer cycles are associated with a higher BMI and shorter cycles with smoking and high consumption of caffeine and alcohol.

And studies also showed that women reporting depression, higher perceived stress levels, and high levels of physical activity were associated with having irregular periods, anovulation, and heavier menstrual bleeding.

Regular cycles ranging from 21-35 days. That is still 'normal' or typical. If it's outside that every time it's worth tracking and speaking to a healthcare provider once you have some data, to just check in on your hormone health at this point in time.

Here is an overview of what is happening at each point around the cycle.

Week 1 – is when the uterine lining is shedding and we call this a period. The bleeding amount can vary and length of time, but on average 3 to 7 days. Starts off light/spotting, heavier flow, then light flow. Normal Volume varies considerably from 30–50 ml of blood per period, up to 80 ml is still considered 'normal'. But what is your normal. It's all relative to you.

The colour will probably vary from start to finish from bright red to dark brown, this is typical. When the flow is darker it simply means it has taken longer to travel from the uterus.

If the menstrual flow contains small lumps often called clots then that is also common, but if they are over the size of a 10p then that is when you make an appt with your health care professional, taking along your tracker and any other information.



WHAT IS HAPPENING IN PHYSICAL TERMS (CONT)

Menstrual health mechanics

Remember: if the discomfort or anxiety is affecting your ability to think straight and complete physical tasks in the way you would normally, then that's not helpful.

Week 2- the body starts to prepare to ovulate, which includes in most cycles a release of an egg. There are a few cycles each year that don't result in an egg release, called an anovulatory cycle. You can still get a period with his kind of cycle but it's not the kind that we really want many of.

Week 3 – ovulation has occurred and the egg is now traveling toward the uterus, where the endometrial lining of the womb is preparing itself by thickening in number of cells. In order for a fertilised egg to implant successfully the cells need to be more than 8mm thick.

Week 4 – the lining now reaches a point of Will it or won't it shed? A few factors will determine this. The decision primarily will be made on whether an egg has been released and subsequently fertilised or not. We then move back into week 1 and a bleed occurs.

What is the length of your repeat pattern? How's your menstrual health mosaic looking?

Keep collecting your data and building your menstrual cycle mosaic and I'll speak to you in the next episode.



AUDIO 6 - HORMONE HEALTH

The role of hormones

Hormone health is the big sister of menstrual health, so we need some context in the story of menstruation by talking about hormones in general.

There are well over 100 hundred different hormones that play a vital role in our entire bodies, that we call the hormone collective.

Hormones are referred to as chemical messengers, drive every function you can imagine in the mind & body, and they, in turn, can be influenced by co-factors. Some we can make conscious decisions over, some we cannot. e.g. aging, genetics, disease and conditions, environment, stress, nutrition, movement, respiration, sleep, lifestyle factors – smoking, alcohol, and socioeconomics

Hormones play a role in our physical and mental state our entire lives, not just monthly.

Hormones affect the probability of behaviour.

However, we can also say they are the explanation, not the excuse

The reproductive processes centres around the reproductive hormones, but it's also a big part of the story when you find out that oestrogen, progesterone and testosterone are also made in other glands (adrenals, liver) and tissues, like skin, fat cells, bone and the brain!

During your 20s and 30s the lifetime levels and hormone activity provide a metabolic flexibility that gives you a physiological resilience. We can bounce back from pretty much anything such as a weekend of takeaway food or hard partying.

But was your body really designed to do that, and get away with it.

How long does a body last anyway? In evolutionary terms, it's only been the last 30K years since we started to live past the age of 30!

Between 1500 – 1800 your life expectancy was around 35 and then after that it started to rise to your mid 40's.

The shift was due to “the evolution of grandparents”. It marks the first time in human history that three generations might have co-existed

Today your life expectancy is 83 years. That's a huge difference in terms of how long your physical being now lasts. It represents a fifty-year increase in your use by date!



HORMONE HEALTH (CONT)

The role of hormones

But what is your best before date or as stated by the Office of National Statistics your *healthy life expectancy*? – so the kind where you can jump around, do lots of stuff with for example a grandchild (like I do)

200 years ago you lived until 40 – we have now doubled that – but how many of those years are you expected to be full of beans, active and able to do, well whatever you desire? drum roll

... 61.

Yep 61 years of age is your best-before date!

So while you're working on your daily and monthly menstrual health, take a step back and view this with your lifetime filter, and try not to be too smug if you've just been partying hard and only had 4 hours of sleep.

Make the most of it or proceed with caution.

You maybe need to start thinking in terms of hormone health risk assessment – or feng shui your menstrual cycle.

When you read simple advice such as eat real food, move, stay hydrated, and watch your lifestyle choices ... it's for a reason. That is the basic definition of self-care.

Period self-love is paramount to performance. Get the picture.

Keep tracking and building your menstrual health mosaic and tune in for the next episode.



AUDIO 7 - SEX HORMONES

The hormone conductor

In the last episode we talked about hormones in general.

Levels change daily, monthly, and over a lifetime. As we age changes naturally occur in the way body systems are controlled. Some target tissues become less sensitive to their controlling hormone. The amount of hormones produced may also change.

Blood levels of some hormones increase, some decrease, and some are unchanged.

Let's look at just one of the menstrual cycle's key players –

The 4 hormones:

Estradiol (the most potent of the oestrogen family) – made in the ovaries

Progesterone – made in the ovaries (in an area called the corpus luteum)

Follicle Stimulating Hormone (FSH) – made in the pituitary gland (brain)

Lutenizing Hormone (LH) – made in the pituitary gland (brain)

They work in synchronicity and each one affects the level of the next.

(Testosterone is made in the ovaries but is not a part of the menstrual cycle.)

I just want to zoom in on Estradiol for the rest of this episode.

Estradiol is a member of the oestrogen family – we often hear explanations associated with reproductive health as Oestrogen does this and oestrogen does that. In fact there are several different oestrogens classed as either major or minor and they are not all made in the ovaries!

Estradiol has a multitude of functions and plays an important role in male and female bodies, outside of the menstrual cycle.

There are 11 core systems that keep us alive and Oestrogens as a family of hormones impact all of them. For example:

- Endocrine system – influences other hormones
- Bone formation – skeletal system
- Muscle development
- Nervous system
- Immune and lymphatic system – defence against disease
- Skin, nails and hair
- Digestive system
- Cardio vascular
- Reproductive
- Respiratory system
- Renal and urinary system
- Plays a major role in energy & metabolism – oestrogens support the insulin response and how we obtain energy from food.



SEX HORMONES (CONT)

The hormone conductor

And the one particular function that blows my mind is in the Brain activity – it acts as a neurotransmitter. I

n fact sex hormones (incl T and Pr) are critical neurotransmitters that guide brain behaviour.

Oestrogen is classed as a 'happy hormone' alongside serotonin, oxytocin, dopamine, and endorphins.

In the presence of oestrogens, thyroxin works so much better and the same with serotonin as such it impacts mental health.

The pulses of estradiol drive the physiological function of the brain, and its connectivity – helps you think

Relatively speaking the oestrogen family are like the conductor of a huge hormone orchestra. As well as having a direct role in those functions listed they also support other hormonal activity as well.

And that means that even a small variation in Estradiol levels has an impact on the hormone collective.

So this means that you as a whole person will be affected to a greater or lesser extent with each and every fluctuation. The variation may not be noticed, physically or mentally, but it is still there. In which case tuning into you and tracking your cycle now takes on a whole new meaning.



AUDIO 8 - THE DIFFERENT CYCLE PHASES

The Cycle - the follicular phase

The length of your cycle is defined as “the number of days between the first day of menstrual bleeding of one cycle to the onset of menses of the next cycle”.

Day 1 proper bleed (not spotting) to Day 1 of the next proper bleed.

Across the cycle, there are 2 phases. Follicular and luteal.

The follicular phase (1st half of cycle) is the part of the cycle that will most likely vary in length from month to month, and person to person. On average it is 14 days.

From the point of ovulation, the luteal phase (2nd half of the cycle) will be approximately 14 days and rarely changes.

There is a huge inter variability in hormone levels from cycle to cycle, and person to person. The normal range of estradiol for example is 30-300 pg/ml in menstruating females.

As a point of reference in males, normal estradiol levels are 10 to 50 pg/ml.

The level of estradiol in non-menstruating females post-menopause is 0-30 pg/ml – save that for another episode!

Some mapping methods call the 4 parts seasons, which kind of makes sense, but for now, we will just go with 1-4

Phase 1 – follicular phase

Part 1 –progesterone just left the building and oestrogen is low and about to rise. As you progress through this part around 3-7 days you can feel more tired than on average (remember that's average levels that relate to you) because this is the bleed week.

And whilst this is going on in the uterus, deep in the brain the cycle is already starting again and the ovaries start to join the new party.

Part 2 –Bleeding has stopped and you are starting to feel energised, creative, and heading for ovulation. Progesterone is still on holiday.

Oestrogen levels are rising toward their peak. The surge is a result of something I call the Eggs Factor competition happening in the ovaries. You have 15-20 eggs that get selected from a few thousand to be in the competition for the top egg.

You may also feel a tad perky in the bedroom, It's an evolutionary thing, if you catch my drift.



AUDIO 9 - PHASE 2 OF THE CYCLE

The Cycle - the luteal phase

Phase 2 – Luteal phase

Part 3 – The main event just happened. The top egg was selected and pushed out centre stage. The space left behind (known as the corpus luteum) now gets filled by let's say the record company aka Progesterone. Yes, progesterone finally makes an appearance in the 2nd half of the cycle.

Only if you have ovulated though. Without ovulation, no ovarian progesterone is made, because it only originates from the space called the corpus luteum I just mentioned.

So, no top egg, no need to make that song number one, and no record company – make sense?

This may happen a couple of times a year naturally, and you wouldn't ordinarily notice because you may still bleed, but it will be a different kind of bleed.

If a pregnancy (or not) is one of your objectives we can add temperature measuring to your mapping tool kit because body temp rises slightly at the point of ovulation.

Part 4 – Progesterone has been making a noise for a few days to get that record to number one and now starts to tail off. Oestrogen has a small 2nd surge and also starts to tail off.

This is the premenstrual phase – sound familiar? Premenstrual syndrome – PMS.

In the menstrual cycle, Progesterone controls endometrial lining thickness, it's involved in pregnancy, skin elasticity, bone strength, respiration, nerve tissue, anti-inflammatory, immune response, insulin signaling, and brain function.

Progesterone is also a crucial metabolic intermediate in the production of other endogenous steroids, including sex hormones and corticosteroids.

During the 4 week cycle, you will have times when your mental resilience toolbox is full to the brim and other times not so. Your strengths may occur when your oestrogen is high and your vulnerabilities when your oestrogen is low. As the progesterone intertwines that adds yet another dynamic.

The two giveaways into how your hormone levels are intertwined are your energy levels and your emotions – we could call them menstrual moments.

Mindfulness & Journaling are great tools to help you spot these menstrual moments.



AUDIO 10 - MENSTRUAL HEALTH V MENTAL HEALTH

The stress connection

Stress raises the levels of a hormone called cortisol. We need some to get up in the morning, but in large quantities over a long period of time cortisol is not good for us. In menstrual health terms when cortisol is high then reproductive hormones don't work as well.

This means when you have high stress = cortisol you have then is a menstruality moment waiting to happen!

If your ovaries (primarily) are pumping out these essential to-life hormones such as oestrogen, progesterone and testosterone, but your stress levels are through the roof your cortisol is circulating like crazy and stopping the sex hormones from doing their job ...

That is not good, not only for your menstrual cycle signs and symptoms but health in general.

Sex hormones are not just circulating around the ovaries and uterus, they are going around the whole body, building and supporting, and acting in the brain.

How do we reduce cortisol? – > reduce stress → breathe

Anything that can help you breathe on purpose and with a purpose. It could be sat there breathing, stood while the kettle is boiling or mediation or yoga.

Increased oxygen flow reduces cortisol and then everything works better.

Now I know that it may sound a bit far fetched and of course, if you are having a high blood flow moment and you know if you stand up to walk across the office and it feels like your insides are about to fall out, listening to me saying breathe and be still sounds like I'm taking the Mickey.

But, by doing this on a regular basis, over the course of time maybe not this week but next week or next month by lowering cortisol your sex hormones work better and your heavy bleed, pms, and other challenges have a much better chance of starting to repair themselves. It feels like it's by magic but it's not its simple steps such as real food, reduce stress and move.



MENSTRUAL HEALTH V MENTAL HEALTH (CONT)

The stress connection

Movement is not optional. You need to do some kind of movement every day. But just as the hormones change your fitness routine can too.

There are some excellent resources which I'll put a link to in the class notes.

But in summary, look at the way you move according to the weeks.

In the follicular phase (weeks 1 & 2)

The bleed week movement needs to be customised to you, but in general, don't push too hard, keep within your limits until week 2 when movement can become more intense, but short, to minimise injury.

In the luteal phase (weeks 3 & 4)

As you switch from week 2 to 3 you can tap into fat burn. You can try longer sessions of exercise and keep up with the pace. As we reach week 4 some customisation will be needed depending on the kind of premenstrual phase you have. But keep moving even if it's only a little.

The stress, movement and menstrual connection is very strong and will be a key player in how you can optimise your windows of strength and smooth your windows of vulnerability.

As you continue to build your menstrual mosaic you will be able to modify what you are doing and when. However, this is not a single solution or magic process, there may still be discomfort and distress, but you are now starting to build a very robust menstrual health tool kit to make the journey a whole lot easier.

<https://www.jennis.com/blog/cyclemapping/map-your-training-to-your-menstrual-cycle-with-jennis-cyclemapping/>



AUDIO 11 - SIGNS, SYMPTOMS AND SIDE EFFECTS

Do we have symptoms of menstruation?

We tend not to refer to the signals and side effects of our cycle as symptoms, but I'm going to drop that in now as it will come in handy in a future episode.

Let's say there are challenges associated with the menstrual cycle as a whole, and these can pop up at any time. But the most 'famous' one is menstrual cramps.

What is period pain?

Period pain happens when the muscular wall of the womb tightens (contracts). Mild contractions continually occur in your womb, but they're usually so mild that most women cannot feel them.

During your period, the wall of the womb starts to contract more vigorously to help the womb lining shed as part of your period.

When the wall of the womb contracts, it compresses the blood vessels lining your womb. This temporarily cuts off the blood supply – and oxygen supply – to your womb. Without oxygen, the tissues in your womb release chemicals that trigger pain.

While your body is releasing these pain-triggering chemicals, it's also producing other chemicals called prostaglandins. These encourage the womb muscles to contract more, further increasing the level of pain.

Making sure to mobilise the pelvis between periods will help circulation to that area and potentially reduce future pain. You scrunch over and tense yourself and unless you release that tension in your whole body over the next 21 days you are at a starting point of *scrunchiness* before you even start the next set of cramps.

Think of it as a warm-down after a gym session to stop the muscles from getting sore and remember to look beyond the bleed for the solutions.

50- 80% of menstruators experience extreme menstrual-related pain at some point during their reproductive lives.

Pain goes with the territory but it doesn't mean we have to 'put up with', 'crack on' or 'deal with it'.

If any part of the cycle leaves you hurting you to the point it is affecting your quality of life that is not helpful, and you must seek advice from a healthcare professional, having your up-to-date hormone health data will be a huge asset when you do.



SIGNS, SYMPTOMS AND SIDE EFFECTS (CONT)

Do we have symptoms of menstruation?

Period pain can be caused by an underlying medical condition.

There are other pains such as breast tenderness and even ovulation pain.

Challenges associated with 2nd half of the cycle are Migraine, headaches, tiredness, emotional changes, bloating, PMS and PMDD (check the resource links in the class notes)

What can you do to reduce this pain?

Anti-inflammatory meds are the primary recommendation movement, supporting the body with the right kind of nutrition and keeping stress levels low.

Hormonal contraception is also often prescribed for periods that are affecting the quality of life.

The different pills work in different ways and I've add a link to a great resource which goes into much more detail. Each contains different synthetic sex hormones and each one having a different effect on your hormones.

Please remember to count the months as part of your hormone blueprint just because periods may not occur it doesn't mean you have elongated the hormone highway timeline. Your ovaries still only have a typical 40-year window of operation with or without hormonal birth control, and with or without pregnancy.

Above all else remember – Life is too short to stuff a mushroom and way too short to suffer in silence

<https://www.jennis.com/blog/cyclemapping/what-does-oral-contraception-do-to-your-hormones>

<https://www.larabriden.com/category/birth-control/>



AUDIO 12 - MENSTRUAL MATHS AND PERIMENOPAUSE

Menstrual Health Matters

Let's look at the reproductive years with a lifetime filter in terms of numbers.

At birth, each menstruator has 2 ovaries. The number of potential eggs = oocytes, of which there are between 1-2 million

Around 10,000 per month never reach maturity. By the time periods start there is approximately 25% lifetime egg pool remaining. At age 30 you have around 12%. Age 40 only 3%

You ovulate once every menstrual cycle. You normally release one egg per cycle, but in rare cases, you can release two, at the same time.

The hormone blueprint and your DNA determine how long your periods, to no periods, journey is.

It's pretty seamless. There's no big announcement it is an evolving dynamic process. The overall journey is approximately 40 years and you are pre-programmed to have around 400-450 periods in your lifetime.

NB with hormonal contraception you still count the months as if you were having periods. They don't get stored up to come out all in one go when you stop contraception.

So the maths goes like this $11 \text{ you start periods} + 40 = 51$ (average age of menopause day.)

Menopause is classed as 12 consecutive months without a period. Just one day. The time leading up to that is called perimenopause and can be 10 years or so. The time before that is premenopause

But what is actually happening?

The menstrual cycle is the regular infradian rhythm. The regular eggs factor competition.

The first 3 or 4 years may be a bit irregular as your ovaries get the hang of it and then for around 20 years it's relatively regular. Except if pregnant.



MENSTRUAL MATHS AND PERIMENOPAUSE

Menstrual Health Matters

In the mid to late 30s that's when the ovaries check in with the program and consider whether they need to start winding down ready for periods stop day.

This is when the eggs factor competition is on one minute and off the next.

Now as you have discovered the sex hormones work beyond the bleed, so if your ovaries start acting like some kind of temperamental dimmer switch this can trigger ... symptoms of perimenopause aka menopause transition ... which gets abbreviated to *going through the menopause*.

Supporting hormone health therefore is essential for bone health, heart health, brain health you name it any kind of health needs to be supported.

So, basically, from the day you start your periods to the day you stop, you are menopauseing to a greater or lesser extent. The day after Menopause Day you are post-menopause.

Menstrual health is health, healthy aging is linked to healthy menstruation and by default healthy menopauseing.

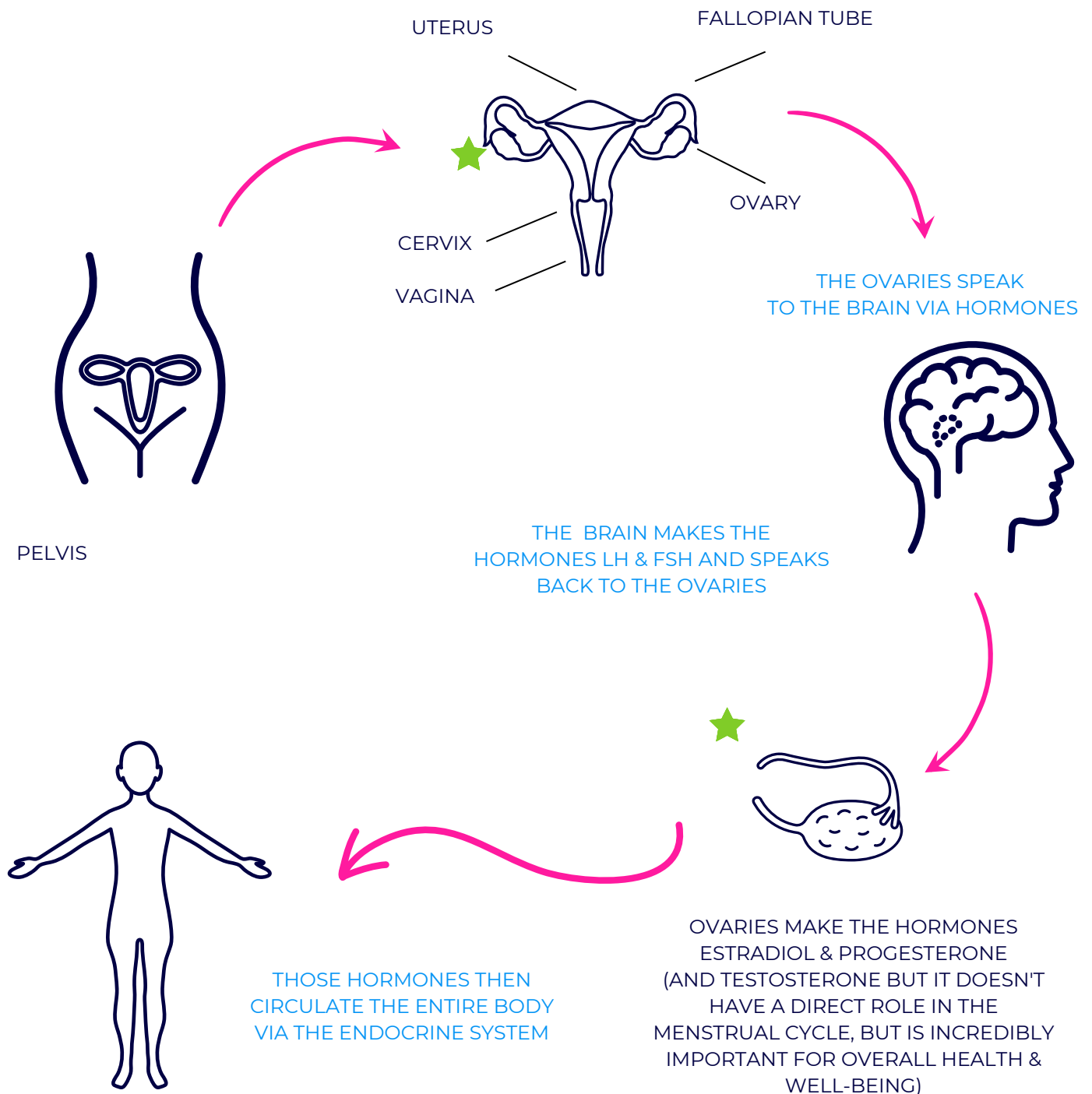
Why don't we talk about menstruation? We don't talk about it because we weren't taught how to.

Now however you have started to learn this fascinating language of menstrual health and how it impacts overall health and you can now go on to share this information and maybe discover more as to why Menstrual health matters, and more importantly why menstrual health is the 5th vital sign.



THE ANATOMY

Structures involved in menstrual health include:



ESTRADIOL, ONE OF THE OESTROGEN FAMILY,
IT'S ROLE IS TO SUPPORT THE 11 SYSTEMS OF THE BODY.
ESTRADIOL'S FUNCTIONS GO BEYOND PERIODS AND PREGNANCY, AND DOES NOT ONLY
CIRCULATE BETWEEN THE UTERUS AND OVARIES!
ESTRADIOL IS ALSO MADE IN THE ADRENAL GLANDS, LIVER, FAT CELLS, SKIN, BONE AND THE BRAIN



MENSTRUAL MATHS

Even if biology wasn't your strong point, our paint by numbers approach to periods will ease you into the anatomy & physiology know how.

NUMBER	ITEM
2	OVARIES Ovulate alternately on average
2	HALVES TO THE CYCLE Follicular & Luteal
4	PHASES Each half of the cycle, divided into 2 phases
4	HORMONES Involved in menstruation
11	SYSTEMS OF THE BODY Supported by Estradiol
28	DAYS IN MENSTRUAL CYCLE Not always and not the same each cycle
40	MILLILITRES OF BLOOD Lost on average each period
51	MENOPAUSE DAY Average age periods stop
400-450	PERIODS Over 40 years!
1-2 million	OOCTYES IN OVARIES AT BIRTH Remaining age 30 - 12%: age 40 - 3%



THE FIRST PERIOD

Menstrual Health is often shaped by our early experiences.

What was your first period like? Was it scary, strange, exciting, all of those or something completely different?

How old were you? What do you wish you had known then, that you know now?

What would you tell your younger self?

Whether you've had a few or a couple of hundred, we don't get a prize for having the 'best period' or a certificate that says 'you rocked it this month'!

Grab a pen and take a moment to write about your periods.

How do they make you feel? Which week of the cycle do you like most?

Do you have a cycle strategy? Could it do with tweaking?

Just write what feels right. Pour your feelings on to the paper and see what happens.

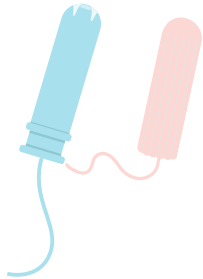
DEAR MENSTRUAL CYCLE ...



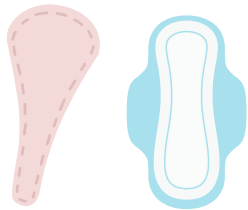
PERIOD PRODUCTS

There are wide range of options to choose from and it's certainly worth trying different ones for price, comfort and whether they are environmentally friendly.

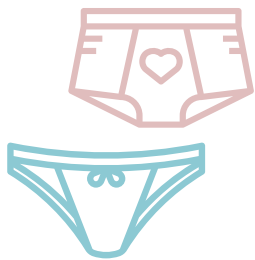
The first product we use is often one we stick with for years. If that's you, think about whether the one you are using is in fact right for you for different cycles, or days in one cycle.



TAMPON - inserted into the vagina to absorb the blood. They come with or without an applicator and available for different. There are different levels of absorbency. The packaging will tell you if the tampon is for light, medium or heavy periods.



PADS - disposable or reusable. One side of the pad is made of an absorbent material that soaks up the blood. They come in many sizes and absorbencies, so you can change them depending on how heavy or light your period is.



PANTS - They look like regular underwear, except they have a special absorbent layer which prevents leakages onto clothing, and as they are washable, they are one of the most sustainable options available.



CUPS/DISCS - made from medical-grade silicone, and are around 2 inches in size. You put the cup inside your vagina and the cup collects the blood rather than absorbing it. They can be washed and used again.

With so much choice it's easy to get overwhelmed. There's 'no size fits all' mentality with each one carrying different advantages to our individual needs. You might want to use one type of product throughout your menstrual cycle, or you might want to use different items for different situations, such as sleeping, exercising or whilst at work." There's also an environmental factor that most will want to consider during menstruation, with some period products more eco-friendly than others.



OVARIAN CONDITIONS

There are conditions linked to the ovaries that mean the menstrual cycle and menstrual health are disrupted.

Polycystic ovary syndrome (PCOS) is a common condition that affects how ovaries work. The 3 main features of PCOS are:

- irregular periods – which means your ovaries do not regularly release eggs (ovulation)
- excess androgen – physical signs such as excess facial or body hair
- polycystic ovaries – ovaries become enlarged and contain many fluid-filled sacs (follicles) that surround the eggs (but despite the name, you do not actually have cysts if you have PCOS)

If you have signs and symptoms of PCOS, they'll usually become apparent during your late teens or early 20s. They can include:

- irregular periods or no periods at all
- difficulty getting pregnant as a result of irregular ovulation or failure to ovulate
- excessive hair growth (hirsutism) – usually on the face, chest, back or buttocks
- weight gain
- thinning hair and hair loss from the head
- oily skin or acne

PCOS is also associated with an increased risk of developing health problems in later life, such as type 2 diabetes and high cholesterol levels.

Premature Ovarian Insufficiency (POI) also known as early menopause, occurs below the age of 40 and affects around 1 in 100 girls and women in the UK.

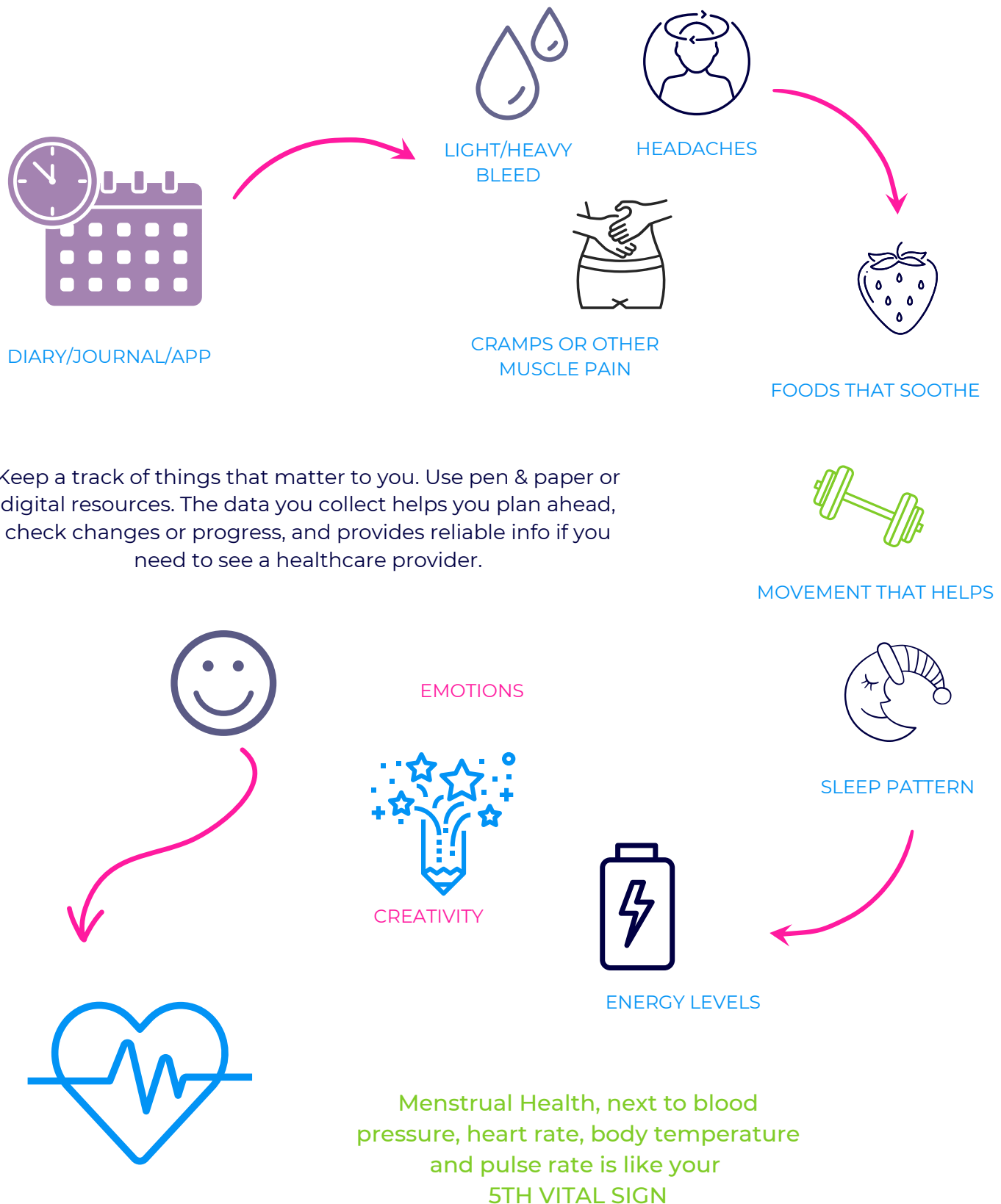
POI can occur as a result of surgical or medical treatment for other conditions (e.g. endometriosis, cancer, PMDD), can be associated with autoimmune disease (e.g. hypothyroidism, Addison's Disease) or genetic abnormalities (e.g. Fragile X Syndrome), or, rarely, may occur following severe infection (e.g. tuberculosis, malaria). However, for the vast majority of women no cause for POI is found. This is then known as spontaneous, or idiopathic, POI.

Specialist management of POI is necessary, not only to help alleviate associated symptoms but also to reduce the risk of chronic disease (in particular heart disease, osteoporosis and dementia) in later life.



MENSTRUAL CYCLE TRACKING

Tune into YOU and discover your 'average' level of awesome. Tracking will definitely improve your life and maybe even save your life.



MENSTRUAL PAIN & OTHER CHALLENGES

Period pain happens when the muscular wall of the womb tightens (contracts).

During your period, the wall of the womb starts to contract more vigorously to help the womb lining shed as part of your period.

When the wall of the womb contracts, it compresses the blood vessels lining your womb. This temporarily cuts off the blood supply – and oxygen supply – to your womb. Without oxygen, the tissues in your womb release chemicals that trigger pain.

LESS COMMONLY, PERIOD PAIN CAN BE CAUSED BY AN UNDERLYING MEDICAL CONDITION.

Medical conditions that can cause period pain include:

- endometriosis – where cells that normally line the womb grow in other places, such as in the fallopian tubes and ovaries; these cells can cause intense pain when they shed
- fibroids – non-cancerous tumours that can grow in or around the womb and can make your periods heavy and painful
- pelvic inflammatory disease – where your womb, fallopian tubes and ovaries become infected with bacteria, causing them to become severely inflamed
- adenomyosis – where the tissue that normally lines the womb starts to grow within the muscular womb wall, making your periods particularly painful

SYMPTOMS OF PMS

The most common symptoms of PMS include:

- mood swings
- feeling upset, anxious or irritable
- tiredness or trouble sleeping
- bloating or tummy pain
- breast tenderness
- headaches
- spotty skin
- greasy hair
- changes in appetite and sex drive

PREMENSTRUAL DYSPHORIC DISORDER (PMDD)

Symptoms of PMDD are similar to PMS but are much more intense and can have a much greater negative impact on your daily activities and quality of life.

Symptoms can include:

- physical symptoms such as cramps, headaches and joint and muscle pain
- behavioural symptoms such as binge eating and problems sleeping
- mental and emotional symptoms, such as feeling very anxious, angry, depressed or, in some cases, even suicidal



MENSTRUAL CYCLE CHANGES & PERIMENOPAUSE

When we look at menstrual health with a lifetime filter we know that periods start at menarche (aka puberty) and end at the climacteric (aka menopause day).

The cyclical infradian rhythm starts to change around the late 30's. Remember this is all pre-programmed into the hormone blueprint, we just don't know exactly when the pattern we have been so diligently tracking, will start to change. BUT if you already have an idea of your personal rhythms and have become a hormone detective, then these subtle changes will be easier to spot and you can adjust your menstrual health tool kit accordingly.

The cycles may become longer, shorter or both all at the same time!

The lifetime levels start to go down over age (even though each cycle they are still going up and down - which is confusing to say the least)

THE OVARIAN ESTRADIOL IS THE DRIVER OF THE CHANGES AND CAN LEAD TO ADDITIONAL MENSTRUAL HEALTH SYMPTOMS. OF COURSE STRESS AND OTHER CO-FACTORS THAT IMPACT HORMONE HEALTH ALSO PLAY A ROLE.

The signs, symptoms and side-effects of menstrual cycle changes during perimenopause include, but not exclusive to, the following:

- Depression/anxiety
- Palpitations, panic attacks, loss of confidence
- Mood changes/irritability
- Period changes, irregular, painful & heavy
- Hot flushes, Night sweats
- Changes in your skin - dry/itchy
- Vaginal dryness
- Allergies
- Brittle nails
- Loss of sex drive
- Breast tenderness
- Joint aches & pains
- Headaches/Migraines
- Burning tongue, electric shocks, tingling extremities
- Digestive issues/Bloating
- Gum problems
- Muscle tension/weakness
- Sleep problems/insomnia
- Fatigue and tiredness
- Hair loss/thinning hair
- Brain fog/difficulty concentrating
- Dizziness
- Bladder irritation/incontinence
- Tinnitus
- Unexplained /sudden weight gain
- Change in body odour

WHILST NOT SYMPTOMS THEMSELVES, RISK FACTORS ASSOCIATED WITH MENOPAUSE ARE OSTEOPOROSIS, TYPE 2 DIABETES, DEMENTIA, BOWEL CANCER & CARDIO VASCULAR DISEASE.



MENSTRUAL CYCLE NUTRITION

Food can have a really powerful impact on our menstrual cycles; supporting ovulation, sex hormone production and menstrual health.

We eat three meals a day, mostly, so we have at least three opportunities to add in foods that are beneficial for our menstrual and hormone health.

1

WEEK ONE



2

WEEK TWO



OESTROGEN IS LOW AND NOT YET RISING. PROGESTERONE IS ABSENT. ENERGY COULD BE LOW. APPETITE LOW. EMOTIONS RANK ON THE INSIGHTFUL LEVEL AND JOURNALING IS RECOMMENDED AT THIS POINT TO MAINTAIN PERSPECTIVE.

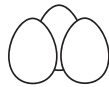
Keep protein levels moderate. such as one or two meals a day with protein as the focus.

Slow-acting carbs. Aim for low sugar fruits and ones that are high in Magnesium e.g – grapes, figs and banana

Vegetables are always a good thing aim for ones higher in iron e.g. broccoli and any green veg turned into a soup.

Keep fats low in amount and naturally sourced.

Keep food choices simple and not too heavy digestion wise. Look to nature's kitchen and try ingredients such as turmeric that are anti-inflammatory & calming



OESTROGEN IS STARTING TO RISE. PROGESTERONE IS STILL ABSENT. ENERGY INCREASE AND WE QUITE OFTEN HEAR OURSELVES SAYING 'BACK TO NORMAL'. APPETITE RISING. EMOTIONS RANK ON THE ASSERTIVE LEVEL AND JOURNALING IS RECOMMENDED AT THIS POINT TO MAINTAIN FOCUS.

Protein levels can be increased to medium by incorporating in to each meal or increase portion sizes. The type of protein, if you are a meat eater, can be more of the red kind this phase.

Iron-rich foods are still a priority here to replenish sources after blood loss.

In the carbohydrate category you can manage to be more flexible during phase 2 as the increased circulating oestrogens help support insulin sensitivity. This means the carbs you do eat are more likely to be burnt off rather than stored.

If fat burn is something you are looking to optimise this phase is a good time to find it by 'bio hacking'. In which case moderate carbs to slow-acting only e.g veggies.

Keep fats moderate in amount and naturally sourced.



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We eat three meals a day, mostly, so we have at least three opportunities to add in foods that are beneficial for our menstrual and hormone health.

3

WEEK THREE



4

WEEK FOUR



OESTROGEN IS STARTING TO FALL AND PROGESTERONE RISES SHARPLY. ENERGY IS STILL HIGH AT THE BEGINNING OF THIS PHASE BUT THEN WE BECOME MORE RELAXED AS PROGESTERONE KICKS IN. THERE IS AN ILLUSION OF FEELING MORE ENERGETIC BECAUSE THE PROGESTERONE HELPS US HANDLE STRESS BETTER, BUT TRY NOT TO PUSH TOO HARD AS THE NEXT PHASE IS AROUND THE CORNER. APPETITE STILL HIGH, BUT BE PREPARED TO MITIGATE POTENTIAL CRAVINGS IN PHASE 3.

Protein levels can be increased to medium-high by incorporating in to each meal or increase portion size. Lighter proteins like fish and sources of essential vitamins and minerals from nuts and seeds work well this week. Now is a good time to also stock up on consuming nutrient dense foods to minimise cravings and preparing foods to have on standby that are gentle on you for the next phase. Keep fats moderate in amount and naturally sourced.



OESTROGEN IS LOW AND PROGESTERONE IS STARTING TO FALL AND VERY LOW BY THE END OF THIS PHASE. ENERGY IS THERE ONE MINUTE AND GONE THE NEXT. APPETITE IS LOWER THAN PHASE 3. PREMENSTRUAL SYNDROME CAN OCCUR. IT CAN BE TRIGGERED BY THE DROP IN PROGESTERONE BUT ALSO IF YOU ARE LOW IN SEROTONIN, THE BRAIN CHEMICAL RESPONSIBLE FOR STABILISING OUR MOOD.

Have a ready to go supply of easy to consume, tasty meals with moderate protein portions. This helps support the mood-boosting serotonin and foods like bananas are also a good source of minerals at this point.

Carbohydrates that are simple and straightforward work best here. Dark chocolate and dried fruit help to provide nutrients with a hint of sugar to prevent a complete meltdown.

Unless we are prepared this is when cravings can hit us and our appetite increases for the foods that will not serve us well in the next phase.

Natural fats sourced from magnesium rich foods such as nuts, seeds and avocado are also helpful and minimise inflammation.



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MENSTRUAL CYCLE NUTRITION

A Functional Approach

Real foods that are not processed form the foundation of a menstrual health tool kit.

1. Nutrient dense – focus on foods that contain as many valuable nutrients as possible. Foods that qualify come with one ingredient and no label, such as broccoli, avocado, fish, eggs, nuts & seeds. Always look to nature's kitchen to add further zest with herbs and spices. If you can grow it, one way or another, then eat it. If you need to utilise heavy machinery and complex manufacturing systems, probably best to avoid it.

Real food works well with our bodies. Fake foods don't.

Real food is less likely to trigger inflammation than moderately or ultra processed foods.

So, given a choice and opportunity, select from the foods that work best for you.

"Eat food made by men in white coats and you'll end up seeing men in white coats."

2. Hydrate – help your liver help you. Oestrogens support liver function and as they fluctuate in levels from one end of the cycle to the next, it can add additional duress on the liver. In addition, the liver is an organ that also creates non-ovarian oestrogens, so we really do need to be kind to it whenever we can. The liver's primary objective is to cleanse your body of toxins and keep you alive. The changing levels of hormones can directly impair or enhance the ability of the liver to do its simple task. For example, during the high points of oestrogen in the cycle you may find you can consume wine without it affecting you too much, but when oestrogens dip in your cycle your response to alcohol may change.

3. Support gut health - in order to absorb as many nutrients from the real food we need to make sure that gut-health is considered. Changing levels of oestrogens affect the gut microbiome, which in turn can affect our ability to digest foods. Making conscious choices of what you eat and when will support gut health.

Reduce Stress – Reduce Inflammation

There are four other key components to positive steps to great health, menstrual or otherwise that can't be overlooked. I like to call them "Virtual Vitamins".

- Vit O – breathe. This helps to reduce cortisol levels from being too high for too long. High cortisol impairs the function of other hormones.
- Vit S – sleep. Rest and repair.
- Vit L – laugh. We are social creatures and respond well to interaction with others.
- Vit M - movement. Move it or lose it!



MENSTRUAL CYCLE TRACKING

Tune into YOU and discover your 'average' level of awesome. Tracking will definitely improve your life and maybe even save your life.

	J	F	M	A	M	J	J	A	S	O	N	D
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2												
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KEY	
<input type="checkbox"/>	SPOTTING
<input type="checkbox"/>	LIGHT
<input type="checkbox"/>	MEDIUM
<input type="checkbox"/>	HEAVY
<input type="checkbox"/>	CRAMPS
<input type="checkbox"/>	TIRED
<input type="checkbox"/>	FATIGUE
<input type="checkbox"/>	ACNE
<input type="checkbox"/>	HEADACHE

CYCLE LENGTH	
JANUARY	
FEBRUARY	
MARCH	
APRIL	
MAY	
JUNE	
JULY	
AUGUST	
SEPTEMBER	
OCTOBER	
NOVEMBER	
DECEMBER	

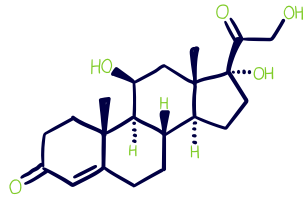
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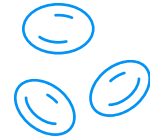
HORMONES

What they are and how they work

HORMONES ARE
TRANSPORTED AROUND
THE BODY IN THE BLOOD

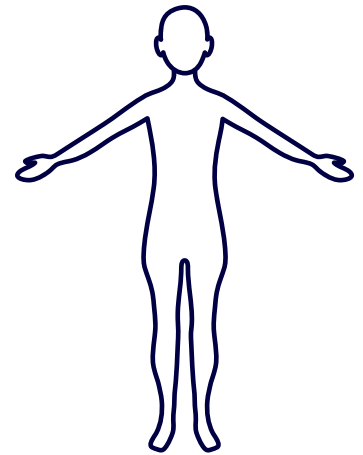
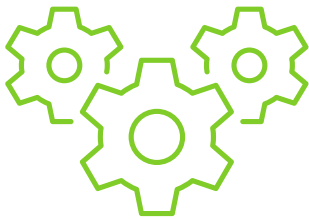


There are a large number of
hormones, with a variety of
roles, that are essential to life.



HORMONES ARE CHEMICAL
MESSENGERS

THE HORMONES ACT AS A TEAM
OF CHEMICALS THROUGHOUT
THE ENTIRE BODY



HORMONES CONTROL THE SETTINGS IN OUR BUILT-IN
OPERATING SYSTEMS AT A CELLULAR LEVEL
e.g. bones, muscles, nervous system, brain function,
the heart, blood vessels, digestion, breathing



RESPIRATION



STRESS



DNA



EXERCISE



FOOD

HORMONE LEVELS ARE IMPACTED BY CO-FACTORS
Some we can make conscious decisions over, some we
cannot. e.g. ageing, genetics, disease and conditions,
environment, stress, nutrition, movement, respiration,
sleep, lifestyle – smoking, alcohol, social factors



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PERIOD FACTS

The inside track on all things menstrual



THE BLEED

HOW MUCH?

3-7 days of bleeding per period.

Average 40 ml = volume x1 hens egg - per period

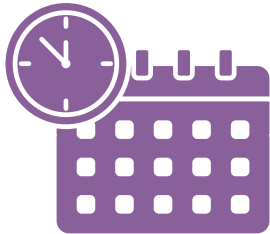
More than 80 ml is classed as heavy.

A single pad holds 5ml = 1 teaspoon

A clot of menstrual fluid bigger than a 10p piece is considered heavy.

PLEASE SEE A GP IF:

Heavy periods are affecting your life; you've had heavy periods for some time; you have severe pain during your periods; you bleed between periods or after sex; you have heavy periods and other symptoms such as pain when peeing, pooing or having sex



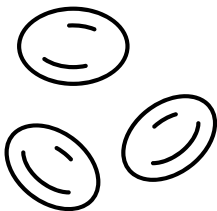
CYCLE LENGTH

WHAT IS AVERAGE?

Menstrual cycles are typically variable.

Cycle length usually varies by 2-4 days each cycle, with most people's cycles being between 21- 40 days in length.

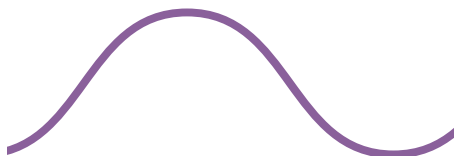
28 days is just the average cycle length



MENSTRUAL FLUID

WHAT IS IT MADE OF?

Menstrual fluid is not the same as the blood from a cut. Blood makes up about 50% of menstrual fluid, which also contains stem cells, an enzyme called 'plasmin' that prevents the blood from clotting, vaginal fluid, cervical mucus, water, common electrolytes and at least 14 proteins. The colour may vary from bright red to dark brown. Darker colours are normally when the menstrual fluid has taken longer to leave the uterus and is not normally anything to worry about. It is normal for the colour to be different from the beginning to the end of your bleed.



HORMONE FLUCTUATIONS

ESTRADIOL - THE CONDUCTOR

Estradiol levels range from 30 - 300p/ml

Oestrogens are also made in the adrenal glands, liver, brain, fat cells and directly in certain tissues like skin and bone.

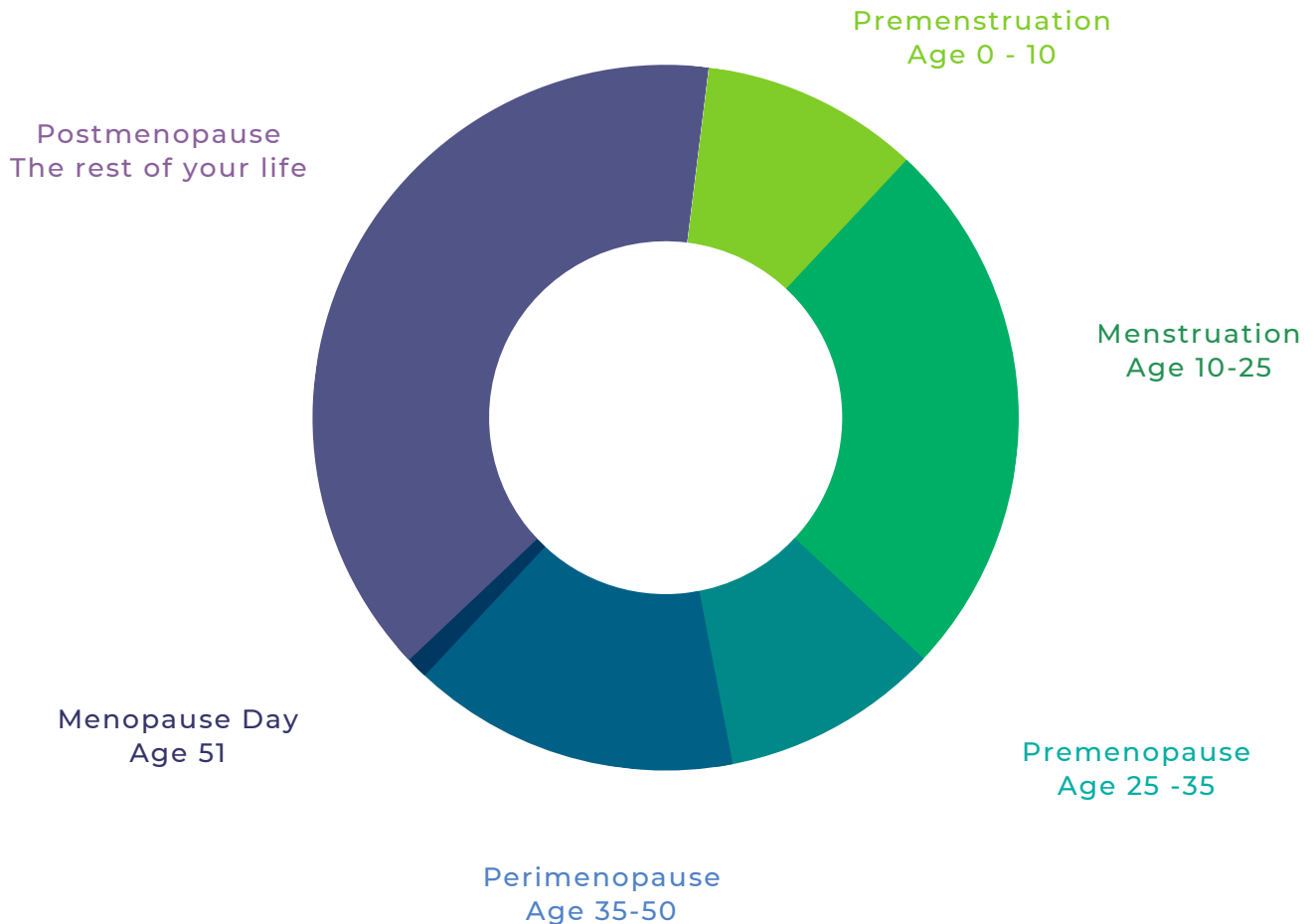
Testosterone is made in the ovaries too



MENSTRUAL MAP

Approximate ages and different 'typical' time frames

(based on living from 0 to 100!)



85% OF THE REPRODUCTIVE AGEING BLUEPRINT IS SHAPED BY DNA

You are likely to follow a similar pattern to a close female relative

MENOPAUSE IS ONE DAY OR MOMENT IN TIME WHEN YOU HAVE GONE 12 CONSECUTIVE MONTHS WITHOUT A PERIOD

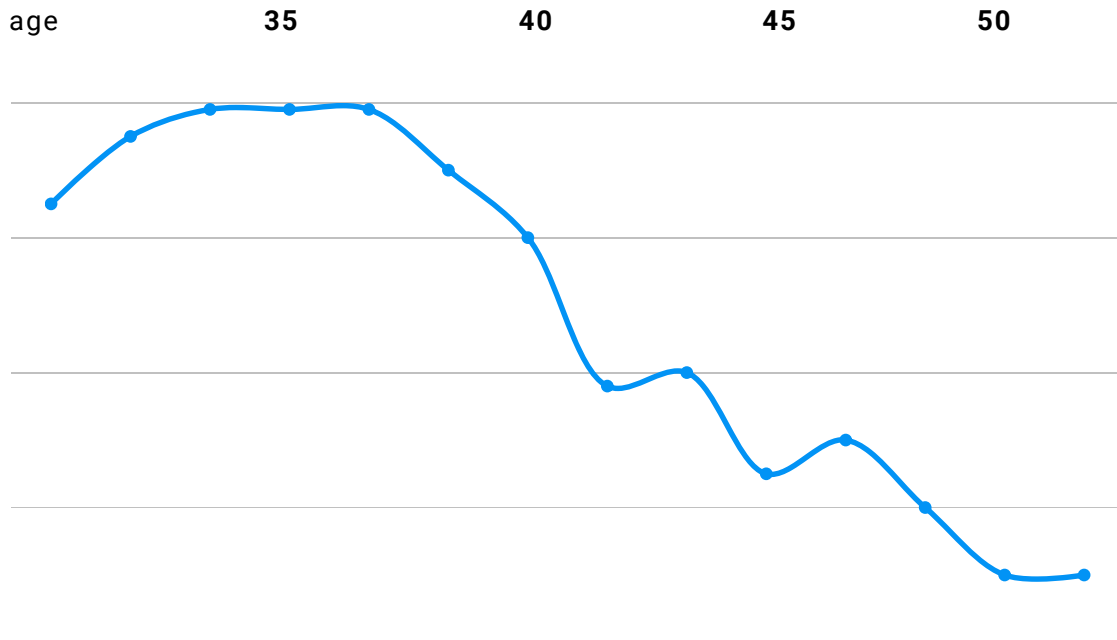
Menopause can happen at any age, but the average age of Menopause day in the UK is 51.

95% OF FEMALES EXPERIENCE MENOPAUSE DAY BETWEEN THE AGES OF 44 - 56



ESTRADIOL LEVELS

Hormone levels change over age. Ovarian activity changes over time and the circulating levels drop quite rapidly during perimenopause.



OESTROGEN IS A CATEGORY OF HORMONES.

Estradiol is the oestrogen created in the ovaries during the menstrual cycle.

OESTROGEN IS A ANABOLIC HORMONE

It promotes growth and strength and also plays a vital role in supporting the 11 systems of the body:

Cardiovascular - heart, veins, arteries, temperature

Digestive and excretory - mouth, stomach, intestines

Endocrine system - influence other hormones

Exocrine - skin, hair, nails, sweat

Immune and lymphatic system - defense against disease

Muscular system - movement and metabolism

Nervous system - sense and the brain

Renal and urinary system - kidneys

Reproductive system - periods and pregnancy

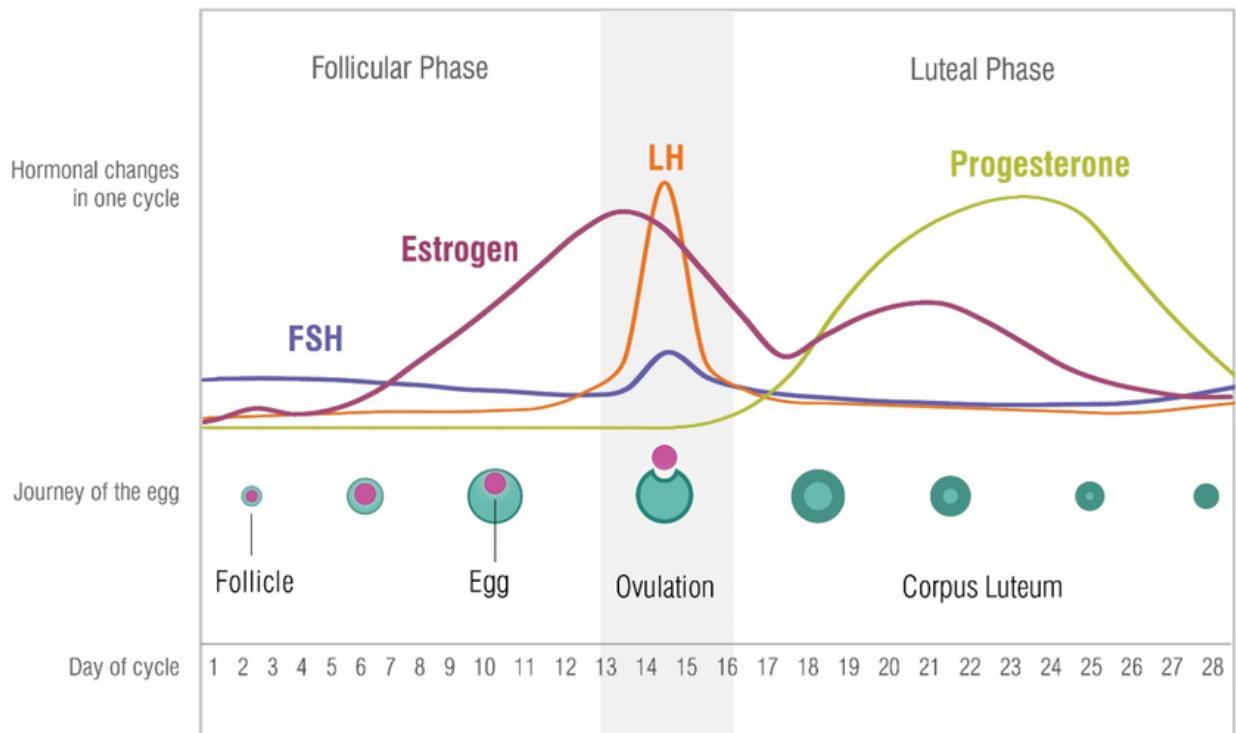
Respiratory system - breathing capacity

Skeletal system - bones formation, tendon and ligament flexibility

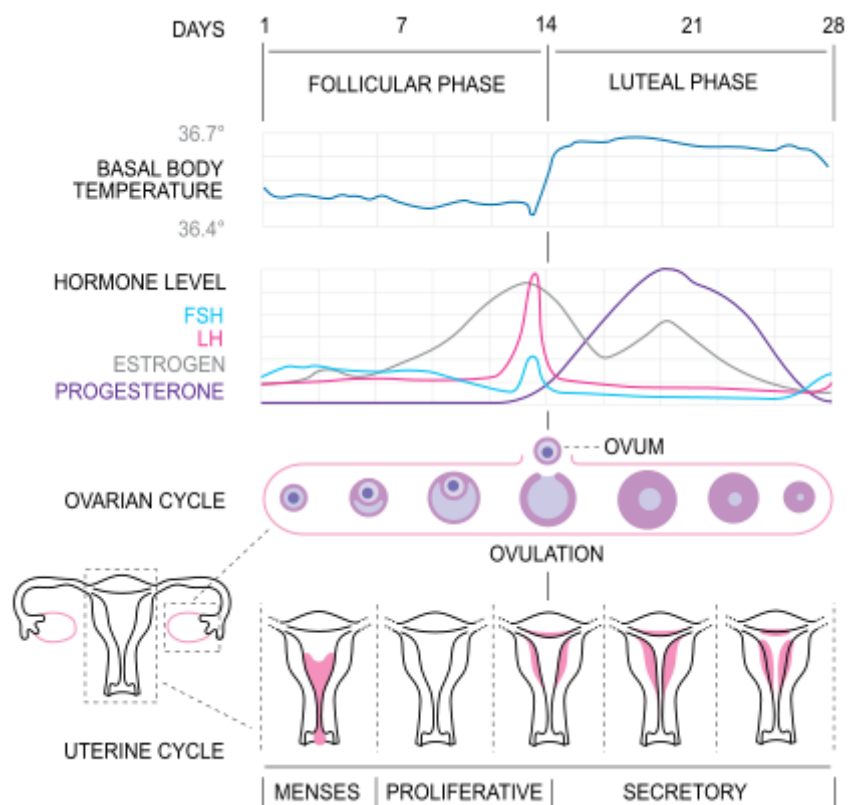


MONTHLY LEVELS

These image represent the monthly levels of the 4 key hormones, the ovarian cycle and the uterine cycle.



This illustration is an example of a 28-day-cycle. Hormonal changes and day of ovulation vary with cycle lengths.



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During your period, the wall of the womb starts to contract more vigorously to help the womb lining shed as part of your period.

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