



The period science we really should have learnt in school





Welcome!

Our menstrual cycles get pretty thrown to the back of our minds. For most people there's a really awkward class at the end of primary school about how our bodies are about to "change".

How we get this strange thing called a period and it basically means we bleed and will get moody. It's not something that's revered, spoken about without shame or even really spoken of.

You probably went on the pill in your late teens, spent your early twenties on it, realising you could take it continuously and just skip bleeding all together.

Maybe your healthcare provider gave it to you because it "fixes your period". Maybe you tried out the IUD or implanon with the promise of it being less invasive on your body and giving you even less bleeds. But now you're getting this itch to come off it all, and you're left sitting in absolute disarray- because what

actually happens when you have a cycle?

Who are these mythical women that talk about using fertility awareness method to avoid pregnancy? What even is a luteal phase? How do I cycle sync? You mean food can affect my menstrual cycle?

There is SO much information out there at the moment. I like to think there's a little menstrual acceptance renaissance going on right now.

Sometimes I think it's just me and my little bubble, but when I mention to women the work I'm doing, I notice how their eyes light up and they start to spill their own beans about it all. It's like they realise "hold up, we're allowed to talk about this now? It's less taboo?"

Sometimes I still get scandalous looks, apparently talking about tracking ovulation in the smoking area at my local Bowls club "makes the men uncomfortable". I'm not one to back down though, I continued.

Anyway, I could ramble for days.

Cycle 101 is just that- a complete (I think) dive into all things periods, cycles, ovulation, bleeds. There are so many other works out there by 100's of amazing women authors that deep dive into all the information covered in this book. This is a dip in the slightly shallow end, it's all the information I would like to be shouting from the rooftops 24/7, but alas, as a word nerd, sometimes the written word is more powerful. So sit back, don't feel awkward because I have no filter when it comes to periods, and hopefully start to learn the info about your body that I'm sorry you didn't get to learn a decade ago.

Where to start?

It's a bit difficult to pick a start point to be honest. I was about to write a mini ebook and now i feel like I'm going on an absolute adventure. Long live pregnancy creativity. Yes as of todays writing I am 23 weeks pregnant- go figure.

So even though I currently don't have a menstrual cycle- 5 year ago me would have NEVER thought this- I miss my cycle. I miss my bleed. The energetic movements of my mood emotions and everything inbetween.

Living in a world that is a bit male centric, the knowledge that womens bodies don't work on a 24hr cycle like a mans has been lost. Do you ever have those days you feel so flirty it hurts and everything feels easy? And other long long days where your mood is sour, you're snacky, sore? Or just blah.

It's not an inherent you problem, it's that our bodies work on a monthly cycle.

Disclaimer- you've probably heard 'a period should be 28 days' false. Few reasons-

28 days has been popularised as the 'perfect time'

because.... Have a ponder..... pill packets come in 28 pill packets. 25 pills wouldn't have worked in a nice square. There is some merit too it, tracing menstrual knowledge back, a lot of research suggests women used to cycle with the moon cycle. Hold your hats if you're not very woo, there is logic in this.

First with this, the moon cycle is 29.5 days, so they haven't pulled the 28 from nothing.

Actually we'll touch on the moon connection later. For now, know that a healthy cycle is anywhere from 25-35 days. You'll have outliers here, you'll have discrepancies, and professionals who may slightly skew the window of average. But for all intents and purposes here, I'm going to refer to the cycle as 32 days long. Firstly, it's my average, I've seen it as an average with other women I've worked with. And the 28 day cycle gets pushed about a lot and I want the other girlies who feel their bodies wrong when they read that to not feel like they're a problem.

Even though it's commonly called the menstrual cycle, it's actually two different cycles reliant on each other, the chicken and the egg scenario- which came first? The Ovulatory cycle is the lesser known one. In my own interpretation of it, it's the norm to call it a menstrual cycle because it's the most obvious aspect of the cycle, outwardly at least, ie bleeding.

So before we can dive into menstruation, we're going into ovulation. It's a little bit of science because I must confess, I love to know how things work. I'm kind of an if you understand it you can embody/accept/utilise it girl.

Note first on days. Working on 32 days we'll go with; Days 1-5 Period

> Days 6-16 Follicular phase Day 17/18 Ovulation Days 19- 32 Luteal Phase

Lets dive into the phases!

Ovulation

Ovulation is the creme de la creme of human existence, because it starts human existence. It's when an egg is released from the ovary. The ovary being a pair that sit either side of your uterus. This picture is a bit of an illusion though, it's actually all squished in together. Think of a beautiful dress you've got laid out on your bed, it's actually more like the dress when it's stuffed in the bottom of the washing machine after a spin cycle. Mish mashed together.

Now, your ovaries have housed your eggs (sometimes known as follicles or ovum depending on maturation, we'll stay with egg for this book) since you were 3 months in utero. Yes, the womb. Some science is currently saying women can create more eggs as adults, however current science generally says women will have all the eggs of their lifetime, from when they are in the womb. Which in theory means you, as an egg, existed inside your grandmothers womb while your mother grew in it. Wild hey!

Hormonal changes trigger an egg to be released from your ovary. Here it has a 24-48hr window to move down the fallopian tube into the uterus. This is the time conception can happen. It is a very tight window though, because the egg has a very short life span out of the ovary. If it hasn't met, connected and fallen in love with a sperm(s) in the 24-48hr window, it breaks down and is reabsorbed by the womb. That is the short event that is ovulation.

Luteal Phase

or "the corpus luteum is badass"
What comes next is my favourite, most misunderstood
bit for women, I reckon.

So, the egg has said bon voyage to the ovary. It didn't just live loose in the ovary though, the egg actually existed inside a very small follicle, kind of like its own womb. Once the egg leaves the follicle, the follicle goes full midlife crisis like 45year old parents who just had all children flee the nest. It's party time in the follicle.

It transform into the fastest growing endocrine (hormone) gland in the human body. The Corpus luteum (dramatic music)

The corpus luteum is a fucking superstar.

It's key job role for the next couple of weeks is producing the hormone progesterone. The chill, down to earth sister of estrogen.

See, even though the egg has probably broken down in the womb, ie no baby, nobody told the corpus luteum, she's full fire assuming the egg was fertilised and the womb needs to be prepped for a baby to grow, and she PREPs.

confirm the egg and sperm did find each other, it's already realllllll far behind. There's not enough of a cushy home in the womb for it, the body hasn't been storing nutrients to speed up growth, fuck all has happened really and with that, the egg sperm combo goes nowhere.

So, why do we need the progesterone production? You've probably heard of the baby having a placenta in the womb, the organ that provides for it, feeds it, gives blood, oxygen. Literally everything transfers from mama to buba through this bad boy.

Placentas aren't a dollar a piece though, they take time to grow along with the baby (it is an entire organ, cut her some slack). So before the placenta takes over being the babies sugar daddy, around 10-12 weeks pregnant, it's actually the corpus luteum, creating progesterone that picks up the slack.

So the job an entire organ is grown for, that's what the corpus starts to cover.

Progesterone

Disclaimer- hormones travel in your blood, your blood travels everywhere. Hormones can affect countless bodily functions and systems. We're focusing on the direct menstrual cycle affects at the moment.

Progesterones got a few tasks here. Bit of a cause and effect with some parts. And no not all things are always fully understood in women's reproductive science.

- ☐ Thickening the lining of the uterus to provide a cushy home for the egg to implant.
- ☐ Upping your body's base metabolic rate by about 200k, more food so you can provide for baby.

☐ Slows digestion down (yes pre period constipation has a scientific reason) this is so the body has more time to absorb more nutrients from the foods ☐ Calming hormone. It actually brings you inwards more. Studies have shown women prefer the company of familiar people at this time. From an evolution standpoint you're closing your circle so that you are protected in this delicate time of growing a baby (remember your body thinks you're pregnant!)

About 10 days after you ovulate (on average) your body realises there is not, in fact, a bouncing baby making home in your uterus. This triggers outrage from your hormonal system and basically hormone levels drop drastically. Mainly here progesterone and estrogen. This steep decline in these wonderful hormones causes your uterus to basically give up and clean out shop. Ie shed the uterine lining by contracting, getting ready for a fresh start next cycle.

Why's my period late? Or, why does stress affect my cycle?

This is probably the most common misconception I hear.

"My period was 5 days late, I have NO idea what's going!"

*fumbles wondering if I'm pregnant even though I didn't have sex

In almost all situations, it's actually a delayed ovulation that leads to a delayed period. We say almost all, because there are a couple of things that will delay your period without delaying ovulation, but that's for later.

How does our body delay ovulation?
Our bodies are wondrously smart, like, insanely. We easily bypass the fact we're alive at all, breath, digest food, grow hair. Life is astounding frankly.

Our bodies know that carrying a little baby and sustaining it for 9-10 months is no teeny task. It's monumentally huge and will affect every system in your body. Plus put you through a risky situation of child birth. Not to say child birth is *inherently* risky in a negative way, but it can have its moments.

Your body knows this, and it's figured out that not all environments are going to be conducive to a healthy, strong pregnancy and birth.

This is where stress comes in. The bodies ability to allow an egg to be released and travel down to the uterus for conception, relies on feeling it is a safe time to conceive. Unsafe times in earlier years would be famine, drought, being chased by sabre tooth tigers, classic things to illicit a stress response.

Stress in these times can be more underlying and less obvious. Diet, sleep pattern changes on international flights, overexercising, being underweight, being overweight, break ups, exams, deaths, work bullshit, blood sugar regulation, mood disorders. Truly stress can come in any shape or form. And even though the stress of an exam or your sleep pattern changing isn't as hectic your body as famine. Your bodies stress response doesn't know that. Ever heard people saying lately that our bodies don't know the difference in stress between a sabre tooth tiger chase and a work deadline? That's exactly what is going on here. Your body has hit a stress threshold and gone "oh conceiving isn't optimal, I'll let the egg keep on waiting

in the ovary, probably wait a few days."

Now touching on what we said above about 10 days after ovulation your body realises no magic happened and your period is triggered.... This is why your period may be 'late'.

A classic example of this is you normally have a 32 day cycle, so you ovulate about day 17/18. From day 15 you end up at a festival, time of your life, little sleep, minimal food, dancing your absolute ass off, come back to reality, have a bit of a cold as well (classic). This has all put stress on your system and your period doesn't start until day 36. Those days of boogying in the bush, your body decided it wasn't prime for conceiving, so held ovulation off for a few days... day 22 seemed smarter.

I say 'your body decides' pretty loosely, of course it's all hormone interactions with your stress system, but you've essentially given your body ideal circumstances to delay ovulation.

Ahh the period, bless, nearly every woman's most dreaded time of the month

So I hope there's kind of more an understanding about how we got here. Even though we're discussing the actual bleeding part, we're going to touch a bit on the later days of the luteal phase too, because those changes tend to be the hard lead up to le period.

So, hormones are dropping, uterus is shedding. Mood is likely at an all time low. Staying in a little doona fort sounds like the best idea right now.

Now as much as I try to avoid straight comparisons of female bodies to male bodies, I think female hormones are commonly grossly misunderstood here, but most people know testosterone, so we're going for a blunt sex analogy.

You've probably heard about testosterone. The hormone that makes men, men. It gets touted as being responsible for everything dude related: sex drive, wanting to punch things, protect people, build muscle, grow hair, being strong, sweep us off our feet etc etc

Now imagine if we just kind of.... Shut down most production of this baller hormone for a few days. Like, slate wiped, endocrine glands going on strike. Men would be, at the core, less of who they normally are without this dude defying hormone. (note, women also have testosterone, but in smaller amounts!)

That's akin to what happens to women during the late luteal and menstrual phases, but our hormone switches are for progesterone and estrogen. I do again, apologise for needing to compare to men's testosterone, but it's really just a more widely known hormone, and I love a good analogy.

So, for us womenkind, what happens when our

So, for us womenkind, what happens when our hormone levels plummet?.

For one we need to understand that estrogen and progesterone are also mood stabilising hormones (among countless other things!).

They affect our energy, our mood, our libido, our lubrication, our breasts, our bodies ability to store water, our poop, our sleep hormones. And then throw in the uterus having a shedding party- causing cramps, leg aches, butt aches, nausea, dizziness. Neither of these lists are exhaustive.

It sounds like a lot, and for some the symptoms and are extremely debilitating and agonising. PMDD and endo girlies we salute you.

A bit on blood

A healthy bleed can be around 3-7 days. Blood should be a rich, bright red. It's quite hard to tell a woman what a normal flow looks like, who knows how many mils are in a tampon? But some notes to consider-Going through a pad or tampon every couple of hours is a considered a high flow and might want to chat with someone.

Menstrual cups and reusable pads/underwear hold more, changing 2 or 3 in times in a 24hr period can be considered moderate.





Follicular Phase

Your body has gone through a little dark and dreary winter and you've emerged into a spring! You feel energised again, life feels a bit brighter, you're not sore, making plans is a breeze. It's like watching those spring flowers bloom all over again. This is the lead up to ovulation, around days 6-16.

Follicular phase is when estrogen comes back to the party, externally you're feeling flirty and fun again. Internally, your ovary is gearing up to pick the most matured egg to go meet the sperm.

A little bit on egg maturation. We touched very briefly on the egg being called an 'ovum' at the start in the ovulation section, basically even though we have many eggs at birth, they still need to go through a small maturation process before they're ready for their big event.

Egg maturation takes about 3 months, so at any one time you've got multiple follicles (housing the ovum/egg in the ovary) that are growing and trying to nourish their egg so it's picked as the chosen one.

A note here for PCOS girlies- this is where you're at.
While we all have multiple follicles working at maturation, in PCOS there is a higher number of follicles working to mature, and not reaching maturity. Essentially it's a bit like an ADHD/crafty girlie working on many projects at once and not getting anything finished. The pill is touted as 'solving it' when really it's just shutting ovulation down all together. Lots of research, ok some research has been done showing that dietary changes can start to shift this situation. Remember not any one thing in the body acts on its own accord, everything is interconnected, and the interconnectivity here is PCOS with insulin/hormone imbalance. Will absolutely touch more on this soon!

Now while estrogen plays a big role in the egg maturation, it's also starting to thicken the lining of your uterus, again. In your last cycle when the uterus realised it wasn't housing a little cherub, the beautiful lining the estrogen and progesterone had created, got torn down, nothing but the best and freshest for the potential babes!

So the estrogen gets this process going again, adorning the walls in thick cushy cells that a baby could move into.

Ok, that was a lot!

And yet I feel I've barely touched the surface of the life of a menstruator. I hope this summary has given you more of an understanding of the astounding things our bodies do monthly, behind the "it's just a period".

If you have any questions or even just want to chat, you can find me at <u>periodtalk.com.au</u> or over on instagram at periodtalk.alex

Much love Alex x



