Introduction and fertility trends

Hello and welcome back to the Beyond Infertility Summit. I'm your co-host, Dr. Carrie Jones. And today I'm very excited to have my friend and colleague, Dr. Jaclyn Smeaton who in her own right is an amazing fertility expert in our field.

She lectures all over on the topic of fertility and she happens to be the chief medical officer at Precision Analytical. Many of you might know that company as the Dutch test, so we are 100% going to pick her brain on the Dutch test.

But first, Jaclyn, welcome to the Summit. Thanks, Carrie. I'm so happy to be here and be a part of the Summit. Well, you absolutely are one of the top people I go to when I have a infertility questions.

So with your company, Hello Fertility, just following you and your everything, your fertility education journey all this time. So my first real question is, given you've been doing this a while and you've out there in the field and patients like what are you seeing in the topic of fertility?

Like, what do you see now maybe as opposed to five years ago or even longer? Yeah, well, I think there's been a lot of movement in the field of fertility, particularly in what we can do as integrative providers to help address fertility.

Now, if you guys are trying to get pregnant, there's some things we know, we know and there's a lot of things that we know we don't know when it comes to fertility and how to get pregnant.

But, you know, in particularly in that field of like unexplained infertility, unexplained infertility is just we don't really know yet. There's got to be a cause.

We just can't identify it based upon what we know and can test for today. So some of the areas that have been uncovered and that include reproductive immunology, you know, the role that your immune system and the stability of your immune system plays in your ability to get pregnant and stay pregnant.

And the other area, which has been a little bit of a recent obsession for me is the reproductive microbiome. Now, this broke wide open a number of years ago, but within the last five or six years, because we really determined that the womb was not sterile.

In fact, when babies were born, they tested their meconium, which is like the first bowels they pass, which is based on absorbing, you know, swallowing amniotic fluid in the womb and meconium has its own microbiome.

So babies in utero have a microbiome. The uterus has a microbiome. The placenta has a microbiome. And we now know that, you know, follicular fluid, fallopian tubes, uterus, all of these have their own microbiota.

And that strongly influences the ability to get pregnant. So there's been a couple of really big shifts that I think, and then a lot of it is just the awareness of patients trying to conceive on the things that they can work on, on their lifestyle and how just how impactful those are.

And I love that because you I've heard you talk about in the past the importance of really, you know, I mean, not to still this quote or this book title, but like take charge of your fertility.

Oh, and one of those is testing because I feel that when it comes to fertility, patients may come to you and say, no, no, I've been worked up and they can't find anything.

And when you look at the workup, you might be thinking to yourself, well, this leads a little bit to be desired. Let's

let's talk about that a little bit. Definitely.

So the conventional workup is, you know, it's important to do that. You know, it looks at are you ovulating? It looks at a little bit about egg quality, although we can talk.

I'm sure you have other guests talking about it. Quality evaluation. It's not a perfect science. So it can be tough to like really nail down what's going on with your ovarian reserve.

Then sometimes they tell us a little bit about receptivity of the endometrium, but that's rare. And then most male partners only get a standard routine semen analysis still.

So they're missing a lot or missing gut function or missing nutrient status or missing your antioxidant and free radical levels or missing hormones. You know, we get some basic hormones, but not the full picture.

I mean, there's so much that's missing when it comes to assessment.

Basic fertility workup and missing labs

And I think that can be refreshing when I get patients who come in to see me because they think that they've been tested for everything and there's no answers.

And it's like, well, you've really just kind of touched upon the tip of the iceberg and from a conventional reproductive and no perspective, you might not have a diagnosis.

We know about that. There's so much more that we can look into to kind of lift up the hood and get inside and see what's really happening. I love that. Lift up the hood and look inside.

Yeah, that's the truth. So let's let's lift some of these out. So for people listening, get your pen and paper ready. Get ready to take notes. You let's pretend you're talking to somebody who is just beginning their fertility journey as to somebody who maybe is in the middle of it.

So they're just beginning their fertility journey. They haven't had lab work in Eons and they're thinking, I've got to start somewhere. What would you recommend?

Well, the basics for me would include a good hormonal workup. So that involves like cycle day three labs. So you have them drawn when you're on your period still, and that would be follicle stimulating hormone or FSH Luteinizing hormone or LH estradiol, which is the main form of estrogen that we look at anti-mullerian hormone.

testosterone, free and total testosterone, DHEA sulfate and see my missing on the top of my head. Those are kind of the biggies from sex hormone binding globulin, which kind of tells us a little bit more context about your hormone levels.

And then we look at nutrient status. So I generally run a pretty comprehensive panel of water soluble and fat soluble nutrients, some of them that are key.

I won't go through all of them, but vitamin D, zinc, really important. Med Omega-3 status is another one that we can run and just standard routine blood work.

Now, there's so many great things to look out there with male partners. Oh, sorry. And then cycle day 21 or seven days after ovulation, we want to measure progesterone.

That's when progesterone should peak. And we can tell based upon the results that come back. One, Are you ovulating? And two, are you making enough progesterone?

And that can be related actually to the health of the first half of your cycle. Because if you don't have healthy

ovaries and you're not having a strong ovulation, you won't have a lot of progesterone around in the second half of your cycle.

So we got to make sure that's optimized. And it's not just about progesterone. It's about progesterone as a marker for your overall menstrual health male partners.

I generally still start with a semen analysis. If you have come in and you've been worked up and you've been trying and you've failed IVF, I'll always add DNA fragmentation for males now too, because we know that you can't see that all the way is the health of the DNA from a semen analysis.

And it's another independent challenge that needs to be overcome for fertility. So that's kind of a basic start. If we kind of know all that information, then we might want to dig deeper.

We can talk about that, like what does deeper look like? But that would be a basic routine workup. Which is good. And as you mentioned earlier, not one that's often run.

Unfortunately, if you were just to go to your primary care OB-GYN, and again, it's nothing against them. And, you know, to them, their workup is where they start.

And a lot of the labs that Dr. Smeaton is talking about maybe they don't have ideas or options or know how and how to read it or what to do if it's off or high or low.

And that's where great functional integrative care comes into it, because we not only know how to look at these labs through that lens because trying to get you as optimal as possible. Right.

But then also, you know, what do we do with it? So now yes. Get into the deeper here may have been on this journey. You're listening to this right now and you're thinking, yep, yep, yep.

I've had all that done. Now what? Now what? So first, just to reflect on what you said. I mean, I think that you are absolutely right. And I counsel the doctors that I teach about this all the time.

There is no point in running a lab if you don't know what you're going to do, if it's high or if it's low or if it's normal. If you can't answer that, like, how would the result of this change your treatment plan? Don't run it.

It's wasteful, it's use. It's like a waste of your patient's money. So I think that's absolutely important to say. And I think that you're absolutely right.

A lot of providers, especially in the dying or reproductive industries, they are they have deep knowledge in a small area and they've been practicing the law decades of experience they have in reproductive endocrinologist.

The less experience they have in metabolic health and how it's viewed today, gastrointestinal health and how it's viewed today. And so I think that naturopathic physicians and functional medicine doctors, because we are trained as primary care and as generalists and because we think about those as foundational to overall health, kind of no matter what's going on, we have to have expertize as it develops over time in those other areas too that influence fertility.

So it's a completely different look. So the next step for me is really to try to hone in what additional tests we need to do, because what we don't want to do is test everything and there can be so many kind of avenues or paths to go down for testing.

So this is where a really skilled physician will ask good questions to try to determine what else is going on. And this is why we ask so many questions about your digestion, your skin, your mental health, your sleep.

Because all of those little things that you deal with that you think are not important, like the fact that you get, you know, really bad allergies in the spring or the fact that you have loose stools really frequently or whatever that is,

you don't sleep well.

Those are important to us because we can actually put those puzzle pieces together to think about some of the thematic things that might be going on for you, like digestive distress or dysbiosis or chronic inflammation or autoimmunity.

So it's we start to ask questions that help me hone in on what type of testing to do. But there's a couple of major categories that we look at. So let's talk about metabolic health first.

We now know and actually Zainab Buras, who's a Zainab in your summit, Canadian natural physician, she's fantastic. Also a researcher. She just published a really interesting research article about hemoglobin, a onesie and about glucose monitoring and the impact on fertility.

And they worked with couples with infertility, put them on CGM monitors and taught them what their goals should be, how to keep their blood glucose in range after eating.

And they had a massive improvement in fertility rates just from helping their clients better understand the way that food impacted their blood sugar and making some basic changes to nutrition.

Deeper testing: metabolic, gut, oxidative stress, and hormones

And what we know is that hemoglobin HNC, which is kind of a long term picture of your glucose regulation, is correlated with infertility when it's too high.

So we want to evaluate metabolic health really thoroughly and that might be testing things like fasting, blood sugar, fasting, insulin, your hemoglobin, A1, Z, those are kind of the basics that we look at.

But you might be in a group where we think more continuous monitoring would be helpful with CGM data. I mean, that can be really not only eye opening for what's happening for you, but also a teaching tool to help you.

It make improvements because you get this direct feedback. I read this great article just yesterday that was put out by levels of like what they see as the 12 worst foods to spike blood sugar that yeah the number one was grapes right of food that we think of as healthy generally.

And the second was oatmeal like things that are in the list of healthy foods that even we talk about, they're great choices. But if you have sensitive blood sugar or you're not pairing things correctly, it can send your blood sugar on a rollercoaster.

So metabolic health is kind of number one. Gut health is another one. I mean, I don't know if you see this, Dr. Carrie, but like how many people are walking around with gut process?

All of them. I feel I could I put myself in that category. Like this year was my year for gut health because, you know, things were off for me after a period of stress.

And then I had SIBO and I had dysbiosis and like lack of the good bacteria point being, it happens to the best of us, but you need to test. There's great tests available that measure your stool, that look at is there inflammation in your gut, are there signs of food intolerances going on and then what is the microbiome look like?

And you could have infectious organisms that could be a problem or like it was in my case, I actually just had a lack of the good microbes I had like nothing in my gut.

And that's just as bad. You know, it can lead to inflammation. And gut health is very much tied to fertility because it influences inflammation and it influences your ability to absorb nutrients.

It can throw off your hormones. There's so many connections there. So if you are someone who's had wonky

digestion or sensitive digestion or whatever you want to call it, that might be an area that's worth investing and doing some good testing on.

Yeah, absolutely. Another category which is really important for cell health, egg and sperm health is looking at like free radical stress and mitochondrial health.

And those are kind of brother or sister. We look at them really together when we do testing for mitochondrial health and for free radical damage. There's a couple of really nice markers like lipid per oxidizes or H DG, which is a urine marker that can tell us how much free radicals stress your body's under and whether your current intake of antioxidants through food or through supplements is enough to keep it balanced.

It also can tell us a little bit about how much glutathione you have in your body, which is like a master antioxidant. And what we find is that as free radical stress goes up, our oxidative stress goes up, fertility goes down.

And this is one of the first root causes of fertility that was discovered at mitochondria are energy powerhouses. So they get damaged by free radicals.

Also, actually, they're kind of one of the first things to go wrong when you're under a lot of free radical stress and gas where the most mitochondria are in the body, the ovaries and the testes.

We though those cells need so much energy to do their jobs. So all of these things which are like kind of hallmarks of aging, all of these changes to, you know, are really important to like lift up and dig deeper and figure out what's going on for you.

I think the last one really is hormones and a deeper dove in hormones and saved our best for last there because again, I think this is an area where we really under test most patients and the conventional health care system and we look at you know when we look at blood levels of hormones, we're getting out like a snapshot in time.

And it's important to keep in mind that hormones change. You know, everyone knows for a menstrual cycle, they're changing every day, but not only every day.

They actually change hour to hour, like testosterone in males varies by 30 to 40% over the course of a day, depending which our you test. And so if you're taking just a single snapshot and you're basing decisions on that, you could be making the wrong move.

You know, and this is why I love talking about doctors and why I'm so proud to work with precision, is that it allows integrative providers and patients to get a much more comprehensive picture of what's going on, on hormonally.

And I could tell you numerous stories, you know, embarrassing. I've learned over time I run the doctor's first, but numerous stories where I measure hormones in serum, usually because it's insurance covered.

And I'm always conscientious of out-of-pocket costs for my patients, but patients on a treatment plan and they get worse. And then I'm like, all right, we need to do it each test.

And I realize that that snapshot in time painted a picture that was completely different from reality and sent me down the wrong path, frankly. So now I like to get that comprehensive picture upfront.

I really think it's valuable. I'm sure you can speak to this too, to really figure out what's going on. Yeah, well, for those listening, I are watching.

I've used the Duchess for over a decade now, so I am also equally as passionate. Absolutely can do blood work. I totally agree with Jacqueline on maintaining somebody's budget, but if you can peel back that layer and go deeper with something like the Dutch test, you're just going to get so much information.

So let's actually pivot into that. First, we have to ask the most basic question in the world What does Dutch stand

for? Why do we call it the Dutch? That's a great question.

It stands for dried urine test for comprehensive hormones. And it really explains a little bit about the test, one it's done through dried urine, which is really easy.

Patients can do the test at home. You basically at the same as an aviation predictor kit or a pregnancy test. If you've ever done either of those, you are skilled enough to run a Dutch test.

You basically pee on a piece of paper and collect the samples a couple of times per day, or you collect them throughout your whole menstrual cycle, depending which tests are running.

You set the card out, let it drive for 24 hours and mail them in. So that's the dried urine part. So very easy to collect. And there's a couple of advantages to urine.

One is that it's so easy to collect at home. There's no blood draw. You can get great information about hormones without ever having to prick a finger or, you know, get a blood job in a lab.

But the other thing is that urine, if you can think about it, urine is like a video versus blood being a snapshot because you're actually getting it's almost like a time lapse video because urine collects the metabolites over hours.

Like if you think about in the morning, if your first urine contains all the metabolites from everything that's happened since the last time you peed, before you went to bed eight or 9 hours ago, hopefully you're sleeping that much.

So you're getting this time lapse picture and when we collect multiple time points through the day, four time points would be published. Apposition that that's equivalent to collecting all of your urine for 24 hours and testing that as one pool.

So they basically the same by just kind of cheating and doing four catches on paper, you can actually get all of the metabolites that you're making throughout the course of an entire day.

So what that does is it evens out those up and down fluctuations that you get in production of hormones throughout the course of a day and gives you a much more clear picture of what's happening hormonally.

So that's the comprehensive piece of it. One is that you're catching it for a whole day. But then in addition to measuring hormone levels, measuring metabolites is really important too.

And the reason for this is that many metabolites are active in the body. They behave just like their brother or sister hormone. So they can tell us a lot about the overall picture.

We see this a lot, especially with androgens in females, with PCOS, where sometimes what I'll see is that I'll be looking at someone with PCOS who doesn't have high testosterone or doesn't have high DHEA, but what they do have is high metabolites of testosterone.

They quickly move on, but those metabolites still act like testosterone in the body and they produce the symptoms of abnormal hair growth or hair loss or acne or irritability, the things that we associate with testosterone.

And now if you only measure blood in testosterone normal, you would miss that completely. So the comprehensive look of all of those metabolites really gives us a better picture of what's happening hormonally.

And I'm glad you actually mentioned PCOS because I have read statistics that it's a significant percentage of women who go to their GP or OB-GYN or whoever primary care and actually get missed on on PCOS or get told, well, no, your testosterone is actually in range or it's not elevated.

Therefore, despite your symptoms, it may be due to something else. It's not PCOS and I've seen this a lot and running Dutch tests on patients where just as you said and I'm so glad you said this, their metabolites are high.

I'm like, well, you do have PCOS. It's the that one diagnostic criteria are elevated androgens. It doesn't have to be testosterone. That's a concern. Right. Right.

But it can be these metabolites. And and I've heard you say before in other conferences that PCOS is a leading issue with fertility problems. You know, it's a number one endocrine disorder and women.

And so to get it properly diagnosed is huge, huge. It really is. Yeah. And I actually end up diagnosing it for many women who are coming to me after seeing their ob gyn, after seeing their reproductive endocrinologist and kind of the hallmarks that clues me out to it is that irregular cycles, I mean, that is one thing that really women start to pay attention to when they're trying to conceive.

And if your cycles are unpredictable, it's not always PCOS, but very often you have signs of PCOS and you might have kind of an atypical presentation of it, which is how things end up getting messed.

You know, you're not overweight, you don't have high androgens. You know, there can be other causes too, like adrenal health that can contribute metabolic health, ovarian health.

It, PCOS really affects all of those symptoms. Well, actually, let's move into cortisol and then come back to things like estrogen and estrogen metabolism.

Since you mentioned adrenal stress, how does cortisol play a role with fertility? And then, you know, a lot of people are probably saying, well, I got a blood draw, I had a morning cortisol and it was in range.

What do I need to do it again? Yeah, I mean, a morning cortisol is really, in my opinion, like kind of a useless measure for HBO. It's like it's so inconsequential to test that one time.

And really, when we look at the function of the HP axis, there are several things that I like about what we offer with the Dutch test. One is that you get multiple views into axis function.

So what most labs do is this diurnal curve where you measure it for time points, you trace it over the course of a day. And what we see is that when you first wake up, your cortisol elevates in the morning and then throughout the course of day it comes down and in the evening it should be quite low.

So that's the kind of typical piece there. And that's an important measure to look at with the Dutch test, where you can also add a cortisol awakening response, which is three time points taken in the first 60 minutes.

Now, in order to do this, it's like not just urine, it's also saliva, because I don't know about you, but I'd have trouble peeing three times. Yes. And also, that's not enough time to, like, catch all of the metabolites in urine.

So we do that in saliva and right upon awakening. It's actually a stressor for your body. And it acts like a stress test, just like a hormone stress test.

What they would do for someone if they're testing them for disease of the adrenal gland. So we can look at that. And actually, in research, what we're seeing is that what happens to your cortisol in the first 60 minutes of the day actually is really predictive for your overall health of your HP axis.

And then the third thing, which just gets back to the comprehensive side of the data, as we also look at cortisol metabolites. And I had a talk with Mark Newman, our owner and founder and the science genius behind the duchess today about this.

Dutch test overview and hormone metabolites

Because within our testing, what we can see is that there are a percentage of our, you know, patients that we're testing where their cortisol looks normal on the diurnal curve, but their metabolites are way off.

And there are reasons for this where your cortisol might look low, but your metabolites are quite high, or alternately your cortisol is measuring really high and your metabolites are low.

And this mismatch tells us that there's something going on that's not about making cortisol, it's about clearing cortisol. And there's lots of things that can cause this, like obesity, chronic inflammation, thyroid dysfunction.

And in fact, our team, our doctor team reviews every test that comes out and will actually help doctors recognize these patterns of what's going on like this looks like your patient might have hyper hypothyroidism.

You have they've been tested for that. You might want to recommend screening there because there's such a mismatch there. Metabolism is so high that they're making plenty of cortisol and we can see all the metabolites of the cortisol in their urine.

But when we measure them for cortisol, it's gone as soon as they make it, they're clearing it out and that can be a problem. So again, that comprehensive nature and I know this is a lot of your new to Dutch testing it sounds like a lot to have to learn that our team has amazing support resources and does a lot of like mentorship and one on one consultation to help doctors get this. But the API access is another thing that's so important for fertility.

And I think if we pull it back a bit, I mean everyone talks about like, oh yeah, you have this story where, you know, we decided to adopt and we took the stress up the fertility and then all of a sudden, boom, we got pregnant.

Which one? Like never put that kind of pressure on yourself? It's not just about relaxing for sure. However, there is really clear documented evidence that stress impacts the reproductive hormone system and really like fertility, is kind of the first thing to be negatively affected by stress.

And if you think about this from a the point of view of like evolution, you know, and when it's a good time for a female to get pregnant and have a baby, it's when you're well-resourced.

And, you know, our experience with stress has changed dramatically in the last 50 to 100 years. But prior to that, our genetics are built so that if we had a time of stress, which in that instance was probably like no housing or famine, like a year of famine, we would increase the level of cortisol we make and it would shut down our reproductive system or make it less efficient so that we didn't get pregnant at a time where we couldn't have a healthy pregnancy.

Nowadays, our stressors are all over the place and really different and we experience the negative impact of that. But there's real physiology behind that from changing in your hormones, like lower progesterone levels to actually even your cells, like in the testes and in the ovaries.

Kind of removing their ear is what we call receptors for the brain signaling. They'll actually close down their ears when the brain is over, firing and it changes the system from the brain to the ovaries and the testes to basically make the reproductive system less efficient.

So we want to make sure stress is managed and the hormones around stress are in good balance. So this is why I have you on for the summit, because you explain things in a way that I think a lot of people going through fertility struggles are going to think, no one has ever said this to me.

No one's ever explain this to me. I think this makes perfect sense. I can relate with a lot of this, and now they have much clearer answers, at least on like what they intuitively thought was going on with their body.

And now you're just, you know, fact after fact after fact is just been so helpful. But we have to talk about estrogen because estrogen is a big deal and Dutch test does it differently as they look at estrogen metabolites and estrogen detox, which is critical for both males and females.

Absolutely. And, you know, I talk about estrogen. It's kind of like the Beyonce of our hormone queen bee. And we talk a lot about estrogen in a negative way.

I see that all the time with like, you know, from estrogen dysregulation to estrogen dominance. I feel like if you did a Google search and you looked up estrogen, you would probably more likely than not find negative media around estrogen.

So the first thing I want to say is that you definitely can't get pregnant without estrogen. In fact, you can't make progesterone without estrogen. There's so many things that estrogen does.

And every single cell type in our body has receptors for estrogen. So our bones need estrogen. Our skin needs estrogen. Our vaginas need estrogen. You know, it's really needed everywhere.

So first and foremost, it's important to have enough. Now, when we look at doctor testing, we do measure three different kinds of estrogen that are produced in our system.

And that can tell us a little bit more about how much estrogen is in your body, because it's not just one hormone, it's actually a family of hormones.

We look at Astron, which is called E E1 Estradiol or E two and estriol or E3, but the family of estrogen isn't just about those three sisters. It's like all the cousins to all the metabolites.

And when estrogen is made in our body in order to be metabolized, it goes through a couple of steps, which we call phase one, phase two. And then it gets excreted through the gut and through urine.

But if those things aren't happening efficiently, those metabolites can one have activity that will make you feel like your hormones are out of balance, even if your bloodwork looks normal.

And two, they actually can cause DNA damage, which is very relevant to egg and sperm health. So we want to make sure that your estrogen levels are good, but also phase one metabolites, phase two metabolites are also good and that you're able to get it out of your body effectively, which kind of gets back to that gut health piece.

So we have to look at the health of the liver, the kidneys, the gut and the ovaries. When we look at that overall estrogen picture and with the Dutch test, we see every step along the way and we're able to tell whether that's all happening efficiently, which is awesome, or if it's not, what needs to happen to get things into balance.

So let's say, for example, your estrogen levels are high when you look in your blood. That could be a couple of things. It could be one, that you're making too much estrogen and then we have to kind of like figure out where that's coming from.

Or it might be that you're making just the right amount, but that the clearing process for estrogen is faulty. You know, I heard one practitioner recently talk about like it's trying that your body's trying to take out the trash, but the garbage truck stops coming.

Right. And we can see what steps not working. And then we're able to see what exactly you need to be doing differently to make that work better. And sometimes it's supplements, sometimes it's lifestyle, sometimes it's looking at gut health and might be increasing the fiber in your diet or taking a probiotic.

But it helps us really hone in on what's going to work best for you so that you're not guessing. Because the other thing I hate is when patients come in to me on 50 different supplements and it's like, this is why testing is so important, because who wants to take a grab bag of supplements every day? Oh, why don't you rather just no one will help?

Cortisol, stress, and estrogen metabolism

So with this estrogen metabolism, can you get this at all in blood work? You can't, because metabolites only exist in the urine, so we have to measure it in the urine.

So it's another benefit of that Dutch test. You can measure the the hormone levels in your basic blood work, but you cannot look at metabolites. Which is definitely a real key piece to know because I know, you know, some people are like, oh, I got this drone tested, I got estradiol tested, which is great, fantastic that you should.

But this key piece of what's how it's moving out of the body or not, which could absolutely be affecting you, is what Jacqueline is talking about. And so this is important to note if you're thinking you're going to go to your local Quest's lab core hospital and just get metabolites for estrogen and some of these other markers she's mentioned, unfortunately, that's not the case.

They're going to look at you funny and say, we don't do that here. Not bloodwork anyhow. So. Right. All right. So I would be remiss if I didn't ask you about what's called the cycle mapping test.

I do want to differentiate between that sort of testing you've been talking about, which is a one day test versus the option for a psych map. What is that?

So, I mean, it is exactly what it sounds like. It literally maps out your menstrual cycle. So if we talk about like hormone snapshot, that's as being a single time point.

The cycle map actually looks at urine every morning for an entire menstrual cycle. And what the report looks like is a tracing of your estrogen and progesterone levels based on metabolites that we can calculate back to what would be in your blood.

And really, you get a tracing of it. So if you've ever looked in a textbook and you've seen a menstrual cycle chart where it's like, here's what estrogen should look like, here's what progesterone should look like, and it shows the curves.

We give you that same picture of what's happening for you. So I'm actually in the process of doing that right now. I'm like, should be ovulating. I'm doing this every day.

It's the only test I've never run on myself. Oh, from Dutch and I'm quite excited to see what mine looks like. That'll be kind of fun. But you look, you basically get to see your estrogen progesterone every day.

This is really helpful for women who have irregular cycles. Or you might be if you're symptomatic every period, like every premenstrual time or your time around, you all elation or you, you know, maybe you get anxiety early on in your cycle, whatever it is.

I love running this test for that purpose because we can see what's happening hormonally when you're symptomatic and really determine like what's going on.

I'm the one I'm doing actually adds metabolites and ads like the entire Dutch. You know, everything they can test for in with the cycle map. So I'll also be doing a little bit more testing in the middle of my luteal phase around that seven days after ovulation to actually catch the full day.

And what's happening with my hormones over the course of a 24 hour period within a 28 day period cycle. The cycle mapping is definitely one of my personal most favorite tests.

For somebody who does have a cycle, I don't recommend it for you know, we do recommend it for menopausal women or women with no cycle like that. The point is to find your cycle.

However, I was talking to a health coach yesterday who said she ran a Dutch cycle mapping and because she was having a lot of high histamine symptoms at ovulation.

So she was very itchy, very scratchy, very g.i. Stuff, sniffy, snotty headaches, the whole thing. And she thought is this allergies? Why do I keep developing a histamine reaction right at ovulation.

So she happened to do a cycle map and found that her pre ovulatory estrogen rice, which is supposed to be large and in charge, was larger and in charge.

Her this she'd ever seen. And estrogen unfortunately slows down the breakdown of histamine. So it was put giving her she was already a histamine type person and then it was just pushing her over her.

Her bucket of histamine was overflowing and she could see that. And she was so excited because everybody kept trying to blow it off to allergies or blow it off to, you know, here's other, you know, histamine support or it must be something you're eating or are you drinking wine or eating cheese?

And she was like, no, none of those things. And she said, this is it. I'm I'm an extreme estradiol maker. Yeah. And you can. See Jen's a bossy barb, so she'll take charge when she needs to.

But this is a really cool thing about functional lab testing, is that she could have really spent years seeing specialists who were treating the allergies, which are the symptom.

It's what's showing up for her, but it's not the problem. You know, the problem was the high estrogen. And so when you're able to see that and get to the root cause, who would think that she would need to treat her allergic symptoms with things like sulforaphane and magnesium and these things that are for estrogen metabolism?

Who would have thought that that would be the key to her feeling better versus throwing Sudafed or an AC or, you know, QUERCETIN and all of our favorite allergy stuff at her?

Maybe a combo is great, but again, it's like really finding what the root causes there. And the same thing goes with fertility every time. Every time I had another case, another doctor said to me that the her fertility client and you I'm sure you see this all the time, which is why I'm bringing it up.

And I'm sure people listening can relate. They kept getting a blood draw for progesterone on day 19, 20, 21, somewhere in there per their doctor. And it was always really good.

And yet, unfortunately, sadly, they would miscarry really early to get pregnant. Miscarry. And so finally, this tiny, tiny doctor saw a functional doctor who did a Dutch cycle mapping on them.

And they realize their progesterone went up like straight up and straight down. It was like the signal puttered out and they didn't make a whole lot of progesterone after that.

So, yes, they look glamorous, fabulous and robust on day 19. But by the time they got to day 22 ish, you know, 24 ish, it was even being pregnant. It just it must have some signal somewhere.

Just couldn't push it through. And the progesterone fell straight down. So she was one if she hadn't had that. And they kept thinking, well, it's not progesterone. Stop progesterone.

You don't have a recurrent miscarriage because progesterone and it turned out it was progesterone her it just she couldn't make enough to sustain and I.

Thought how fascinating. Gosh, she did go through a few miscarriages to finally get these answers, which, you know, that's awful. But another another good reason.

Another green check mark for this comprehensive Dutch testing, for sure. Definitely. Yeah. I mean, I really have a test. Don't gas approach. Yeah. In my practice and like we said, we're always budget conscious and if we were to screen people for everything, you'd probably be looking for the things I want to see.

I like $2,000 in labs, which for some people that's totally fine. They're like, Test me for everything. But for the average patient, that's a lot of money to invest, especially when you're in a very expensive fertility journey to begin with.

So that's why we like to use the intake. You know, I give you like a super extensive questionnaire and then the discussion that we have to help hone in on what can be most helpful.

But there's a couple of things that make the Dutch test, like one of my absolute favorites for couples that are trying to conceive one is how many things it looks at for the value of the test, you know, so you get the HPA axis and your stress level, you get to look at your hormone levels, your hormone metabolites.

Cycle mapping and root-cause fertility insights

And then we haven't talked about this, but on the last page of the Dutch test, there is a section called the Oats, which is all these kind of individual markers that get added on that.

Tell us a little bit more about what's happening hormonally. So I think about it as like when you see the problem in the main page of the Dutch test, you can look at the Oats page and sometimes you can find that the cause there, for example, we have a biotin marker on there because a lot of people run the Dutch test for hair loss because hair loss can be hormonal.

Well, now you can also see if it's nutritional. When you look at the Dutch test, the with fertility, there's a couple of really great markers in that Oats page.

There's markers for low levels of vitamin B12, low levels of vitamin B6 glutathione iron that antioxidant marker or antioxidant that we mentioned that is so, so critical for good fertility.

There's studies showing that low glutathione iron is associated with low fertility. High glutathione is with high fertility, and you make it. But we can also influence how much you make it.

So knowing if it's low or high can really help. Also, it contains 8-OHdG that one of those markers for oxidative stress. So there is broader panels available for that.

But as a screening tool, it's awesome for me that that's on the Dutch test because it will pick up a lot of cases where it's like, Oh, this is really nutritional for you and we need to work on cellular health to get, you know, get your egg quality to improve.

There's so many like beneficial pieces of that test that go far beyond hormones that gloomy and to a lot of the different root causes for fertility. The other thing is it shows things like methylation, it shows things like detoxification.

So some of the general problems that can result in poor fertility, we can pick up on on that test. And sometimes we have to run additional testing, but it's a great peek into what might be going on for you.

I love that. Amazing. Well, as we wrap this up, I know everyone's thinking if they haven't heard of the Dutch test yet, they want it. Where can you find more information about the Dutch test education on the Dutch test?

And then, of course, where can they find more about you as a doctor. So the website is dutchtest.com. Pretty easy to remember if you're a provider I highly recommend click become a provider because there is so many resources behind that log in that you can get.

We have an entire eight hour course that's free. On Mastering Functional Hormone Testing. So if you're curious but overwhelmed with some of the things we've talked about today, that course breaks it down hormone by hormone for you.

And we also have a great interpretive guide. So if you are looking to use the Dutch test and you want some help in interpretation, getting the most out of it, that's totally free.

And you get the whole doc team supporting and cheering you on as you get started. If you're a patient, there's

actually a find a provider tool on there as well where we post, you know, you can look up by zip code and find the providers who use Dutch testing and who have proficiency in helping you interpret your results.

So I would definitely take a look at that site. Whether you're a patient or a provider, I can be found at Hellofertility.com and my Instagram is Hello_Fertility.

And I don't see a lot of patients. I don't take on a lot of cases because I'm pretty busy with all things Dutch. But I do help some couples who've been in a tough spot trying to conceive and still need some help.

And still puts out great information. So for sure, at least follow her on Instagram at @Hello_Fertility. You actually can follow Dutch test as well @Dutchtest.

Thank you. On Instagram. @Dutchtest thanks further on that in there you'll see up all the time and we do have a podcast as well, so that's great for patients or providers.

If you want to learn more about hormone health, the podcast is so much fun. We've had you on Dr. Jones as a guest and it's they're fun, they're informative and you're going to learn a lot. And Dr. Jaclyn is an amazing host, so that is absolutely a good plug for her podcast.

Well, thank you so much again for coming on the Infertility Summit. I absolutely appreciate it. You've been a wealth of knowledge as usual, and thank you to the Dutch test for all this information is just been great.