Introduction to Precision Hormones

Hi everyone, it's the top of the hour. We're getting started on the Mimosa Longevity Hormone Optimization Mastermind. I call this precision hormones and you'll see why.

And I'm so excited to share with you this particular topic. Hormones are really the spice of life, the source of the life. The juice of Life. And they're a part of our body that we know are important.

But in conventional medicine, we're not really taking care of hormones the way we could. Hi, Monica. Nice to see you on here. For those of you who are joining live, feel free to ask questions in the chat box.

This is a recorded webinar and I go really fast. I got through all the content in 45 minutes. We're really respectful of the time. this will be available on YouTube afterwards as well as on Substack.

So again, I'm so excited to be talking to you guys about hormones tonight because this is an area of interest of mine as a provider. And I'm gonna share with you my screen, which will have some content that we're going through together.

And like I said, feel free to share questions. At the end, I'll probably stop the recording and we can talk through some of the questions at the very end.

Let's get started. So this topic today is called precision hormones. This is a series of different webinars that I've been doing for the past several weeks.

For those of you who may have had a chance to join previous ones, thank you so much for being a part of that. And for you, who haven't yet, we have some amazing topics we've already covered that you'll find very interesting, including the circadian rhythm, which is another topic that's available on YouTube and Substack.

So I invite you to go ahead and take a look at that. That is a another area that I specialize in and it forms kind of the underlying framework of how I approach health and wellbeing, both in the state of medical care and also in wellness and longevity.

Today we're talking about precision hormones. I just want to make sure doing a sound check everybody can hear me. Everything's okay. Yes. Okay, looks like the bike is on.

So today we're going to talk about precision hormones and starting just looking at this as an overview about why hormones are important, and how we need to start thinking about hormones in our body.

Remember that stress and nourishment are a critical part of how well your hormones are working and how your nervous system, your microbiome, and your genome come together to shape your health is what we're going to talk about today.

So again, this is the fourth of a series of free masterminds that I have been putting together for this year.

Cortisol, Stress, and Circadian Rhythm

And next year, we're going to be offering a membership model for those who'd like to learn more about the protocols and how to implement some of these things into your life.

It's still educational, but it will be much more specific and more protocol-based starting in 2026. So this year I'm just offering lot of education, open content for you to start to learning and get yourself grounded in some the underlying

themes in functional medicine and longevity medicine.

So first, remember that hormones are kind of like a signature in our body, similar to genomics, except they're the expression of what is taking place inside and also outside.

So hormones don't lie. You know, they really tell the truth about how you are living. So when you look at labs, they might look normal, but your body is often telling a story through your hormones, right?

So we need to look the patterns of the hormones. Not just how far they are off of range of what the lab says is normal. But also what your BODY feels is NORMAL.

What your normal set point is and how different they may have been from when they were a little bit younger or when we felt more energized. So everybody really has a unique pattern of their hormones And what we're studying in the laboratory has not yet caught up to how we really need to look at hormones in their body because they're constantly fluctuating.

They change throughout the day, they change based on the season, the time of the month that you're in. So there's so much more we can do in terms of understanding them from a medical standpoint and lab standpoint.

But what's most important is to remember that they are telling a story about your energy, your sleep, your appetite, your mood and your cycles, as well as your resilience.

This is really important. We'll talk more about that in a few pieces down. Your cravings are reflected by your hormones and of course your metabolism.

So all these areas come together to kind of make the expression of how you're feeling, how well you are feeling in your life. So that's essentially what hormones are, is they are language, right?

They're how we communicate in the body. They are communication signals between cells. So hormones don't start the problem, they're actually reflecting the problems.

When people say, I have a hormone problem. It's actually something else that the hormones that are reflecting. And when you work with a doctor, their job is to figure out what that something is, and then help create a solution and help you kind of modify your life or remove that thing that is causing that underlying problem and balance the hormones as well so that you can start to feel better.

So they're reflecting your nervous system. They're reflected in your microbiome. And as I said earlier, the circadian rhythm, that time of the day that you wake up, you go to bed, all of these are reflected by your hormones.

Your inflammatory load affects your hormone, whether you have a chronic inflammation that's going on, a gut inflammation, All of that is reflecting in the hormones, as well as your emotional history.

I talk a lot about trauma and the role that trauma plays in health. This actually is reflected directly in your hormones. And we'll talk more about that a little bit further.

As well as your genomic blueprint, we will get into the genome and what specific genomics SNPs to look for when you're looking at your hormone. So tonight we're going to pull all these different pieces together in a way that feels more human, but also scientific at the same time, because we can't forget that at end of the day, we are performing evidence-based medicine.

We want to make sure what we doing is repeatable, validated, and is going not to do any harm in your body. So stress and cortisol is kind of the foundation of hormonal balance, and it's why your body feels safe or unsafe.

It's that cortisol response. So let's start with cortisol. And it this hormone that gets the worst reputation, right? It the thing that we often say, oh, my cortisol's so high and so I'm gaining weight and all these things.

But it actually got a very different role in the body than just that. It is a circadian rhythm based hormone that goes up and down throughout the day.

So you don't have a cortisol problem, you actually often have cortisol rhythm problem. Now that's the circadian rhythm that I'm talking about. The rhythm changes long before the labs start to change.

Healthy cortisol levels can rise in the morning and they give you focus and momentum and then they drop at night and that allows you to rest. So this is a healthy cortisol curve.

You'll notice by 6 a.m. it starts to go up. At noon, we're peaking, 6 p.m., it really should start to go back down and be flat, low at night. But what happens is when the nervous system is overwhelmed, you have a lot of stress, your not sleeping well, You have lot a things going on with the inflammation in your body.

What happens is this rhythm gets distorted, and that's when we have problems. So what kind of problems show up? You might be feeling wired throughout the day, right?

So really extremely nervous and agitated or exhausted throughout day. You can't really understand why you're feeling so tired and there's no real direct cause of it, but you are really tired, you need to be resting all the time.

Some people show as very anxious at night, very nervous, anxious. Others wake up in the middle of the night, 2, 3 a.m., overnight awakenings that don't really have any other cause and feeling very tired in morning.

It's not totally normal if you see when cortisol starts to peak right after 6 o'clock to feel so tired at like 9, 10 o clock. it's usually a sign of some sort of a disruption in cortisol.

And also cravings, craving of sugar, salt, and being stimulated, wanting to take a lot of coffee, needing that adrenaline hit all the time. That's a sign, that's the craving that we have often because of an imbalance in the cortisol.

Remember that this is not a personality flaw, it's a survival response. Your body is trying to tell you that you need to protect it, to help protect yourself, right?

So it is a form of the fight or flight, more of a chronic stress response, but still in that same area of not feeling safe. And that's what creates these responses in the body.

So many studies have shown that chronic stress can actually reshape the cortisol curve within weeks and even days. Right. So what does that mean? It means like if you have periods of, oh, I'm going to just do this really hard thing for one week.

And you were able to do that when you are 20. But when your doing that at 30, 40, 50, even sometimes 60, your body is going to take a different response than what it was when were 20, and the recovery is gonna be different, the damage is different.

So really rethink how you're looking at stress, Even if it's for a short period of time, weeks or days can affect your cortisol levels. So remember that genes also have an influence.

So I'll just name a few here. I work one-on-one with people on genomics. If you wanted to look at your genomic in more detail, we can do a comprehensive look of your individual genome and find out if you have some of these SNPs.

Some of you may have COMTI variants, and that makes you process stress neurotransmitters much more slowly. Emotions tend to linger in these cases. Some people have something called an FKBP5 SNP, and that makes cortisol receptors hypersensitive.

So when cortisol does come in, the response is going to be elevated. Some have an NR3C1 or CRHR1 variant that

intensifies the startle response. So you might notice that, oh my god, I'm so jumpy.

I have so much anxiety. You actually might have these SNPs. It's helpful to know that that's what's underlying it so you can actually have some answers for the symptoms that are showing up.

It's not shameful, it's just how we are built. So our nervous system is built differently and many of us have different SNPs, different genotypes and SNPS in order to compensate for different stress responses that have shown up in terms of your ancestry.

Thyroid Function and Stress Effects

And so the body creates these mechanisms and we're all individual, we all unique. So remember, it's not that it is pathology or shameful. It's what makes us unique.

But it helpful to know what's actually happening inside so we know how to address it and how treat it. Nourishment as a nervous system medicine is so important.

And, you know, as those of you who work with me and know me, I work, with food as medicine. I also do Ayurveda. So nourishment is a big part of how we approach health and well-being and stress responses.

Now, people often underestimate the importance of food in this equation. What you eat is equal as important as when you The protein in your morning meal is not a trend, it's not something that we should just be eliminating.

It is a cortisol regulatory mechanism. So having some protein if you have some of these symptoms can make a very big difference. And remember also that minerals, again, they became kind of trendy.

Everybody was taking minerals. Well, minerals aren't just supplements. They're there to stabilize the electrical signals in your body. So every cell in our body needs minerals in order to function properly.

And most of our food these days is depleted in minerals so oftentimes this can be very helpful for people with some of these symptoms I'm mentioning. Fiber and whole food carbohydrates are not optional.

They're not dietary rules. There actually signaling your glucose and your glycogen responses. So there are many reasons why we need to control carbohydrates or have different types of fiber, especially if we're getting more into food sensitivities and SIBO and other diseases.

But in general, for the general population, fiber can be very helpful in terms of regulating hormones. Remember that a starved body is also an anxious body, and a dehydrated body often inflamed.

So if you're underfeeding yourself, there's no way that you are going to feel safe. And that safety, again, is an essential response in the body to control that cortisol.

So I just want to really emphasize the importance of good diet. Undereating elevates cortisol, skipping meals destabilizes blood sugar, caffeine on an empty stomach spikes adrenaline, and late night eating disrupts melatonin and thyroid signaling.

This is important information from research studies. Long fasting windows also amplify stress response in already stressed bodies. So this is why one size fits all is never the answer when it comes to nutrition and well-being.

We need to look at each individual case each individual person and say, what's right for you? What's the best plan for in your wellness and your well-being?

You know, everybody being on a fast, a 24-hour fast won't be the right answer, right? So we really need to look specifically at what is happening. And oftentimes I find we need even look at the hormones to see whether or not these dietary things make sense for your body.

Now let's move on to the next system. We talked about cortisol, that's the adrenal response and how we respond to different times of the day with cortisol and stress.

Another very important rhythm keeper is your thyroid. Remember, the thyroid doesn't just regulate metabolism, it actually regulates the flow of energy throughout your body.

So energy, digestion, mood, temperature, and also your brain function is controlled by thyroid hormones. When it collapses, which can happen, it's a very sensitive organ in the body.

It often will respond to chemicals, environmental chemicals triggers like EMFs. These are all things that the thyroid can be very And what it does happen is what happens is that it collapses quite easily because of the sensitivity.

Stress can actually decrease the conversion to active T3. It's this active thyroid hormone that is needed in order for the body to receive the thyroid properly and to have all the different downstream organs function appropriately when the tired hormone is present.

Inflammation, which comes from stress and other things in the body, can actually prevent this conversion of active T3 into something called reverse T 3, Which is measured commonly in functional medicine workups, but is not measured when you go to your primary care doctor and just say, hey, I want to just get my thyroid checked.

So know that, that when your results come back normal, when seeing a PCP, the general medicine, That doesn't mean your thyroid is actually normal. We need to go more specific and look at some additional biomarkers to know what's actually happening.

So when you do see this reverse T3 elevated, it's telling us that there's a brake pedal being put into place because there is too much stress present.

so we're not in a state of health in that situation, even though the other labs may look normal, so again we need look a little bit closer, dig a bit deeper when it comes to the thyroid.

Erratic eating, unfortunately, a lot of the fasting that people are doing disrupts the thyroid timing. And so the weight loss can occur initially, but it often is not long term and tends to result in even more weight gain when you go back to being in a normal rhythm.

Female Hormones and Estrogen Detoxification

So erratic, eating again, is going to disrupt directly the thyroids. More regularity in your schedule is important. So eating at the same time every day, for example, like we talked about in the circadian rhythm lecture.

And your genes here are very important as well. They're very specific SNPs for the thyroid. So I've listed some of them here, DI01, Di02. they are basically telling me how well are you converting that T4 over here into active T3, right?

So this is a SNP, a genetic predisposition that your body has to potentially not convert as And so when you might not be feeling very well, even though your thyroid hormones look normal and you have the SNP, it's saying that we can't just trust that level of the thyroid hormone.

You're just not converting it properly. So we still need to treat and give you more support around your if you have these SNPs present. The TPO and TG SNPS are showing us how sensitive your thyroid is to inflammation and nutrient depletion.

SLC5A5 is an iodine transport. We know that iodines is very important for the thyroid, but also remember that people can often get toxic by taking too much iodide.

So you've to be very careful about dosing the iodides and how much you actually need. And if you had the SNP

present, we would look at things a little bit differently and potentially dose that iodine differently for you.

IL-6 and TNF-alpha are also inflammatory patterns that tend to suppress that active T3, right? So again, if have these SNPs, We need to actually look your case a bit different and see what else we can do to support you and not just trust the lab numbers that come out.

They explain why some people are more vulnerable to stress than others. So really this is where personalization and precision medicine become very powerful because we can start to use these genomics in your day-to-day care.

All right, now let's move on to some of the more downstream hormones. We've talked about the adrenals, the thyroids, very central in our body, right? They are controlling a lot of initial responses, all the downstream organs.

like the heart, the kidney, lungs, liver, all of these have receptors for the hormones that I've just mentioned. Now we're going to talk more about other hormones, that you probably heard about and are interested in and kind of what their downstream roles are and maybe some things you may not have known about.

So let's start first with female hormones. Estrogen, progesterone and testosterone. Those are the three primary female hormones. Yes, testosterone as well.

Female hormones are exquisitely sensitive to stress, nourishment and emotional safety. Estrogen supports serotonin, cognition, skin, metabolism, and inflammation.

So you can see it's very much a hormone that is important in the body beyond just when we think about estrogen for fertility and childbirth and all these things, actually all the way into aging.

estrogen keeps us young, right? It keeps as fertile and young even after menopause. So serotonin, cognition, skin, metabolism, inflammation, all key factors, key functions in our body throughout life.

Progesterone calms the nervous system. So this is really what often people don't have enough of when they're feeling very nervous. So because it is a calming hormone, it supports sleep.

It actually creates a balance with the estrogen and it stabilizes your mood. And then female testosterone, so testosterone in women actually drives their libido, their focus, concentration, your strength, and your emotional steadiness.

So if you're feeling very emotionally labile, not really feeling grounded, it's often one of these hormones that is off balance, either too high or too low.

Progesterone is often the first hormone to fall when life becomes overwhelming. So if you're having a lot of stress, you are not sleeping well, and you've got a whole lot going on in your life and then you start to actually feel unwell, it's often progestorone first.

And it's not because your ovary is actually failing, but because you system is in this kind of destabilized state of survival. And now what are they really hormones for?

They're there for reproduction, right? So in a state lack of safety, your body is not going to be feeling very optimal in terms of the hormones because it is set up for production.

It's the opposite of that safety in that case. So here we need to really look at your genomics and try to understand, and I do this often with many of my patients before I even start looking at their hormones, is what's happening underneath in your genomics?

Because if these are off balance, then your detox pathways are often not optimal. And if we were to start to put in estrogen onto a substandard detox pathway, pathway, what's going to happen?

You're going have a bunch of cancer-causing estrogen metabolites that start to build up in the body, which can be harmful and dangerous. So it's very important to optimize your detoxification before we start play with the hormones.

Genomics can really be helpful here. There's a CYP1A1 and C YP 1B1 gene that show us how you process your estrogen, right? So again, if you take estrogen in or your body's producing natural estrogen and in high quantities, but because of stress, you have a lot of free radicals around and not enough antioxidants in your diet or in supplements, what's going to happen is you create this inflammatory response inside your and it's going to have to go through the liver and through other detox pathways in all your cells to be able to clear these estrogens or these free radicals metabolites.

So in order to do that you need these optimal pathways. Now if you have these SNPs that are subpar, so in other words, they're not working as optimally as they could, right?

So there could be heterozygous or homozygus mutated. What happens is you're processing and clearing the normal estrogens that your body is producing and they start to build up and start making you feel worse and worse.

Now the worst thing you can do in that situation is put more hormone in. Right? Because that hormone has nowhere to go. It's the detox pathways that are not optimal.

Do you see what I'm saying? So that's why we have to work on these pathways and understand what's happening before we start to mess with adding in more hormones.

CompT is responsible for estrogen methylation. ESR1 and ESr2 are actually receptor sensitivities. So if you're having a defective receptor sensitivity for estrogen, even if we put estrogen in there, your body's not going to be able to utilize it properly because the receptor won't bind it and it won' t be be to work with it.

Male Hormones and Testosterone Decline

And then lastly, sex hormone-binding globulin is another SNP we can look at that tells us when we measure your estrogen, is that level actually something we could trust because if your SHBG is not optimal, then your free estrogen is going to be higher because it's not bound, for example.

So these are sort of complicated parts of the estrogen pathway, but they make a lot of sense when you start to look at it and understand bigger picture of what's taking place underlying your hormone symptoms.

So now let's move on to male hormones. In males, there is often a silent decline of their hormones, and remember that testosterone doesn't just drop because men age.

It drops because it's a very metabolically and emotionally hostile environment that the male's endocrine system is off and put in. So research in highly reputable journal articles have shown that chronic stress actually lowers the testosterone and poor sleep, which I often see men will, you know, will resort to in times of, deadlines and striving for goals.

What it does is, unfortunately, it lowers your testosterone. And what is testosterone's role in the body? Focus, concentration, execution. So they're going against each other when you're losing sleep.

Insulin resistance, which often occurs in today's modern world because of toxins, environmental pollutants, food, all kinds of reasons for this, actually lowers our testosterone, so we need to be looking at insulin and glucose in all men.

to understand the big picture of what's happening with their testosterone. Also, gut dysbiosis increases aromatization. So if you have a gut issue and you're having gut imbalances, even as a male, their testosterone is becoming aromatized.

It's not going to be in its optimal form in order to use downstream by the organs. often it gets converted to intermediate metabolites and even estrogen.

And emotional suppression actually reduces androgen signaling. We're gonna talk a little bit more about trauma and the role here, but research is showing that not having an outlet for your emotions actually produces the signaling of these hormones.

So what can we look at when it comes to precision genomics in males? There's an AR gene, which shows, again, just like the receptor for estrogen, an androgen receptor sensitivity for testosterone as well.

There is a CYP19A1 gene which is responsible for metabolism and clearance in the liver. And it shows how fast testosterone can actually convert to estrogen.

So this is another thing that happens in body often in males is that the testosterone can convert into estrogen. So we can look at this SNP to find out if that's what's actually taking place as a part of the underlying physiology of low testosterone.

There's also the HSD17B and SRD5A2 SNPs that are part the activation pathways of testosterone So some men can have strong receptors and those are functioning optimally, but they might have lower hormone levels.

Others can high levels but have weak receptors. So remember, the hormones are just these signaling molecules that go and they bind a receptor and the receptor does that downstream action.

Both pieces are important when it comes to figuring out what's actually happening in the physiology. This explains why a normal lab that's just looking at the levels doesn't mean normal physiology.

So we really need to get into what else might be taking place when we're doing a workup for hormones. All right. So now I'm going to switch gears a little bit and talk more about the bigger picture, about hormones and how they tend to get affected throughout their lives.

And this is an area that often you won't hear a doctor talk about, but it's very important when it comes to health and well-being. It's an era that I am particularly interested in when I come to research.

Trauma, emotional memory and endocrine signaling are closely related. There's something called the PNEI system, which is the psychoneuroendocrine immune system where all these different systems are actually connected and often affected by psychological stress.

This is the part where the endocrine system remembers how you've lived in the past. And there's a memory from childhood, sometimes from ancestors that is coming in.

I believe, and research is showing, that through epigenetic changes affects how these hormones actually get imprinted and expressed later on through life.

Trauma, Microbiome, and Hormone Signaling

So the endocrine system remembers what you live through, not just in a psychological sense, like our memory, right, but also in biological sense. So that trauma can actually influence these things that we've talked about.

So let's say you've had a lot of trauma in your life, childhood trauma, or have been through challenging circumstances. It can be physical stresses like having a displacement, being part of a natural disaster.

it can emotional stresses. These are all going to have some sort of response on our hormones. Trauma has been shown to flatten cortisol curves. It actually disrupts your progesterone production.

It suppresses your testosterone. It changes the conversion of the thyroid hormone. it changes inflammation, often

making you more inflamed, altering the gut microbiome and changing the circadian rhythm, right?

So it can be acute states of trauma, but also can chronic trauma that has just PTSD that is never really been resolved, turning into complex PTSD, that will result in different biological signals like this.

So coming back to the core role of why these hormones are there in our body, they're there often as a response to safety or the lack of. So again, their creating emotional, rational, nutritional and circadian rhythms.

And we need to understand all the other factors that are playing a role when your hormones are off balance to help you bring them back into balance. And often when I work with people, we're doing a lot of other things, including breath and wellbeing and mindfulness and all kinds of ways to approach your.

Because that's how we are going to create long lasting change. And the other really interesting thing is the microbiome and the role that that plays here.

So right now we've talked a lot about genomics, we talked about hormones and expression of these different chemical signals in our body. Well, there's also the rule that these trillions of bacteria play when it comes to hormones.

We consider the micro biome almost like a hidden endocrine organ. So microbiome itself, independent of all the other things happening in your body, influences estrogen metabolism itself.

It's called the estroblome, right? That's how we're starting to understand it now. Microbiome the biota themselves are influencing cortisol signaling, serotonin and GABA pathways.

We know about the gut-brain connection. So that's playing a role here with the seratonin, GABAA. thyroid conversion is affected by the microbiome, insulin sensitivity we know is effected, as well as inflammation and detoxification.

So, recent studies have shown that microbial metabolites are directly affecting hormone receptors, right? So again, we're not measuring this yet. So this is very new science that's saying that not only is it's erect measurement of the hormone on that end organ and that receptor, but also these hundreds of trillions of bacteria in our body are producing these byproducts called metabolites that also go ahead and affect the hormonal receptors.

So you have another pathway that is essentially present. Short-chain fatty acids also regulate gene expression. And dysbiosis increases stress reactivity.

So dysbiosis is that imbalance of the microbiome in the gut. Gut microbiota shape estrogen recycling. Going back to what I talked about, the detox pathways.

We said liver and those cytochrome P450 enzymes, the CYP enzymes. Those are very important for detoxification, but also the gut microbiota themselves are responsible for shaping estrogen recycling.

So when estrogen starts to build up in the body, if you have poor gut health, you don't have optimal microbiome health. You're going to have trouble getting rid of that estrogen and have symptoms show up.

So really when it comes down to it, it's the genomics, the microbiome, and the hormones that create this blueprint that influences how you're feeling and how well you are feeling, also how your aging in your life.

So remember, we can't really talk about hormones without addressing your genomics, your microbiota, circadian rhythm. I always refer back to trauma history, nutrition status, inflammatory patterns in the body, and stress adaptation loops.

So what's happening when it comes to adrenal stress? and cortisol. So I mentioned in the beginning that this is a set of free webinars, a free mastermind series that I've created, that we have one more session coming up.

We're going to take a break for Thanksgiving. These are every two weeks, but we're gonna take break from Thanksgiving and have more one session after that, which is gonna be like the finale, referring back to the key points in all of them and really talking about longevity.

And then next year, we're gonna go into another series where this is gonna be more of a membership model, where I'd love for those of you who are interested in receiving more information, it's a closed community, so I can share more protocols that are there to support some of the things that we are talking about.

So what we're building inside the longevity membership is we'll be discussing more about hormone genomics, microbiome mapping, circadian personalization, different fasting windows for different genotypes is never one size fits all.

So there's ways to figure out based on your genotype.

Membership Preview and Closing Announcements

I really encourage if you haven't done so to take advantage of doing your genomics. There's a very specific platform I work with where we get a huge amount of genome data.

and we're able to ask it all kinds of questions and it really is very informative. So if you haven't done that, it's a once in a lifetime opportunity to get your genome looked at and gives you data that can be really helpful for all kind of things in your life.

We'll also look at detoxification pathways, the CYP, UGTs and GSTs, nervous system rewriting protocols and longevity, personalized nutrition, a big area that I'm interested in and often work on patients with.

We'll look at clinical hormone labs, so we'll get into that in a lot more detail in the membership, as well as genomic interpretation. So, looking specifically at case studies of genomics and how to interpret them.

Male and female endocrine optimization protocols. I'll be sharing more details about that. And trauma responsive healing framework. What's out there when it comes to healing and supporting trauma?

For those of you who are part of this webinar series that have signed up, thank you so much for doing so. You will be receiving more access to the recordings at the end of the series, so stay tuned for that in your email.

But also, if you haven't already done so, there's a Mamanta Longevity Substack. So I encourage you to go ahead and join that if just go on substack dot com.

and look for Mimosa Longevity and go ahead and subscribe. It's free to subscribe right now to stay part of this membership. And that's where we'll be opening the closed community as well.

So I am excited to be sharing the next topic with you. Again, this is gonna be skipped. We're gonna skip a couple of weeks here because we have Thanksgiving in the middle.

it's going to on December 11th, so mark your calendars at 7 p.m. we will be discussing the Langevity Blueprint. integrating science and spirit into personalized wellness plans, but now the focus on lifelong health and longevity.

What are the key principles? The key pillars of longevity? So stay tuned for that in two weeks time, actually in four weeks' time for December 11th. I will see you then online.