Fertility Hormones Demystified: Your Path To Pregnancy Transcript

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Summit Welcome and Day 2 Introduction

Hey, we're are your co-hosts of the Beyond Infertility Summit. Dr. Carrie and Dr. Aumatma. And we have an incredible lineup of speakers for you. In addition, Dr. Aumatma and I have created a mini crash course for, you know, every day you can expect a mini lecture from us covering foundational content, helping you gain context and insight before deep diving into the day's interviews.

We hope that this will serve as a helpful context to get deeper understanding through the day's interviews. Hey, welcome back to Day 2 of the Beyond Infertility Summit.

I'm so excited that you're here. I hope you enjoyed Day 1. And today we are diving into the fascinating world of fertility hormones.

AMH and Ovarian Reserve Basics

So let's get started. The first hormone that you have probably heard about, if you've been on this journey for any longer than six months, is a hormone called anti-mullerian hormone.

What the heck is it? It's basically a hormone that is released by the follicles, whether they're kind of just hanging out or they're ready to be developed into eggs.

These follicles are giving out a signal just saying, hey, I'm here. And that helps us get an estimate of how many follicles there are in your ovaries.

So we have a sense of are reaching the end of your ovarian lifetime or is this just the beginning? Where are we at? So what you need to know about AMH is it became popular with the advent of IVF, which was literally only 42 years ago.

And that is basically what they found is that when you have AMH above 1.06, IVF is IVF cycles are more likely to be successful. And when that number is below 1.06, they're less likely to be successful.

And that's literally all they've found. A lot of people have confused that and honestly, a lot of doctors also say this is if you have low ovarian reserve or your AMH is below 1.06, then it's going to be very hard for you to get pregnant.

And that's actually not true at all. In my experience, when AMH is below 1.06 and really like the zone between 0.1 to 1.06 energy per ML, that's the US unit for AMH.

FSH, Estradiol, and LH in the Cycle

When that number is in that zone, you're really looking at a better chance of success with natural means. It doesn't take any longer. It actually is a shorter amount of time than doing IVF for most of those women because they don't need to produce tons of follicles to be able to get pregnant, which in the case of IVF, they kind of do.

So when you're doing natural conception or you're trying to do it on your own without an intervention, you're that zone between what point? 0.1 to 1.06 is a really sweet spot for you to approach from a more natural perspective first before going down the IVF route.

Okay, so we've covered the most important hormone, the one that I get the most questions about, the one that most people are freaking out the most about.

But let's talk about the other hormones, because what's happening with the other hormones is actually sometimes

way more important and way more indicative of what's happening under the surface.

So the first hormone that we go to in this sequence is going to be follicle stimulating hormone. That's the first hormone to peak in the follicular phase.

So as you finish up your menstrual cycle, follicle stimulating hormone is going to start creeping upwards. Usually around cycle day four or five. And this hormone is from the pituitary, telling the ovary, hey, wake up, it's time for you to make some follicles and make some eggs.

And it starts developing these follicles that turn into eggs. And depending on what your reserve looks like, the body selects. How many follicles does it want to develop into eggs that could potentially be ovulate?

Every single egg that's developed is not actually going to lead to ovulation. Only one follicle. Usually. Sometimes two or three. Which is how we get twins or triplets.

But most of the time you're only releasing one follicle so that FSH is going to be the signal that helps this the ovary be in the right environment to produce eggs.

Once those eggs start producing, they're going to send a signal back to the brain. So the ovary is now sending a signal to the brain, hey, I've got follicles.

They're developing, they're growing. And as they grow estrogen is increasing. Estradiol is a signal from the ovary back to the brain. And that signal is basically saying, hey, we're growing, we're in a good place.

And matter of fact, that estrogen is going to peak at a couple of days before ovulation. Usually 1 to 2 days before ovulation, you're going to see a peak estradiol and that peak is essentially the telling the braid.

We've got enough follicles, they're adequately grown.

Progesterone, Corpus Luteum, and the Luteal Phase

It's time to switch the signal from FSH to LH, which is luteinizing hormone. So brain gets the signal and it switches back to it, switches to a different hormone called LH and LH goes back down to the ovary, sending the signal for ovulation to happen.

LH is going to then help this follicle that was selected as the Queen follicle to be ovulated so that it pushes that follicle out. It says by little birdie, You ready to fly?

And the follicle or the egg goes down the fallopian tube and and it's it's hopefully going to be met by amazing sperm that are able to break through the protective barrier of the egg that then is going to allow the egg to be fertilized and then the egg goes down and implant into the uterus a couple of days later and 3 to 5 days later.

So if that happens, then we've got a pregnancy. And if that doesn't happen, then the egg that was ovulated, the egg that got released left behind, something called a corpus lutein in the ovary.

And that corpus, Lydia, is producing essentially the progesterone that you're going to have for the luteal phase. So that's what tells the body you're in a luteal phase.

It's a lot of what people experience in the luteal phase is going to be a calmer, more, better quality sleep. Progesterone is an amazing hormone for our bodies, so it really helps us have that balance in our lives when what we don't often talk about is estrogen is going to have a little another surge in the luteal phase.

If that surge out rates progesterone, then that's where a lot of women have symptoms that we call estrogen dominance. But it's really the the ratio between progesterone and estrogen that makes it estrogen dominance.

When the norm is actually progesterone dominance during the luteal phase is what gives us a healthy, optimal cycle. When estrogen is higher than progesterone, our body is getting a signal to not be able to get pregnant.

So it's like that entire fertility state. But estrogen, both in the follicular and the luteal, is one of the key hormones that supports fertility. So we don't want to get rid of all the estrogen.

We just want it in an optimal state throughout the entire cycle. The other thing that I want to say is that I didn't mention this, but that corpus luteum, if it's actually I want to start that little part over.

So if the corpus luteum is producing progesterone for that luteal phase and if you got pregnant, it's going to continue producing progesterone for ideally ten weeks until the the baby takes over the production of progesterone.

Isn't that so cool? So if pregnancy happened and baby takes over, great. You are. You've got adequate progesterone to keep you pregnant for that first ten weeks.

If you don't get pregnant, then that corpus luteum kind of all these survives for a hopefully 10 to 14 days, ideally closer to 14. That makes for a healthy, luteal phase.

If that the corpus luteum survives, then you've got a a good, healthy, luteal cycle. If it doesn't survive, that's where progesterone will kind of drop off.

And that's where we start thinking, okay, what else do we need to do to support that corpus fluid? We have to stay healthy for that entire luteal phase, which is so, so, so important.

And it's going to be contributing to the the level of progesterone that is being produced in the luteal phase.

Hormone Patterns, Cycle Timing, and Closing Remarks

So extremely important function of of post ovulation to have a healthy corpus luteum and for that corpus luteum to be producing healthy levels of progesterone to sustain a healthy luteal phase and or sustain a healthy cycle or, and or sustain a healthy pregnancy.

So once that corpus luteum is done, it's been 14 days. It's like, okay, time for me to dissolve away. It doesn't look like there's a pregnancy. So I'm good. I'm done with my work.

It dissolves away. And as that corpus luteum is dissolving away, the level of progesterone starts to drop. And when it reaches the bottom, or mostly the bottom, that triggers the shedding of the uterine lining, which starts our period again.

So it's really important to understand this flow of hormones, because what we often see is some of these hormones are not doing their job as effectively as they should.

So for example, oh, something I see a lot of is high FSH and lower AMH. So AMH is the anti-malarial hormone. When that hormone is low, we have low reserves, but when we also have high FSH, it's sort of like the boss standing over our shoulders yelling at us and us, the little worker, be doing our job and not doing it super well because someone is micromanaging us.

And that's sort of the relationship that is being set up between the brain and the ovary when the FSH is high. You, as you can imagine in that situation, we're probably not making the best quality eggs.

So really the quality of our egg doesn't just have to do with estrogen. It doesn't just have to do with progesterone. It's really starting with the follicle stimulating hormone.

We have to look at that. We have to pay attention to that. And as we go through the rest of the cycle, we're really paying attention to the optimal levels at the right time for these hormones to be released.

If estradiol reaches a peak on cycle day seven, guess what? You're oscillating cycle day eight or nine, which is way too early. Those follicles are probably not fully mature.

So really understanding the rhythm of this is the most crucial piece and I think a lot of people get hung up on the numbers and oh, my AMH just low. But really what we need to be discussing is do we understand the way that these hormones cycle through our body, when is going to trigger what hormone and if things are being triggered at the right time and we have the right levels of triggers happening, fertility becomes a lot, lot, lot smoother.

So I hope this is helpful. If you are tuning in, you should know that the baby course, this mini course, is going to lead into a longer series where we're going to talk about all of these hormones way more.

We're going to talk about all of the different topics that we're covering in this mini course. We're going to do a deeper dove throughout the Masterclass series.

That's going to happen after the Summit. So stay tuned. You're going to get lots of info about that and I will see you soon.