The *Science* of your Cycle

Day 3: Get to know your cycle (Part I)

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Today's goals

- ➔ Learn how your hormones work together to create the changes that happen during the first two phases of the menstrual cycle
- ➔ Understand what "vaginal discharge" REALLY is and why it's important for your health
- ➔ Understand why pregnancy is only possible during certain parts of your menstrual cycle
- ➔ Learn that your body is AMAZING and WONDERFUL (even if it doesn't always feel that way)

Day 2 recap

- ➔ FSH stimulates the development of follicles (egg sacs)
- ➔ LH triggers ovulation
- ➔ Estrogen creates changes in the cervix
- ➔ Progesterone prepares the uterus for pregnancy, counteracts estrogen, and heats up the body
- ➔ Changes in estrogen and progesterone levels are triggered by changes in FSH and LH.

Why we're learning this...

- ➔ We're led to believe that our cycles are mysterious & unpredictable (they're NOT unpredictable...even if they're irregular!)
- ➔ We're taught that we have **no control** over how painful, irregular, or problematic our periods are (we DO have control)
- ➔ We think our periods show up when they want and there's no way to know when they're coming (this is FALSE, even for irregular cycles)
- ➔ We're taught that we can get pregnant any day, any time (we can't)

Keep in mind

- ➔ Your body's goal is to reproduce (how RUDE and presumptuous!)
- ➔ Your menstrual cycle is made up of TWO cycles (it's true!)
  - ◆ Uterine cycle - changes to the uterus during a single cycle
  - ◆ Ovarian cycle - changes within the ovaries during a single cycle
- ➔ The vagina is naturally acidic (which keeps it healthy), but this acidity makes it impossible for sperm to survive
- ➔ If you use hormonal contraception, you do **not** experience a true menstrual cycle

An overview of your cycle

1. Menstruation
2. Follicular phase

We'll cover these today

3. Ovulation
4. Luteal phase

We'll cover these tomorrow

Menstruation (aka your period)

- ➔ The first day marks the start of the menstrual cycle (not the end)
- ➔ It's part of the **uterine** cycle
- ➔ It's when the lining of the uterus **sheds** because a **pregnancy did not occur** during the previous menstrual cycle
- ➔ It typically lasts for 5–7 days

Follicular phase overview

- ➔ It's part of the **ovarian** cycle
- ➔ It's dominated by the hormone **estrogen**
- ➔ It **varies in length** from cycle to cycle
- ➔ It's **sensitive to external factors** like stress, diet, exercise, sleep, etc.

What happens during the follicular phase?

1. The pituitary gland makes FSH
2. Follicles make estrogen
3. Estrogen changes the cervix

1. The pituitary gland makes FSH

- The pituitary gland (in your brain) makes FSH (which stands for **F**ollicle **S**timulating **H**ormone)
- FSH, as its name implies, stimulates the development of a handful of follicles inside the ovaries
- Follicles are tiny sacs that each contain an immature egg

The pituitary gland makes FSH, which causes immature eggs to grow and develop.

2. Follicles make estrogen

- ➔ FSH stimulates follicles (or immature egg sacs) to grow
- ➔ Growing follicles make and release the sex hormone estrogen
- ➔ The bigger the follicles get, the more estrogen they make

Growing follicles make increasing amounts of estrogen.

3. Estrogen changes the cervix

- ➔ The bigger the follicles get, the more estrogen they make
- ➔ Estrogen triggers the cervix (the lower part of the uterus) to produce a special sperm-friendly fluid called **cervical fluid**
- ➔ Cervical fluid keeps sperm alive in the acidic vaginal environment
  - ◆ It is **thick and tacky** when estrogen is low and becomes **clear and slippery** (like raw egg white) when estrogen is high
- ➔ Slippery cervical fluid can keep sperm alive in the female reproductive tract for up to 5 days

As estrogen production increases before ovulation, cervical fluid progresses from **thick and tacky** to **clear and slippery** to help sperm reach the egg.

Day 3 Summary

- ➔ Menstruation is the shedding of the uterine lining
- ➔ The vagina's default mode is an acidic, sperm-killing machine
- ➔ Growing follicles make estrogen that triggers cervical fluid production
- ➔ Cervical fluid becomes increasingly wet and slippery before ovulation, allowing sperm to survive and reach the egg
- ➔ Cervical fluid allows sperm to stay alive inside the female reproductive tract

When your vagina sees sperm:

YOUR BODY IS DOPE.