



**Transcript**  
**Class 1: Hormones 101**

Hormones 101: Optimizing Your Hormones

If you feel like your hormones are complicated, you're not alone because they are complicated. How many times have you felt dread as your period is approaching, or felt at the mercy of your cravings? Maybe you found yourself canceling plans with friends, dodging text messages and crying uncontrollably to TV commercials. Those Tim Horton's commercials - they get me every time!

We deal with a lot! Painful periods, mood swings, bloating and inconsistent cycles! Not to mention, our hormones change throughout our seasons of life, making it feel like it's impossible to navigate. Sometimes, it can feel like your body is betraying you, but I want you to know that it's exactly the opposite. When things go weird, generally it's your system trying to tell you something.

In this course, I'm going to teach you how to decode your symptoms and work with your body to make your hormones work for you, not against you. I'm talking less mood swings, more stress resilience, better burnout management and maybe even easier periods. We'll cover everything I talk about with my patients, to help you understand what your hormones are trying to tell you, to get rid of the overwhelm, the mood swings and the hot flashes, to sleep better, move differently and feel like you've got a handle on your body.

I am so happy you're here because in this course, I'm going to help you understand how your body works, which hormones may be driving your symptoms, and what to do about it. We are going to talk about all the major players in the endocrine system, which is our hormonal system. We'll be diving into sex hormones, like testosterone, estrogen and progesterone. We'll cover hormones that help us balance our blood sugar and control our thyroid and adrenal function.



We've also done something really unique in this course that is unlike many of the hormone courses out there. We are giving you information that spans a woman's life cycle, from just starting your period to life in menopause. We're giving you access to information that will serve you your entire lifetime. Pretty cool, right? We're going to touch on hormone replacement therapy, how to set yourself up for perimenopause success and, hopefully, transition into menopause knowing exactly what's to come.

That means you will find value in this course for years to come.

So let's get started.

The first step in balancing your hormones is knowing what imbalance looks like. I'm going to take a guess here and say that if you're here, it's probably because your hormones are less than optimal. Maybe you're tired of feeling mood swings every month, maybe you just had your IUD removed or just came off the pill - maybe you're considering going ON a hormonal contraceptive to help manage your flow, cramps or mood. Because, you know as well as I do, when your hormones are off, you feel it. It can consume all areas of your life, your mood, your marriage, your relationships, and even your productivity.

Hormonal imbalance can take on many forms. You might experience acne, fluid retention, mood swings, excessively crying or sadness, headaches, oily skin, dry skin, changes in your voice, joint pain, painful or heavy periods, irregular cycles or no cycles at all. Even super light periods, although they seem like a good time, may be a sign of hormone imbalance.

Take one of my patients, for example. Rebecca was 30 when she and I first started working together. She came to me concerned about her oily skin and irregular cycles. She also had a really hard time losing weight. While her symptoms were telling us pretty clearly which hormones were her primary troublemakers, we confirmed our suspicions with the same lab testing we'll be reviewing in this course. Rebecca's labs revealed she had elevated levels of testosterone, making her skin oily, and insulin resistance, causing her body to hold on to weight. Her lab results, along with her story, led to the diagnosis of PCOS, polycystic ovarian syndrome, which we will talk about later in this course. Together, using the exact tools you'll learn in this course, we addressed the root cause of her PCOS.

Now, I also want to share with you the opposite of PCOS, which is where we don't have enough hormones, there's a deficiency of hormones, as was the case with Kathryn. She was postmenopausal. When she came to see me, she had dry skin, so very opposite of Rebecca. She had a complaint of drooping breasts, which might feel a little silly to say, but it's a sign of low estrogen. She was also struggling with joint pain and vaginal dryness, which are also symptoms of low estrogen. And it's not just women who are post menopausal who experience symptoms of low estrogen, if you have light periods, this is something we investigate and it can make it difficult to build that uterine lining, especially if you're looking at getting pregnant.



Then there's the flip side of light periods, and that's super heavy flow. Erin, a 25-year-old woman, was complaining of extremely heavy, painful periods. I'm talking hot water bottle hugging, popping Midol, and feeling like she couldn't leave the house most days of her cycle. Here's the thing, while that was a sign of too much relative estrogen, Erin was also experiencing acne, much like Rebecca.

Then there's Megan, she came to see me because her periods were jumping all over the place. She was having a light period one month, and a heavy period the next. Her mood was fine one month, and she wanted to break up with her partner and ship her kids to boarding school the next. Turns out, her hormones were actually fine, her system was just responding to burnout. She was having anovulatory cycles, and you'll get those tools to understand how burnout impacts your hormonal health.

You see, hormones can show up in a whole lot of complicated ways, but in this course, we are going to clear the waters and make it super easy for you to understand your body. We are going to dive into estrogen, stress and testosterone in detail a little bit later in the course. I can't wait for you to understand all of this.

We need all of our hormones to have balance in our system. In fact, I like to think about our hormones like a symphony. When every instrument is in tune, they play the most lovely song. If just one instrument is out of tune, that is one hormone is out of balance, the entire piece is thrown off and you feel it. You not only hear it, but you feel it.

## Hormones 101: What Are Hormones?

So what are hormones? They're chemical messengers produced by the glands in your body. They send information to all the organ systems of the body to relay messages and exert specific actions on our tissues. Where they are produced, and what they exert their actions on depends on the specific hormone

Starting from the top, the pituitary gland, which sits just a few inches behind where my glasses are sitting right now in our skull, controls almost all of the other glands in our body that are downstream from it. Some people refer to the pituitary gland as the *master gland*. In some cases, the hypothalamus, another gland located in the brain, tells the pituitary to turn off and turn on signals. The pituitary gland in the brain is responsible for sending out many hormones that then go and stimulate our other glands to produce their hormones, such as thyroid, ovaries, and adrenal glands.

Let's go through some of these pituitary hormones.

The first is follicle stimulating hormone, or FSH, which stimulates the maturation of the ovarian follicles in preparation for ovulation. Basically, it gets an egg ready to ovulate. It also controls the amount of estradiol that your ovaries are producing during the follicular phase of your cycle. LH, or luteinizing hormone, is produced by the pituitary and triggers ovulation and the development of the corpus luteum, which is how we get our progesterone. ACTH and TSH, these signal the adrenal glands and the thyroid. The pineal gland, which is another gland found in the brain, produces melatonin (that's your sleepy hormone) and is responsible for our circadian rhythm as well as cyclical changes.

Now, coming down to your throat, you have your thyroid gland right in the front of your neck. It produces hormones that modulate our metabolism, our menses, and our mood. It also allows us to function "brain fog" free and ensures that we have a bowel movement everyday. When we get to the estrogen module, you'll understand just how important this is for our hormones to be kept in check, and how estrogen, progesterone, thyroid, and all of your hormones interact. With your thyroid gland, the majority of thyroid hormone that is produced is inactive T4, with a little bit of T3. But T3 is our active thyroid hormone and it's what your cells actually use. The T4 your thyroid gland makes needs to be converted to T3 to be able to produce the desired effects, which happens away from the thyroid gland. This is known as the HPT Axis. Hypothalamus sends a signal to the pituitary, which sends a signal to the thyroid, which sends a signal back to the hypothalamus.

Coming down to your abdomen, this is where your pancreas lives. The pancreas is responsible for several roles in the body, including secreting a really important hormone called insulin. Insulin is responsible for balancing our blood sugar and storing fat in the body when we have enough energy. This is a conversation that is missing a lot in the hormone conversation, but it's one of the most important when it comes to managing weight, chronic disease, hair loss, acne, and, of course, the balance of your blood sugars.

As we move further down the body, and just behind you, you have your kidneys. There's two little glands that sit on top called the adrenal glands. They look like santa claus hats. They're responsible for producing hormones that enable us to respond to stress, maintain our blood pressure, and to some extent, take over for the ovaries when they decide to call it quits in menopause.

The adrenal glands are the base of our conversation about Burnout. We're going to go into WAY more detail in the next class, so don't fret, friends! The first hormone that we probably all are familiar with is cortisol. It's known as the stress hormone, but in reality cortisol is what allows you to respond to stress appropriately - or at least that's what's supposed to happen when everything is functioning optimally. Your adrenal glands also produce DHEA. This is a hormone from which estrogen and testosterone are made from. This is why those adrenals are so important in menopause. The adrenal glands also produce epinephrine and norepinephrine, which are part of our fight or flight response, and those are released in times of high stress. You're probably familiar with the term adrenaline because that's what these hormones are. They can be a major cause of anxiety. Aldosterone is another hormone that comes from the adrenal glands, and it governs your blood pressure. This is how not drinking enough water can mess with your hormones. Mom was right, not drinking enough water is bad for your health. This axis is known as your HPA Axis.

Now, moving down the body, we find ourselves in the pelvis, which is where our ovaries live. The ovaries are a main source of production for estrogen, progesterone, and testosterone prior to menopause. Your pituitary gland signals to your ovaries to put out different amounts of these hormones, depending on where you're at in your menstrual cycle. This communication between the pituitary in our brain to the ovaries is what causes ovulation, and the release of an egg from the ovary. It's known as your HPO Axis.

## Hormones 101: The Phases of Your Menstrual Cycle

Now that we know what each gland does, let's get into the mechanics about how your menstrual cycle works.

You may have heard of your period as the fifth vital sign, but if not, I'm going to explain it to you. Your vital signs also include your blood pressure, your heart rate, your breathing rate and your temperature. Back in 2015, the American College of Obstetricians and Gynecologists deemed your period the fifth vital sign. Just like the others, your period is an important marker of your health status. This is really what sex ed class should have taught us, but at least you're going to get it now! Once you understand how to look for changes in your period, you'll be able to manage your hormones MUCH easier.

There are three phases to your menstrual cycle: follicular, ovulatory, and luteal phase. Sometimes the period is described of as it's own stage, but it's really part of the follicular phase.

Let's break down each phase so that you can understand the changes that are happening within your body.

Day one of your cycle is the first day that you see blood, that's when your period begins. And TRUE bleeding, so you should need to use a tampon, pad, cup, etc and not just the spotting that can happen before. This first "true bleed" kicks off the follicular phase. This is triggered by a drop of estrogen and progesterone, which causes your body to shed the endometrial lining, which is the lining of your uterus. That's what your period is. Now, about days two to three of your cycle, where you're still having your period, follicle stimulating hormone, or FSH, that pituitary hormone, is beginning to rise. It does this to trigger the ovaries into producing estrogen. Estrogen is the main controller of the follicular cycle, and as you'll come to understand, estrogen is REALLY important.

Around day eight of your cycle, estrogen levels are heightened. This causes anywhere where there are estrogen receptors to almost "plump up". This is why your breasts might be more full around ovulation. Fluid movement is such an important conversation, and this increase in estrogen also has the added benefit of making those fine lines and wrinkles disappear just a bit. Now, around day nine or 10, you may notice that your sex drive peaks up a bit. Well, that's because testosterone is rising at this time. Our production of testosterone is much less than men, but if you notice you get a bit more short tempered before ovulation, it might be your testosterone playing a role.

Now, your body is super smart, it increases your testosterone and elevates your libido about five days before you ovulate so that you'll seek out a partner and have sex, and then retain that sperm, which can live about three to five days. It does this in the hopes that once the egg is released you'll become pregnant. That's why despite the fact that your egg only lives about 24 hours, you're considered fertile for five to six days out of each month.

As we lead into days 12 through 14, approximately (assuming we're on a 28 to 30 day cycle), your ovaries ramp up estrogen production. Estrogen spikes, which stimulates the pituitary gland to release luteinizing hormone, or LH. This LH surge triggers ovulation and an egg is released. It's during this time that the egg travels down the fallopian tube and either implants in the endometrium, if it's been fertilized by sperm, or slowly dissolves and passes out of the body along with the uterine lining during your period.

Estrogen also stimulates the growth of uterine tissue, thickening the uterine lining for the potential implantation of an embryo or a fertilized egg. This is why, if you're experiencing really heavy, clotty or painful periods, we want to double check that your estrogen is being broken down appropriately. It's the predominant hormone during the first half of the cycle, which is also known as the follicular phase, and lasts approximately days one through fourteen.

The ruptured follicle, what is left behind after ovulation, is called the corpus luteum now. It creates progesterone to help stabilize the uterine lining that was developed by estrogen during the follicular phase of the cycle. Progesterone is your "calm the fuck down" hormone. If we don't have enough progesterone being produced you either want to run away (the flight of your fight or flight response) or murder someone (the fight part of the fight or flight response). Maybe even you might want to do both. If you find that's true for you during the week or two before your period, and you can't sleep, you're feeling anxious or you're aggravated with everyone in your life, you definitely need to consider that you might be burnt out. I'll go through this later in our course. But hear me once, hear me right, the sensitivity of your body to progesterone is not something that can be tested for. Testing progesterone simply confirms that you have, or have not ovulated. It cannot tell you how sensitive your cells are to progesterone.

Now, following the ovulatory phase, we move into the luteal phase. Please understand that you must ovulate to make progesterone. Ovulation is that important. About two weeks following ovulation, or days 15 through 28 of your cycle, is the luteal phase. LH, which is what causes you to ovulate, can only survive for 14 days until it drops. It pulses during that time, and it's the dropping of LH 14 days after you ovulate that it the precursor signal to estrogen and progesterone dropping, thereby initiating your period.

Progesterone is most dominant in this phase, but estrogen is present as well. Your progesterone peaks about five to seven days after ovulation, which is why if we want to measure progesterone, we do this on days 19 through 22 of the cycle. Remember what I said about testing progesterone - it's simply confirmatory of ovulation. But, if there's no egg implanted in the endometrium, that LH drops, triggering the drop of everything else and your period starts. Your brain starts talking to your ovaries again, and we start with day one all over again. That's your menstrual cycle.

Side note, show this class to your partner if you want them to understand this a bit more. You can bet their Grade 7 brain wasn't thinking about anything other than that condom and banana during sex ed.

Now that we've covered the menstrual cycle, I want to encourage you to start tracking. You have two pieces of homework if you still have a menstrual cycle. One is to track when you get your period, how long it lasts, and how long it takes to get to the next period.

Number two is to take the hormone quiz included with this course. Make sure you take it today so you can follow along in the course and identify the areas where you need the most support. Know that this quiz is not a substitute for lab tests, but these findings are suggestive of different hormone imbalances. If you think that there are issues for you, you want to find a qualified naturopathic or functional medicine doctor who can help you restore your hormonal balance.

The quiz looks at symptoms of high and low testosterone, estrogen, progesterone, as well as thyroid and cortisol. When you approach the quiz, I want you to think about the top five to seven symptoms you struggle with the most and that you would want to see your doctor about. These should be issues you are currently struggling with, not ones that you've had in the past. This quiz will work well if you just started menstruating, if you're in perimenopause, or you're no longer menstruating due to menopause or other issues.

Now, we've covered a lot today, and this is only a taste of what is to come. I want to encourage you to schedule time to make it to each module even if you think that particular hormone isn't your issue. You see, all of our hormones work together, and just like a symphony can't play when one instrument is out of tune, your endocrine system can't function optimally if one hormone is out of balance.

Now, before you move on, I want you to indulge me in a quick visualization so you can get a sense of how important your hormones are.

Start by thinking of a triangle. At the base of the pyramid you have your adrenal glands and insulin. Above that is your thyroid, and at the very tippy top are your sex hormones, estrogen, progesterone, and testosterone. Your adrenals and insulin are the foundation of your hormones, which is why stress can be so brutal for our hormonal health. You know burnout is something I'm incredibly passionate about, so we will be talking about it in this course, but we'll also be talking about it in depth in a course coming out in just a few months. Just letting you all know ;)

Why is the burnout conversation so important when it comes to our periods? Well, when we talk about hormones, so many of us want to jump to our sex hormones. But if your foundation isn't strong, that triangle isn't going to hold up. It's going to crumble.

Insulin is also at the base of the pyramid because having well regulated blood sugar is essential for hormonal health. Elevated blood sugar can lead to insulin resistance and in turn can be the root cause of polycystic ovarian syndrome, like we talked about in the beginning.



Insulin can also stimulate excess androgen production, think male sex hormones. Plus, cortisol and insulin have this interesting relationship, which we'll touch on.

Now, as we were talking about the triangle, we've covered the foundation. Moving up is where the thyroid gland lives. This is second in line because our thyroid hormone affects every single cell in the body. If you have hypothyroidism, too little thyroid hormone, or Graves' Disease, which is too much thyroid hormone, it's not just that you're not just functioning optimally, it's that every one of your sex hormones are also going to be affected as well. In fact, hypothyroidism can be responsible for a missing period, irregular periods, and infertility.

Now, at the very top of the pyramid, that's where our sex hormones lie. We have three classes in this course dedicated to getting you in the know on estrogen, progesterone, and testosterone. First, I'll be guiding you and getting your foundation right so you can leverage all the superpowers your hormones are designed to give you. It is so important to fix the base of the pyramid and work your way up, since your sex hormones are affected by your adrenals, your blood sugar, and your thyroid gland. You cannot fix one without fixing the others.

Alright, so now you officially know more than the average woman about how your body works. You just gifted yourself with some serious knowledge. I cannot wait for you to create incredible change with what you'll be learning in these upcoming classes. Don't forget that you have some homework to do. I want you to get the most of this course, so make sure you take the hormone quiz first so you're ready to go for the next class.

In the next class, we're hitting the base of the triangle, and you're going to learn all things adrenals. Those glands are so important for energy, a healthy immune system, keeping inflammation in check, and blood sugar regulation. They help us deal with stress, and I can make a bet that you have at least a little bit of stress in your life. Stress isn't an issue if we learn how to deal with it in a healthy way. In this course, you'll be getting the tools to do just that. Now, before we go, I want to ask you for a favour. You see, I want to help as many women as possible get access to this vital information. I would be so grateful if you could tell at least one woman about this course so she can take charge of her hormonal health just like you. Alright, I'm looking forward to seeing you tomorrow.