

Female Athlete Education.

THE MENSTRUAL CYCLE: BACK TO BASICS

Defining the terms:

Menarche: The **first occurrence of menstruation** (aka your first ever period!).

Menstrual cycle: A fairly predictable, and repeating, **cycle of changes in sex hormones** (such as oestrogen and progesterone) making pregnancy possible. Day one of your cycle begins on the first day of your period and runs until the day before your next period!

Period (menstruation/menses): **Shedding of the endometrial lining** (of the uterus) through the vagina, if the egg released at ovulation is not fertilised.

Ovulation: The **release of an egg(s) from the ovary** (usually this occurs at the midpoint of each menstrual cycle).

What's normal?

Reminder: The menstrual cycle is **highly individual**, but there are some **common characteristics**:



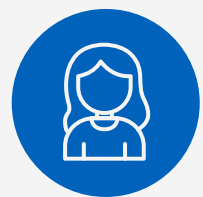
Cycle length:
between **21 and 35**
days (21 to 40 days for
teens).



Period length:
between **2 to 7 days**.



Period blood flow:
shouldn't be **excessive**
or **interfere** with your
quality of life.



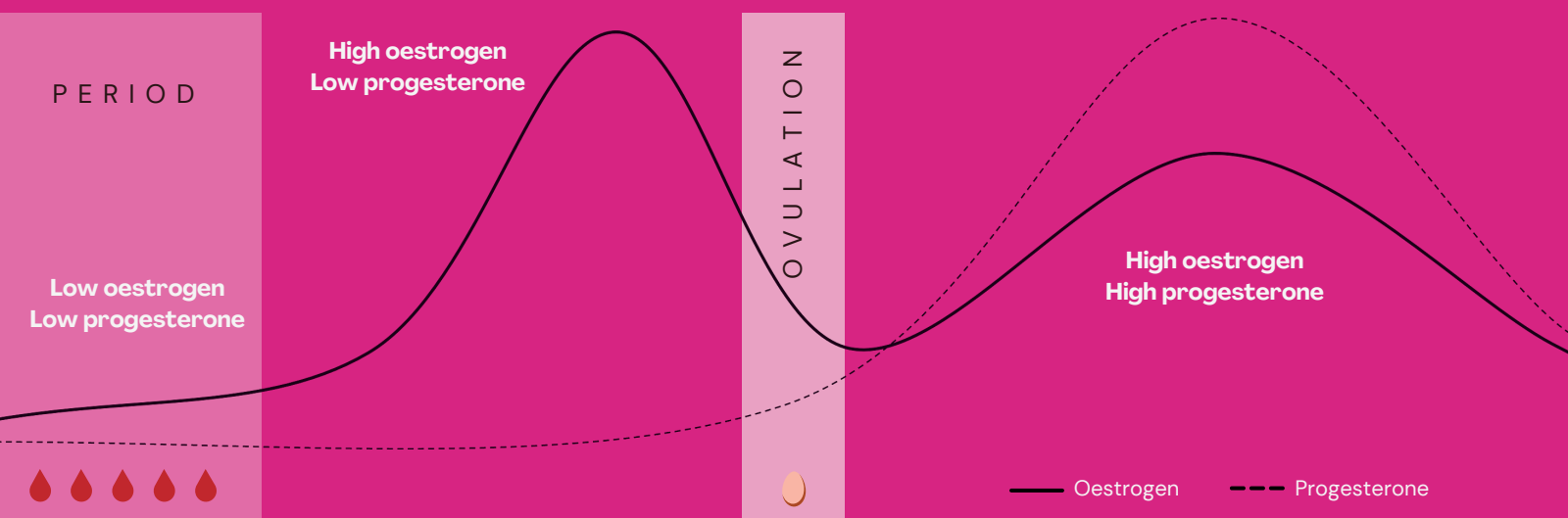
First period age:
between **9 and 15**
years old.

The menstrual cycle:

The menstrual cycle is controlled by the **hypothalamic, pituitary, ovarian axis** (or HPO axis for short). Whilst there are many hormones involved in controlling the menstrual cycle (e.g., GnRH, FSH, & LH), the **two main hormones** that we're interested in are **oestrogen and progesterone**.

FOLLICULAR PHASE

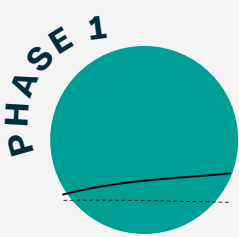
LUTEAL PHASE



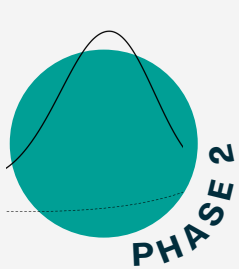
The above diagram represents the fluctuations in sex hormones across a textbook 28-day cycle. Please note we're not all textbooks and only 13% of women have a 28-day cycle!

The phases:

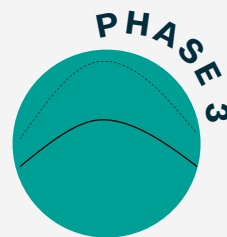
The varying concentrations and ratios of oestrogen and progesterone across the menstrual cycle give the cycle its **four main phases**:



PHASE 1
Menstruation occurs. Oestrogen and progesterone concentrations are **at their lowest**.



PHASE 2
Oestrogen rises whilst progesterone remains low. Eventually, oestrogen reaches its peak just prior to ovulation before it begins to decline.



PHASE 3
Progesterone starts to rise after ovulation and reaches its peak at the mid-point of the luteal phase. **Oestrogen also has a secondary peak** at this time.



PHASE 4
If pregnancy does not occur, **both oestrogen and progesterone begin to decline.** Because the endometrium is no longer supported, it begins to shed and a new cycle begins.

When to get help?

Speak to your doctor/GP:

- If you haven't started your first period by **age 15**.
- If you have **missed three or more consecutive periods** when your periods were previously regular.
- Period pain/other symptoms that **stop you from performing day-to-day activities or training**.
- **Heavy menstrual bleeding** (e.g., needing to change a super pad or tampon every 2 hours, flooding, large clots, interferes with your quality of life) or **abnormal bleeding** between periods/after sex.
- If you think you're **pregnant**.
- If you have any **questions** about your menstrual cycle/notice a **change** in your 'normal' cycle.

For more Female Athlete Education Resources see:

Website: www.SHEResearch.ie

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