

Women's hormones through their lifetime.

Hormones 101

We hear a lot about hormones - but what actually are they? They are chemicals that act like messengers in the body. They are made in one part of the body and make changes to other parts of the body, like cells and organs. An example that we will go into more detail in, is progesterone which is produced in the ovaries and makes changes to the lining of the uterus.

What are women's hormones versus other hormones?

Women's hormones are ones that have specific roles in women's health, for a whole range of reasons like reproductive health, bone health, heart health, hair growth, and influence body weight.

How do hormones impact you on a daily basis?

You probably know that long-term i.e. Over the years, hormones play a huge role. But you might not know about how daily fluctuations in hormones affect you! Did you know that a tiny increase in the hormone progesterone can cause major sleep disturbances that can last many nights!?

That's why I'm so passionate about helping you understand more about your hormones - so you can live your life to the fullest free from disturbances. In this article, I will take you through **your life in hormones** - and how you can best care for yourself at every stage.

Hormones at puberty

The age of the onset of puberty differs between people - it depends on genetics, upbringing, parents' age at puberty, and lots of other different factors. But one thing is the same for everyone: puberty officially begins when the hypothalamus (a super important part of the brain that's involved in all body functions) begins to produce a hormone called gonadotropin. This affects the ovaries (and testes in those born male too - but we are only discussing women's health) to increase the sex hormone estrogen.

There are actually five key stages that happen during puberty, which is known as reproductive development. One of the first stages is the start of menstruation i.e., periods. Periods continue from the onset of puberty up until menopause which marks an end to a women's reproductive years.

Hormones in the menstrual cycle

The menstrual cycle is a cyclic pattern that women's bodies go through from the onset of puberty to menopause. There are many hormones at play during the menstrual cycle, and because women's health can be a bit of a taboo there's lots of uncertainty of what's normal and what's not.

A "normal" cycle

A normal/a textbook menstrual cycle lasts 28 days and is split equally into two halves, the follicular phase and the luteal phase. Each phase is dominated by a different hormone; the follicular with estrogen, and the luteal by progesterone - which is often called "the pregnancy hormone."

But here's the thing not a lot of people know; only around 13% of women have this "normal" cycle! Which leads a lot of women to think there's something wrong with their bodies, when actually they might be completely fine.

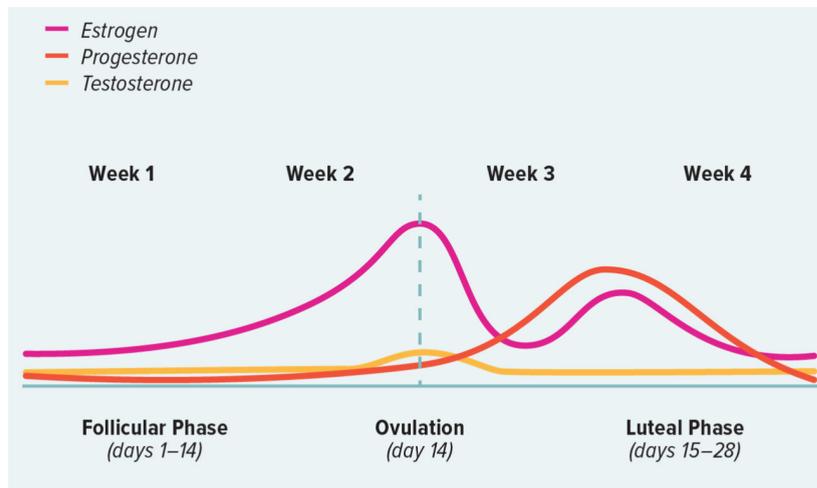


Image: [Healthline](#)

How to care for yourself week by week

- **Week 1** - This is the start of your cycle, and is marked by the start of menstruation. Make sure to have plenty of iron-rich foods like meats, legumes, dried fruit, and green vegetables to replenish the lost iron stores. Taking some time for yourself, self-care, and relaxing are also key here.
- **Week 2** - Making sure to eat lots of fibre here is key to helping your body flush out excess estrogen going into week 3.
- **Week 3** - You might find that you feel really energised, fun, and free during this time - so take some time for you! Make sure to drink plenty of water to stay hydrated.
- **Week 4** - This week is key for self-care, as this is the week before your period. You might feel quite a lot of PMS and need time on your own, so make sure to take it.

The main hormones affecting the menstrual cycle are:

- **Estrogen** - Stimulates the growth of the egg follicle, in preparation for a fully developed egg to be released on the day of ovulation. Estrogen is also essential for bone growth and maintenance (reduces osteoporosis risk), heart health (reduced estrogen can reduce "good" cholesterol levels and increase cardiovascular disease risk), and cognitive health. Just like too little estrogen can cause problems, too much estrogen (estrogen dominance) can lead to irregular periods, missed ovulation, difficulty getting pregnant, PMS, trouble sleeping, dry skin, fatigue, and low mood.
- **Progesterone** - Known as the pregnancy hormone because it increases after ovulation, to keep the uterus lining thick so a fertilized egg will be able to embed. If implantation does occur, elevated levels also stop contractions of the uterus wall which stops a period from beginning. Elevated levels of progesterone 1 week after ovulation are thought to be mood-enhancing, and promote calm and wellbeing. While low levels of progesterone after ovulation (like in the hormone condition PMDD) mean high anxiety, irritability, anger, and feelings of despair.

- **Luteinizing Hormone (LH)** - Made in the pituitary gland and is needed for menstrual cycle control. Its main role is triggering the release of an egg from the ovary - the "LH surge" is seen on the day of ovulation where a woman feels warmer than usual!
- **Follicle Stimulating Hormone (FSH)** - This is essential for growth of ovarian follicles in the ovary i.e undeveloped eggs need FSH to grow and be mature eggs ready to be released at ovulation. High levels of FSH (as per a blood test) can indicate poor ovarian reserves, PCOS, or menopause, and low levels of FSH can signal a concern with the pituitary gland.
- **Testosterone** - People often think women don't have testosterone, but they do! Testosterone (alongside estrogen) is needed for growth, repair, and maintenance of reproductive tissues, bone mass, and behaviours like libido and energy. High levels of testosterone can be seen with symptoms like dark, thick facial hair, acne, difficulty getting pregnant, and irregular periods or ovulation. High testosterone levels may be caused by PCOS, which affects 1 in 10 women.

A more accurate "normal" cycle is anywhere from 21-35 days, which don't range more than 4 days. So, 25 day cycles that range between 21-28 is normal but a 25 day cycle that ranges between 20-30 days is irregular.

There are many reasons menstrual cycles might be irregular i.e., missing periods or missing ovulation (anovulatory cycles), and follicular or luteal phase lengths differing. These include:

- Hormonal conditions like PCOS, hypothalamic amenorrhea, and endometriosis
- Lifestyle related factors like stress, exercise levels, smoking, and diet

Hormones past reproductive age

The menopause

After decades of monthly hormonal fluctuations, your body starts to come to the end of its fertile days, and you reach the menopause. The average age to start going through the menopause is 51 in the UK, but it can vary widely from mid-late 30s to late 60s. The age you go through menopause will depend on your genetics, upbringing, and lots of other factors.

Menopause is the end of your periods, but what most people don't realise is that there's 3 stages of menopause: the perimenopause, the menopause, and postmenopause. So actually what is named "menopause" is actually the day your final period ever starts.

The perimenopause is actually what people usually mean when they say they are "going through the menopause" - it's the symptoms like irregular periods, night sweats, hot flashes, loss of libido, dryness in the vagina, and weight gain.

From the onset of perimenopause, the hormone estrogen does not go up and down in a monthly cyclic pattern, instead it starts to decline until there are low levels that never increase again. Since estrogen is the main female sex hormone, all other reproductive hormones like progesterone, LH, and FSH are also affected. For example, progesterone and LH decrease, and FSH will temporarily increase due to reduced ovarian function.

How much did you learn?

Wow! That was a lot of information, and I hope you found it extremely useful. I hope this article allowed you to understand more about your hormones and how they're affected at different life stages.