

The Human Upgrade: Episode 1105

[00:00:05] **Dave:** You're listening to The Human Upgrade with Dave Asprey. Today, we're going to talk about one of my favorite biohacking topics. It's hormones. I'm particularly interested in this because as a guy, I had less testosterone than my mom when I was 26. And I became an expert in anti-aging, ran an anti-aging nonprofit group, went on testosterone replacement, medically supervised to physiological levels, and it changed my life.

[00:00:35] And I recommend everyone, even if you're only 20, that you get your testosterone levels checked, and your other sex hormones, whether you're a man or a woman, so you know what your baselines are. And I've talked about this in many of my books, but we're seeing more problems today in women. And in my own life, when I decided it was time to have children, about 17, 18 years ago, my wife, at the time, was infertile and had hormone problems and is a medical doctor.

[00:01:06] So we went deep on this, and that was my very first book, was on fertility and hormones in women and men. And it's been an area of passion ever since because hormones control your mood, and your energy levels, and your happiness. It turns out, I know this is news to some people, but women are not just little men, and men are not large women.

[00:01:27] We have different hormone levels, but we do have similar hormones. There's very different levels. And women, as we all know, have a very different cycle than men, and there's life cycles as well. So I wanted to invite someone on who has a very interesting blend of being a board certified chiropractor, a doctor of natural medicine, and a clinical nutritionist.

[00:01:48] Oh my god, are we going to talk about food and lifestyle and hormones in women? Yes, we are. And you could call this functional medicine, but it's a unique spin on it. And her name is Dr. Francesca LeBlanc. Francesca, welcome to The Human Upgrade.

[00:02:05] **Francesca:** Hi, thank you for having me.

[00:02:07] **Dave:** Tell me your story. I find a lot of my women practitioner friends who focus on hormones, they had to learn it the hard way because they were dealing with it themselves.

[00:02:18] **Francesca:** Right. And I think I'm no different than the dozens upon dozens of practitioners who started out on a journey to wellness when they didn't know that's what they were on. It starts with brain fog, mood swings, irregular cycles, insomnia, depression, anxiety.

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[00:02:37] And being from a mostly medically-minded family, I'm a very, very type A and compliant patient, and I followed all of the normal standard courses of action in the allopathic model and would just spun wheels for years upon years upon years.

[00:02:57] And all I could remember was that one day, the last day that I felt "normal," I felt good, and I was chasing that. So when I really felt like I was just not getting anywhere, I started to shift my thinking. And of course, schooling and career changes helped me broaden my knowledge on holistic avenues of treatment.

[00:03:24] So then again, years and years and years of that, and finally, diagnoses of things like adrenal fatigue, and PCOS, and estrogen dominance. And that's where I thought, okay, this is a problem. This is a problem because these are things that are not talked about.

[00:03:42] And it's even in 2023, I'm still getting patients that these discussions still aren't happening, that there might be hormone imbalances at play. So that's really what motivated me and led me to where I am.

[00:03:55] **Dave:** We first met, I think, five years ago, but I'm trying to remember what conference it was. You were maybe just a little bit pregnant at the time.

[00:04:03] **Francesca:** I was gigantic. Let's be honest. Yeah, so we met-- I think it was Mindshare.

[00:04:08] **Dave:** Oh, it was JJ Virgin's Mindshare Conference. I've been going for years.

[00:04:12] **Francesca:** In this California dry heat. And I was struggling to get down the steps of that certain meeting hall. And he came up right behind me and helped me down the steps, and we started chatting, and my daughter, lo and behold, was due on your birthday, and we were chatting away, and I had no idea who you were. I had never heard of Bulletproof Coffee before. I had never heard of biohacking before.

[00:04:45] **Dave:** In 2018? So you were living under a rock or something.

[00:04:48] **Francesca:** I know. For real. I'm not kidding. But then, let me tell you, it was like the gateway had opened because once I had Bulletproof Coffee, don't tell anyone I was pregnant and I drank that, but I was like, oh wow, okay. Something's up here. And then that is really where

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things change for me. P.S. She wasn't born on your birthday. She decided to come a week early, but I started consuming pretty much all of your content that I could.

[00:05:17] **Dave:** Oh, thank you. To be honest, it's an honor when people who are medically trained are willing to consider my ideas. I lecture to, I think, 3,000 doctors at the American Academy of Anti-aging medicine, and I just walked up, and I said, guys, I'm an unlicensed biohacker. And the benefit of that is you can't take away my license for saying something.

[00:05:43] And half the room was like, yes, and the other half of the room was like, screw you, you unqualified hack. But they don't understand if you call me a hack, you're still saying I'm a doctor, so I don't mind it. Or quack, I guess. But whatever the deal is, thank you, with all of your training and working with patients, for being willing to give my stuff a try.

[00:06:04] It does help. It works differently, but similarly for men and women. The amount of coffee, timing of intermittent fasting, and all, it's different. And I really do my best because I started my journey as an author, and now it's, what, four New York Times bestsellers, with a book on pregnancy, fertility, and healthy babies, because if you were really healthy in the womb, you probably won't need a lot of the biohacks that I teach.

[00:06:35] So let's start with hormones and pregnancy. Are you seeing in your practice hormonal changes that affect fertility? Are they better? Are they worse? What's happening in the world of hormones and fertility?

[00:06:48] **Francesca:** I don't actually see a lot of pregnant patients. I see them when they are, of course, frustrated because they've tried several allopathic treatments because there's so many. And then when we start talking about things like PCOS, which I feel like is one of the big drivers, it's really an unspoken silent cause that I don't think a lot of women are aware of.

[00:07:20] It's just so common because of insulin resistance with 60% of women or more walking around with it. The two go hand in hand. And when women between the ages of, let's say, 30 and 37, spinning wheels, doing fertility treatments, we're not getting really to the root cause of why they got there in the first place. So it's frustrating and costly.

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[00:07:47] So I think that more discussions need to be had around, what hormone imbalances have you been walking around with, maybe since you were 18, maybe since you were 16? It's not the model. The model seems to me, as always, the same-- a bandaid.

[00:08:06] **Dave:** It has been the very profitable business model ever since Morris Fishbein started the American Medical Association to create a cabal, or a trade group, or a monopoly on chemical-based medicine versus all of the other types of medicine like chiropractic, acupuncture, herbalism, all of the stuff that now science really does show have a applicability teams. It works. There's different ways that you can solve a problem. But you mentioned PCOS, polycystic ovarian syndrome. What is it, and what causes it? And why is it so common in women in their fertile years?

[00:08:46] **Francesca:** You have some different forms. There's two schools of thought. People that believe that there are different forms of PCOS, and I'm by no means a PCOS expert. I should put that up front, but I think that the inflammatory component to most hormone imbalances is really what drives, is the root.

[00:09:11] And where's inflammation coming from? At the end of the day, whether it's PCOS, whether it's PMS, whether it's PMDD, where is this inflammation coming from? It's coming in the foundation. The foundation's broken. What is happening in the gut? What are you not absorbing? What are you leaking out? And why is your liver so sluggish?

[00:09:31] And I think if you can figure out where the inflammation's coming from, then you can start to break this down. Because again, a lot of what I hear at least in practice is the traditional abdominal ultrasound for PCOS that really then does nothing because doctors don't believe there's anything that you can really do. It's just the reality.

[00:09:56] **Dave:** I have definitely spent a lot of time researching PCOS because that was one of the things that was preventing me from being a father. In fact, my wife at the time, and she's my wife of 17 years, and friend, and co-parent, and things like that. Today, a lot of listeners know of Dr. Lana because we co-authored that book on fertility and just because I talk about my life on the show.

[00:10:21] She had PCOS, and her medical colleagues had said, you're infertile. You're not having kids. And I'm like, now we can hack that. So it was nutritional changes. It was detoxing,

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and it was the role of things like Candida, and mold toxins, and oxalates, and all these other things that happen.

[00:10:39] And it's funny because my hormones were broken for the same basic reasons, even though mine got broken in my own life before we met, and hers got broken before we met as well. That was almost like 20 years ago.

[00:10:52] What I realized is that if you want to be healthy, it doesn't matter if you're 19 years old or 69 years old. It just doesn't matter if you cannot get rid of the toxins that are present, or you're absorbing more than you're supposed to, or you have these onboard infections. They're going to jack up your hormones and probably a bunch of other stuff. And it sounds like those are some of the common causes of hormone imbalance.

[00:11:20] In your practice, what are the big things that are damaging detox pathways? What's slowing that down?

[00:11:28] **Francesca:** I live in the Deep South. I live in mold. So I have yet--

[00:11:33] **Dave:** I live in the Deep South. You got all southern on us right there.

[00:11:38] **Francesca:** So women that I work with here in Louisiana, nine out of 10 have mold toxicity, and it's mind-blowing. Every single time, and it's fascinating to me, but it is facts of the level of environmental mold. And it's always the same. Everyone panics. Is there mold in my home? And it's scary because you want to associate black mold, that visible water damage mold, with what's happening, but it's simply environmental, and it's the mold that you can't see that's building up over time.

[00:12:13] The chicken and the egg. The mold came first, or the heavy metals. We can't figure out what came first. We just know that one is slowing down detoxification and the other's complicating it equally. So heavy metals, again, here in the Deep South-- now, I grew up in the Northeast, and I don't think that the water quality was that much better, but here in the Deep South, the city water is rich with heavy metals. Women are literally taking metal baths, and breathing in mold, and they feel terrible all the time.

[00:12:52] **Dave:** Let's see. In my own past, I had actually brain damage from toxic mold, but it wasn't just that because some toxic molds make xenoestrogens that are a 1,000 times more

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estrogenic than the kind of estrogens that we make in our bodies. I had a really hard time losing weight, the 100 pounds I had to lose.

[00:13:17] I worked out. I dieted. I went to the ends of the earth, all of my effort and willpower. And I believed that it was because I just didn't have enough willpower to eat even less. I came across research on zearalenone. Is that one of the mold toxins you've worked with?

[00:13:36] **Francesca:** Yeah.

[00:13:37] **Dave:** Talk to me about what that does with weight gain.

[00:13:39] **Francesca:** Estrogen dominance is one of the leading hormone imbalances that complicate weight loss for women, and its root cause is mold in this mold family. It's an emotional rollercoaster for women because when you talk about the eat less, exercise more, and all of that, when we get to this root cause of mold, this is a journey.

[00:14:01] This isn't a, we're going to apply these binders, and in three weeks, four weeks, this is what you can expect. Sometimes this is a three-to-six-month process because we have no idea how long or how much of this mold has been in the liver creating all this inflammation and brain inflammation.

[00:14:22] That's what you experienced as well. It's a journey. It's frustrating, and it is so closely related to estrogen dominance definitely here in the South and the other moldier states like Florida and Texas. So we see a lot of that.

[00:14:40] **Dave:** When I did the documentary on toxic mold-- and guys, if you're new to the show, you might not know moldymovie.com. It's a gift. It's a professionally made documentary. The soundtrack is actually from the lead keyboardist and vocalist for Electric Light Orchestra. It has its own soundtrack, and it was as professional as I knew how to do at the time.

[00:14:59] And I traveled around the country, and I talked to leading experts in mold, and people who were affected. And what you realize is that we think of the South as a mold bomb, moldville, and it's consistently moldy because it's just wet. But the mold there usually isn't that bad. The mold levels are there, but the individual species aren't that bad.

[00:15:20] But if you go to where I grew up, in Albuquerque, or you go to Phoenix, that is desert mold. It's dormant until there's moisture, and then it's hyper aggressive. Everything in the desert

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wants to kill you-- rattlesnakes and scorpions- because it's a hostile environment. So if you go to a moldy place in Phoenix, it will trash you more than a moldy place in Louisiana, except for New Orleans.

[00:15:42] New Orleans has its own unique species after all the chemicals got mixed around. I generally don't want to go to New Orleans because you're just going to get sick, even if you're highly resilient like I am now, because there's just so much mold, and it's like mutated mold, like Spider-Man meets mold. Do you see that as well?

[00:15:59] **Francesca:** Yes. I don't go to New Orleans. I do not. I have to go to New Orleans if there is a family function. I'm pretty resilient as well, but I cannot wait to get out of there. I start to feel it. I really do.

[00:16:18] **Dave:** The guy who did a lot of the air testing for Moldy Movie, let's see, this is John and Laura Riera from American Air Testing, if memory serves. They owned a bunch of rental properties in New Orleans. And after, the hurricanes and all, they just said, we're going to exit that area because we can't keep them mold-free anymore.

[00:16:35] So we are changing the environment around us with things like glyphosate, which, in studies, makes mold worse, and just with things like radio frequencies, like EMFs. You probably wouldn't know this if you're listening to this, but a lot of the citric acid that's in food comes from Aspergillus fermentation, which doesn't mean it's necessarily bad for you, but how do they make this modified form of Aspergillus produce more of its toxin?

[00:17:03] The toxin being, in this case, citric acid, they expose it to radio frequencies and EMF that pisses off the mold, so it's more toxic. So I think we've got something going on in the world around us where you just don't want that. If you're near a military base, you've got all the metal pollution. And you go to San Diego and breathe the mold there.

[00:17:22] That's the worst place in the country as far as I can tell. And that's where the most radar is from all the military stuff there. So there's something going on where our hormones are being disrupted by mold. And if you get mold, you're much more likely to get Candida. Talk to me about Candida and what that does.

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[00:17:39] **Francesca:** I explained to my patients. If you think about the way the gut and the liver work is a lot like your kitchen sink. You've got your sink. That's the gut. And you have your garbage disposal. That's the liver. And if one is clogged, how well does the other work? So we have to understand, even if we're going to go through a mold protocol, that we are also going to go through some sort of intestinal permeability protocol at the same time for that reason.

[00:18:10] Candida is, if not the most common gut fungus in women, it's overlooked because traditionally, the symptoms that would be normally associated with, let's just say, yeast infections aren't there. It's not that anymore. For women to come to the realization that we have a fungal issue when they don't actually have those traditional textbook symptoms, again, it's a journey, it's a process, and it's a little bit of a rollercoaster because sometimes things have to get a little bit rocky before they get better.

[00:18:50] **Dave:** There's also a major link between candida infections and PCOS. They go together. And there's also a link between, ooh, a plant-based diet and PCOS because it turns out that if you eat a lot of these plants that are full of oxalates, which I read about in my most recent book, they can also contribute to PCOS.

[00:19:14] So you end up getting candida, which raises oxalate levels and causes inflammation, and then you get extra calcification there because you're eating spinach, and kale, and those things you think are healthy, and then you're wondering what the heck is going on. You've got toxic metals. You've got Candida.

[00:19:32] If you have toxic metals, the body will allow Canida to grow because Candida will store mercury instead of putting it in your brain. So your body is just swimming in toxins and saying, I'll let this bad thing happen because it's not as bad as this other bad thing. And it's trying to balance all this out, and at the end of the day, you're anxious and feel like crap all the time. Your hormones don't work, and you're infertile. And this is actually the story of living in the US right now.

[00:19:54] **Francesca:** Yeah. Because you jumped to the diet. You panic. You're desperate, and you say, I'm cutting out all meat. I'm going plant-based. I did that. Okay. I'm one of them. And then I was vegan just like you.

[00:20:09] **Dave:** No kidding.

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[00:20:09] **Francesca:** Yeah, because I was desperate. I was sick. And, of course, for six months, I was skinny, and it was great until my hair started to fall out.

[00:20:20] **Dave:** Yeah, malnourishment is great for the first month.

[00:20:23] **Francesca:** Right. It's all fun and games. So your hair starts falling out. And that's the truth. I think that that is what is happening in America. We think that it's immediately dietary. If I take this all-encompassing, follow this protocol, everything's going to go away. And sometimes it makes us sick.

[00:20:46] **Dave:** What do you eat today to keep your hormones healthy?

[00:20:48] **Francesca:** So I'm balanced through and through. I found--

[00:20:53] **Dave:** Balanced? What do you mean? You have kale and spinach?

[00:20:56] **Francesca:** I actually don't. And I use kale chips, but, following you, I stopped eating kale. I stopped doing a lot of things ever since I started following you. But I find that I thrive at very high quantities of protein prior to, let's say, three o'clock. So again, I'm--

[00:21:21] **Dave:** Are we talking bean protein and bugs or a specific kind of protein?

[00:21:26] **Francesca:** So I can tolerate eggs. So I do an egg white protein shake, then I eat beef, chicken, fish for my meal. And I do eat some dairy grass-fed, high-fat yogurt. And by three o'clock, I've met pretty much what I feel like is my protein goal through a lot of trial and error.

[00:21:52] Now, on the days when I don't do that, my blood sugar goes to hell in a hand basket. And from there, everything else starts to break down. I'm so dialed in at this point, I can almost pinpoint what's happening. And the truth is that sometimes we want to enjoy life as well. So we might go to dinner and indulge a little bit, but I certainly pay for it.

[00:22:19] So I have to be very strategic about my protein, fat, and fiber. That, to me, is most important. And whatever you favor as your protein source-- and I tell women that all the time, because if they really don't want to eat a lot of beef, then it's just, mix it up with what's left, but cutting out animal proteins entirely, I don't think, is smart when it comes to hormone balance.

[00:22:47] **Dave:** What do you think about when you see these school boards mandating some vegan days at school for kids?

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[00:22:57] **Francesca:** So I think it's a total disaster because most of these children are approaching those pubescent years. And I think that it is a little like Pandora's box because, in a way, you're looking at it from an obesity standpoint. That's probably why they're thinking, this is a great idea, because we have an obesity problem because of these junk school lunches.

[00:23:24] So let's just go on the complete opposite end of the spectrum. And when you look at all the foods that you would consume in a vegan diet, especially for girls-- in boys about to be in those pubescent years, I think it could be very destructive to proper hormone levels when we talk about testosterone and estrogen. It's like paving the way for PMS and PMDD, I think, in girls. I really do.

[00:23:55] **Dave:** I've explained to my teenagers that politicians and school dieticians are made out of meat, and that eating only plants is a really bad idea. And so if you're a politician or a school nutritionist who believes you have any moral rights or scientific reason to use your power to try and prevent kids from eating healthy animal protein, just remember you're made out of animal protein, and you're not allowed to do that.

[00:24:26] And it is this big of a deal. So anytime someone tries to use policy or manipulation to try and stop you from eating the foods that make you thrive as a human being, they are not your friend, and they just don't have the right. It's not in the constitution. We didn't give it to them.

[00:24:43] And if they just try to sneakily do it, I'm sorry, it's people like you and me, and the other 1,000 people that have been on the show, and the millions of people who've heard the podcast, or read books, or any other experts out there. The preponderance of evidence says you should have at least some ground meat every day, and it's affordable, and it's on us to make it affordable.

[00:25:10] If I had to choose between eating meat myself and feeding meat to my kids, I would give it to my kids first, as all humans have done throughout all of recorded history until the last 20 years of propaganda. So I'm glad you're in alignment with that.

[00:25:24] **Francesca:** Yeah. As a woman, I've had a lot of vegetarian, vegan patients over the year, and I've actually had to have a few conversations that went something like, perhaps you're a better fit, better suited for another practitioner because I'm going to tell you my story. And I tell them my story. And when they start to incorporate animal proteins again, they can start to feel a

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little bit better. So I think as a woman, and I can't speak for men, but you just feel differently, and you know it. You know it. Yeah, you can't--

[00:26:04] **Dave:** There's an inner calmness that comes from having enough minerals, having enough protein and good fats where you feel like you can handle everything that comes your way. And if you're limiting your quality protein sources and eating bad fats, it just feels like everything is hard, and maybe you're not going to be able to make it through the day. God, I felt like that most of my life before I learned how to eat. That's why I'm so passionate about it.

[00:26:33] **Francesca:** I know.

[00:26:35] **Dave:** When it comes to hormones, clearly, getting good fats and good protein is necessary there. But you have a way of thinking about it where you have a hierarchy of hormones. That's a great analogy. Can you walk me through that?

[00:26:49] **Francesca:** So the way that I, over the years, of course, figured out how to hack my hormone imbalances, thank you for coming up with that because let's get credit for credit's due. I did not come up with that. I found that there's such a large focus on progesterone, testosterone, and estrogen. It's just what is tested in the office.

[00:27:11] So I started playing around with neurotransmitters, changing my diet to see what would happen, and researching how neurotransmitters work. So I feel like if you approach hormone balance like a business where you have administrators-- every good company needs a strong administrative team. The administrators report to the managers.

[00:27:35] Those are your main hormones. And the managers report to the execs. And this is where things get interesting because your admins are neurotransmitters that act like hormones-- GABA, dopamine, serotonin. So GABA and progesterone have an interesting relationship, a little bit bi-directional.

[00:27:55] So we know that if we're feeling down, if our sleep is junk, if we are very reactionary and we've lost our sense of calm, all roads can point to progesterone, but there's that relationship there with GABA. So you think that you could just support progesterone by getting a bunch of vitamin C and doing all this stuff to boost it, but really what is lesser known is how progesterone acts in conjunction with cortisol.

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[00:28:27] So cortisol and progesterone do this dance. If you're a stressed out, busy woman, chances are you produce a lot of cortisol, and maybe you have for a while. And now you have this yoyo where you go into states of high to low cortisol. Some people call it adrenal fatigue. Most people say that's not real. I do. I believe it is.

[00:28:50] Cortisol is that executive hormone. So if you're the CEO, you really have to be taking specific measures to support cortisol because cortisol is going to act on progesterone, and progesterone is going to sure act on GABA. Now, when you talk about dopamine, mental health issues and women, whoo, big time, anxiety, and depression, and irritability.

[00:29:15] Dopamine is usually in the gutter, and so is testosterone. Of course, if you're going to go to the doctor, they're going to say, testosterone pellets. This is going to change everything. And for some, it does, but for most women that don't understand the relationship to insulin, because most women that have low testosterone, nine times out of 10, are insulin resistant.

[00:29:40] If we're not addressing what is happening with our blood sugar and we just go on pellets, and I've seen this now-- I can't tell you how many times-- that's the patient that feels great for three months and never felt better again, but they're compliant, and they're on their testosterone pellets. We've never addressed this relationship that insulin and testosterone have. Again, bidirectional. So you as--

[00:30:05] **Dave:** It's true for men too, just to call that out. It's not identical, but yeah, if you're insulin resistant, you probably have low testosterone. Because you're insulin resistant, you have more white fat. White fat makes extra estrogen. It does in women and men. So if you're carrying an extra 20, or 30, or like me, a 100 pounds, around and you have high estrogen, you're like, I wonder why.

[00:30:23] **Francesca:** Right, right, right. So again, it comes down to, you can still-- and I actually still support the model of bioidentical hormone replacement therapy, especially with testosterone, but you still need to address this blood sugar dysregulation, which is driving insulin resistance. So as the CEO of your hormone health, you've got to now manage cortisol appropriately manage insulin.

[00:30:47] But then the lesser-known, which has been really fun over the years because this was a big one for me, was this relationship with serotonin and estrogen. So we know serotonin.

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Happy chemical, made in the gut, has to uptake to the brain for everything to work really well. Estrogen, again, and serotonin, one can block the other.

[00:31:10] Estrogen in a dominant state is going to suppress some of that. So again, you're going to the doctor, and your estrogen is low. You're going to probably get prescribed that. But what is really fun is that you can go in and support the mother hormone, which is pregnenolone, which a lot of people don't talk about.

[00:31:32] And this, to me, is your other executive hormones. So the mother hormone by which all the other hormones come from, a lot of women do really well supplementing with pregnenolone and then addressing the dietary and, again, detoxification and absorption issues in the liver and the gut to get estrogen where it needs to be without having to go in with the hormone replacement therapy.

[00:32:00] **Dave:** It's really interesting, and it's so individualized. So if you go back, even starting in the late '80s, early '90s, the Life Extension Foundation, which has published a magazine about longevity since before longevity was supposed to be possible, just to give credit to them, they said, pregnenolone, there's evidence that it helps you live longer.

[00:32:21] And so they would make pregnenolone in multivitamins and stuff I haven't used in many years. But I tried it when I was young and trying to get healthier, and it didn't seem to work for me. And I got my lab tests. And if you think logically, pregnenolone can turn into anything. It's the mother hormone. So you might start there.

[00:32:40] But depending on your genetics and probably toxins and lifestyle factors, sometimes it'll turn into estrogen. Sometimes it'll turn into DHEA. Sometimes it'll turn into testosterone, which then could turn back into estrogen. And I found that pregnenolone didn't do very much for me. And when I tried DHEA, my levels are very low, even now.

[00:33:01] In fact, I first tried DHEA when I was 18. I was just trying to get healthy. And within three days of taking it, I had no libido. And an 18-year-old male without libido, something's going on there. And to this day, if I take either seven keto DHEA, regular DHEA, within a day or two, zero libido. And I haven't figured it out to be like, low DHEA. But if you take it, it just doesn't work because I have some weird pathway that no one's figured out yet, including me.

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[00:33:28] So the variety here is like, okay, get your lab tests. They can work with you. They can work with lots of places to get their labs to see what their sex hormones are. And then say, you could try pregnenolone. You could try DHEA and see if it works. What's the period of time that you would know if it works?

[00:33:46] **Francesca:** Yeah, that's what you always say, even in your book, Smarter Not Harder. That's what biohacking is. Try it. There's so many nuances and all of the research. If it works, keep doing it. If it doesn't, drop it.

[00:34:01] **Dave:** And just to be able to do that without saying there's something wrong with me because it doesn't work. No, there's nothing wrong with you. It doesn't work. It's just because you're individual, and you will find the right pattern of things that work. And maybe it doesn't work because you have a toxin that's blocking it, or you're living in that moldy house, or your lead and mercury are high, or thallium.

[00:34:26] My thallium levels were high when I was eating kale, and it turns out we know kale is the trash collector plant that raises thallium. What metals are you seeing highest in women with hormone dysfunctions?

[00:34:39] **Francesca:** Gosh. Aluminum, always. And again, we can blame a lot of the skincare products for that, but aluminum, tin, cadmium, big down here.

[00:34:51] **Dave:** So tin, where's that coming from?

[00:34:53] **Francesca:** The water.

[00:34:55] **Dave:** So is it the pipes, or is it just in the water itself?

[00:34:58] **Francesca:** We have lots of evidence that shows the dumping that happened here in the '80s was loaded with stuff like tin.

[00:35:11] **Dave:** And who did the dumping?

[00:35:14] **Francesca:** The government itself.

[00:35:17] **Dave:** Oh.

[00:35:18] **Francesca:** Uh-huh.

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[00:35:19] **Dave:** I can't imagine they would ever allow something that was bad for the population. That's shocking. Just shocking. Here's another idea. A byproduct of aluminum smelting called fluoride. We could dispose of that by putting it in everyone's water. It's a great idea. Let's do that.

[00:35:39] **Francesca:** Yeah. Gosh, it comes at us from every direction, doesn't it?

[00:35:46] **Dave:** What do you do for water filtration in the cell South?

[00:35:50] **Francesca:** Great question. I have a well that is down several levels of aquifer, and then I have a very advanced filtration system that the water then goes through before it comes into the house. And then, of course, I'll double, triple-filter the well water before we drink it with RO and then adding minerals.

[00:36:16] But I think one of the things, ironically, that works well for patients, especially the ones that aren't in a position to invest in whole-house filtration of some kind, are these really inexpensive filters from Home Depot. In the South, it should theoretically last 30 days, but because the water is so heavy, you could change it every 15 days, but a lot--

[00:36:45] **Dave:** You're talking about the one you put under the sink in a cartridge?

[00:36:48] **Francesca:** Yeah, or even for the bath faucet and the shower head, so that you can just start to reduce your exposure because it is just an insult over and over.

[00:37:02] **Dave:** This is a really serious issue for people who are working on recovering their health. It's the water that you breathe and put on your skin. And in many parts of the world now, especially in the US, you can use chlorine to make the water not have amoebas and things in it, which is actually good for you.

[00:37:23] But they also know, by adding chlorine, we cause this number of cases of cancer, like, okay, how many people are going to die of bad water versus cancer? Let's use chlorine. Now you can say, maybe I don't want either one, so I'll take the chlorine out of my house, which would be smart.

[00:37:40] But because governments are cheap, it was particularly in California where I think this started, they said, hey, wouldn't it be cheaper if we added ammonia and just less chlorine to

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make something called chloramine? And chloramine is a tiny molecule that doesn't break down easily and is hard to filter out, and it sterilizes waterways.

[00:38:01] So when they did this in California, amphibians started to disappear from the environment, and chloramine was used as a hospital disinfectant in Sweden until all the nurses got allergic to chloramine because it causes allergies. So I don't know if they're doing that in the South, but a lot of governments have started doing it.

[00:38:17] And what that means is you've got to up the quality of the filtration in your house. Sadly, those filters you put on your shower head can't filter out chloramine and the other volatile organics that you would filter out with activated charcoal. Hot water will wear out activated charcoal in about two hours. So your only choice is to be able to put an active charcoal or an activated charcoal filter on for the whole house, and your landlord may not let you do that.

[00:38:46] **Francesca:** Yeah.

[00:38:47] **Dave:** So I don't know what to do there. Maybe there's a activated charcoal bath bomb you can use, but it's a conundrum. And I'm renting right now too. I don't have a whole-house filter, but I have a great RO filter and things like that. And you do your best.

[00:39:02] **Francesca:** You do your best. Yeah.

[00:39:03] **Dave:** And also, you could take a cool shower instead of a hot shower. It makes a huge difference. I just do a cold plunge, and half the time, I shower in the backyard. I have a hose hooked up to the outdoor shower that I bought on Amazon, and I'll just, okay, there you go. Now I'm clean, but I didn't absorb a lot. And so long, steamy showers in bad water are probably a bad idea, but I don't know how that maps to hormones versus just general detoxing. Do you?

[00:39:29] **Francesca:** Hot versus cold in terms of hormone balance?

[00:39:33] **Dave:** Or just the amount of chlorine and chloramine in water.

[00:39:37] **Francesca:** It's scary to me. I also am trying to do my best, and I have two small kids. So when I think about that as a possible concern now, it becomes very overwhelming. This is the kind of stuff that keeps me awake at night.

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[00:39:55] **Dave:** Okay. You're a medical professional. How do you build resilience and mental calmness so that you don't stay awake at night? Because that's bad for you too. And then you get this meta fear, like, I'm afraid of being afraid. And then you're quoting Churchill and all that. The only thing we have to fear is fear itself.

[00:40:15] No, that's not true. You probably should fear bullets and things too. So how do you, though, generate that feeling of, I've got this handled, given all the stuff you know?

[00:40:27] **Francesca:** Honestly, stress management has been one of the biggest techniques-- a real stress management technique for me. I did a 10-day silent meditation retreat 10 years ago. When we talk about the varying degrees of things you can do to manage stress, I've gone way to one side to the other.

[00:40:52] And really what works is going to that space that's quiet at the end of the day. I cannot watch a lot of television at all. I definitely don't watch the news, let's be honest. I am so sensitive. I am so easily stimulated that I have to really be consistent with winding down at the end of the day.

[00:41:17] It has to be screen-free. There cannot be blue light. My adrenals will produce cortisol with just a little corner, a blue light coming in from somewhere. So I'm really consistent with that. And I think that's the one thing that helps me not only keep my circadian rhythm in check, but it's the biggest, if not most important, thing you can do to balance your hormones.

[00:41:40] I tell a lot of my patients, supplements and diet are really not as good as your intentional moment in every day where you get out of fight-flight and into rest and relax and you commit to it and just don't blow it off because that is where I think you start to feel like you've got a handle on things.

[00:42:04] **Dave:** I love that answer. It wasn't what I thought you might say, though.

[00:42:09] **Francesca:** Okay.

[00:42:09] **Dave:** I thought you might say testosterone because if you have enough testosterone, your stress goes down because you just feel like you can handle it. And if you're low testosterone, you're also low dopamine. And if you're low dopamine, you're low happiness.

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[00:42:23] And this is the same for men and women, different numbers, but that relationship there is so strong and so important. So there's a sense of, I've got this. And we've all felt it sometimes, and other times, we've had this sense of, I don't have this, but I'm going to pretend like I do, and hopefully, no one will notice.

[00:42:45] And that was the first 30 years of my life. I'm like, oh, actually, every now and then, I have it a little bit. Maybe I can do more of what gives me that. And since you're focusing so much on hormones, maybe dropping cortisol is a good thing. But you talked about how you believe in adrenal-- what'd you say? Burnout? What is it that people don't believe in?

[00:43:07] **Francesca:** Adrenal fatigue. Yeah.

[00:43:07] **Dave:** Adrenal fatigue. So most of the functional medicine people that I know do believe in adrenal fatigue because they see it in clinical practice all the time. I've seen it two times. I've had stage 4 adrenal fatigue, where you're really blown out. And what happens here is your body calls for more adrenaline and cortisol, and your adrenals can't make it.

[00:43:27] Maybe it's toxins. Maybe it's lack of zinc. Maybe you're eating the wrong foods. It could be anything, but it just doesn't work. And you do your best, and it doesn't matter how much you try. And then you say, oh, I know what I'll do. I'll exercise. Maybe I'll do some cardio. And then you feel like crap for a week afterwards because you cannot recover from it.

[00:43:49] And then if you go deeper into this, you go, oh, so cortisol is an important hormone. Cortisol is bad because it's a stress hormone. But then you read the studies, and you realize low cortisol is more dangerous than high cortisol because you're likely to get an infection you can't handle stress. So there's huge numbers of people here on low-salt diets who have low cortisol because they had high cortisol for a while and they couldn't make it anymore. This happened to me.

[00:44:17] First time, it took me a year and a half to heal from that. And I slept all the time, and I stopped coffee. And I did all the supportive stuff with salt, and iodine, and all the stuff you're supposed to do. Second time, it took me about six weeks to heal. And what I did is I had a cup of coffee every morning because it helps you raise cortisol in the morning when it should go up to give you energy.

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[00:44:37] Not five cups, but just one cup a day. And I started taking adrenal extract, glandular. And I started using licorice root, which supports this. And magically, you can come back. And now I'm going to go off the deep end. I think you're going to laugh at me. I said, you know what? I don't have enough cortisol.

[00:45:00] Screw this noise. I replaced my thyroid hormone. I'll replace my cortisol. So I found a huge body of research, older research, around cortisol replacement. Not prednisone, but cortisol. So bioidentical cortisol replacement. I took 5mg of cortisol 3 times a day, which is a bioidentical replacement dose. And magically, I recovered like crazy, and I stopped getting sick all the time, and my brain worked way better, and I've been doing that for years.

[00:45:30] **Francesca:** That's impressive.

[00:45:32] **Dave:** My cortisol levels are not high. They're normal. But I also found out that my body probably never made enough cortisol. But I look at cortisol as a hormone. If it's too high, you should do something about it. If it's too low, do something about it. And if increasing salt doesn't work, you can do it because the worst thing you can do is have low cortisol in an emergency.

[00:45:51] Because you just get sick, and you just lay there, and you cannot function when you need to show up for your kids, or for your company, or for your mission, or whatever. And no amount of pushing on the accelerator is going to work if there's no gas in the tank.

[00:46:05] And so I find that thyroid for energy, cortisol to be able to turn on the energy when you need to, and then testosterone for passion, for your mission. Not bedroom passion, although it works for that too. And men and women, they're fundamental to being human. And you're seeing most of your patients don't have those things working right now.

[00:46:27] **Francesca:** Mm-hmm. Yeah.

[00:46:28] **Dave:** That's pretty scary. What do you think that's going to do to society?

[00:46:32] **Francesca:** I think that because of podcasts like this, because of the growing number of podcasts and platforms, you can really, really go down rabbit holes yourself. I'm encouraged by that. Because if you really want to heal yourself, you have an abundance of resources.

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[00:46:54] So if I dial it back to 1999, when I was running down Sixth Avenue to make my doctor's appointment that I was late to in New York City, of course, stressed out and running, I think about what was available then the Internet had just come out a couple of years before, people weren't having these conversations. So I'm encouraged because I feel like more people are warming up to the idea.

[00:47:24] Now, am I concerned about what this is going to do for most people that don't want to do the research? Yes, but I think most people that find you are truly desperate and looking to advocate for themselves because they've either followed the traditional allopathic model and they are frustrated, or they're ready. You think they've dabbling. They're little baby hackers, and now they're ready to go. Balls to the wall.

[00:47:52] **Dave:** It's interesting. I don't know the percentages because it's very hard to measure that. Somewhere around a third to a half of people who find the work that I do are drawn to, like, I've tried everything. There's a way of thinking about this biohacking thing. The other half of biohacking are people who are saying, I know there's more. I know there's got to be more.

[00:48:15] And they're reasonably happy. They're pretty healthy, but, like, what else could I do? I really want to show up in the world the way that I want. So it's a personal development, human enhancement, optimization angle. And for me, very low percentages of mitochondrial function.

[00:48:35] My brain is fried. I'm fat. I'm insulin resistant. I have highest risk of stroke and heart attack. I have arthritis. I'm jacked up. So for me, if I would have found me when I was 19, all my stuff was written for if only I would have known. I would have absolutely been one of those, I got to fix myself.

[00:48:54] If you're under 25, no one fixes their cars up except, I don't know, you taint your window or something. But in the old days, I bought a crappy car in high school because it's all I could afford, and then, I'm going to fix it so at least it'll run. And then, I think I could make it a little faster. And I could make it handle better.

[00:49:11] And then all of a sudden, five years later, you've put God knows how much time and money into the car, but now it's actually really fast, and it turns well, and it breaks well, and all that stuff. So when did you stop fixing the car and start upgrading the car?

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[00:49:23] It's a continuous line. And I don't know where the line is on average for followers, so you might be listening to this right now going, I just want to be well. And you may be listening to this going, life's okay. Maybe you have a couple extra pounds, but I want to kick ass. And it's the same tool set.

[00:49:39] **Francesca:** Yeah, yeah, yeah, yeah. For me, it was 10 years of trial and error before I dabbled into the holistic world. And that was through happenstance, by meeting a traditional Chinese medically trained doctor who spoke no English. She operated out of the back of a Chinese specialty food store in Clifton, New Jersey.

[00:50:10] And you had to have a passcode to get to the back. She took no one. Still to this day, never understood a word she had said, but I was desperate, and she had an entire wall behind her of herbs. And based on heat and inflammation, I did what she said. I was sick at that time. So that was the gateway right there, because then I said, this is weird, and there is something to this.

[00:50:36] So in conjunction with chiropractic care, I decided to then take that turn, and change careers, and go down that-- but I think that that was the beginning. So the car was revving, the engine was revving, and I was off and running at that point because then it was just one thing after another, and your eyes are opening going, whoa, whoa, whoa.

[00:50:58] **Dave:** It's so cool because that enabled you to come up with this hierarchy of hormones. And I wanted to summarize it because we talked about it from the bottoms up. The way that you talk about this is three CEOs or three executives in the hormone health. It isn't what I would have thought. And it's cortisol, stress hormone, insulin, an energy hormone, and pregnenolone, which is the root of all the other hormones.

[00:51:23] So if those are the three boss hormones, underneath that, management level would be progesterone, and testosterone, and estrogen. And then the administrative level of getting stuff done would be GABA, and dopamine, and neurotransmitters. So no one else that I've come across is looking at that interaction where you're putting cortisol, and insulin, and pregnenolone as even being related, but those are root hormones.

[00:51:49] And then to look at that mid-level, being the ones that I focus on, which is testosterone, estrogen, and maybe progesterone. And then to tie it to neurotransmitter. So it's an unusual model. Did you come up with that? Or is that taken from TCM, or--

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[00:52:04] **Francesca:** No.

[00:52:04] **Dave:** I've never seen it that way.

[00:52:05] **Francesca:** It was honestly from, so much thankfully, the research that we do have available. And then I have read so many books on hormone health. To name a few, Dr. Sara Gottfried, I've read every single one of her books. I've read every--

[00:52:23] **Dave:** She's a good friend. Sarah's great.

[00:52:26] **Francesca:** Anna Cabeca, I read every single one of her books.

[00:52:28] **Dave:** She's a good friend and also a total pro. I love this.

[00:52:32] **Francesca:** So I think, in what I've learned, of course, from them, again, biohacking did this work for me, trial and error, and then applying it with patients. I was really testing this out. Does this work? Does this not work? Why did this not work for her? Why did this work for her? And then it just felt-- I don't really like to say cookie cutter because, at the end of the day, there is not one.

[00:52:59] You cannot take patient A, B, and C and put them all into the same cookie cutter. But what you can do is actually do the things lifestyle-wise, and dietary, and sometimes supplementally to support those execs. Everyone can do that without having side effects for the most part.

[00:53:22] And then you can go from there. So whether patient A wants to then go bioidentical, you go from there because she's supporting the execs. Her probability of success with bioidentical at that point is going to be really good, I think. It's just a really good framework that you can grow and expand on yourself.

[00:53:45] **Dave:** There's a hormone that I would have expected to be here that I didn't see.

[00:53:51] **Francesca:** Hmm.

[00:53:52] **Dave:** Can you guess which one it is?

[00:53:54] **Francesca:** No, I'm scared.

[00:53:59] **Dave:** Thyroid.

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[00:54:01] **Francesca:** Uh-huh. Very good reason for it. I have, since the age of 22, had near perfect thyroid panel. Near perfect.

[00:54:16] **Dave:** That's not fair.

[00:54:18] **Francesca:** Listen.

[00:54:18] **Dave:** I'm just kidding, by the way.

[00:54:20] **Francesca:** I have some strong thyroid genetics in my favor because when I tell you this has been the go-to for several practitioners in that first decade-- and again, they weren't doing full thyroid panels. TSH, T3, T4, that's the standard.

[00:54:36] **Dave:** And for listeners, we need to slow down for a second. If you're a long-time listener, you've probably learned this by now. A cheap thyroid panel from a Western doctor just asked for TSH, which is how much is your body screening for thyroid. But a functional practitioner will look at, did the body respond by making T4 or T3? So that was what Francesca was just saying, but translated, in case--

[00:54:59] **Francesca:** Sorry.

[00:55:00] **Dave:** That's okay.

[00:55:01] **Francesca:** So when I finally parlayed into the holistic route and had my first full, and you can go into that in a second, thyroid panel, I was expecting to see a Christmas tree because of how I felt. And again, I was in good shape. And that is one that I've gone back to in my yearly analysis of myself.

[00:55:24] When I look at labs, I am still surprised that every year, year upon year, even after babies, I have not had an issue with my thyroid. So that led me to think, how many people out there are like me? So let's leave this out of the equation. And that's why I did what I did.

[00:55:44] **Dave:** Got it.

[00:55:45] **Francesca:** In terms this model.

[00:55:46] **Dave:** Just from personal experience, as you haven't seen it as much, I have found that the toxins that take out your sex hormones quite often also affect your thyroid. And I've also

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seen people replace sex hormones, but not replace thyroid. So then it's frustrating if you replace your sex hormones.

[00:56:06] So now my desire to do stuff improved because there's a sense of apathy that comes when you're low testosterone, whether men or women, different levels. But low testosterone in both sexes will create that mental state that's tied to dopamine. Okay, a little bit of apathy, like, ah, can't be bothered.

[00:56:26] But then, if you turn up desire, but you don't turn on energy, I know I want to do something, but I'm just too tired. And then you get frustrated. So I recommend for biohackers and people who are saying, what's going on? You probably, if you have extra weight, should look at sex hormones and look at thyroid because that's the most likely thing.

[00:56:46] And after that, then you'd go down the toxin path that you really elegantly talk about here. And you're likely to hit some pay dirt on one of those, but you could start on one versus the other, and just, okay, you start with your sex hormones, everything's fine. Great. And you're one of the people like you who has a magic thyroid, or maybe you start with just thyroid, and then you get your electrical levels working, and then your body maybe starts making sex hormones.

[00:57:09] It could go either way. I don't know the percentages. I don't think anyone knows the percentages, but I'd like to ask. People like the couple of experts you talked about, Sara Gottfried, Anna Cabeca, or even better yet, find a functional medicine practitioner who's been practicing for 43 years doing hormones. And clinically, I've seen this, and I'm like, okay, that's probably going to be very valuable clinical data.

[00:57:39] And this is something else that you now understand because you're a functional practitioner. Your clinical experience is evidence. And the chemical induced or chemical-based big pharma people say, if it's not double-blind clinical trials, it's not evidence. I'm like, that's a logical fallacy.

[00:57:56] There's seven kinds of evidence if you can study computer science or philosophy. So what you see over and over in patients matters, and it matters greatly. And that's why you can come up with these new models.

[00:58:08] **Francesca:** Mm-hmm. Agreed. 1000%.

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[00:58:12] **Dave:** What are the next big things? You've seen patterns. You've seen patients. The next big thing that you think might become a problem for people, given the way we've set up our food system and our environmental systems?

[00:58:25] **Francesca:** Oh, that is a loaded question. Honestly, I think that we have such a mineral problem. And I know that everyone's going to snore in your community because they've heard you talk about this, and it is literally an entire chapter in your most recent book, but this is one of the things, again, it's part of my protocol, is addressing the micronutrient panel and getting minerals back to where they are because this level of depletion is scary.

[00:59:02] **Dave:** I do have a pretty good track record of predicting stuff like this, and there's a reason that Danger Coffee is full of trace minerals. And if people go to vitamindake.com, there's my broad-spectrum mineral formula there called Minerals 101. So go to dangercoffee.com, go to minerals101.com, and I'm doing my best to help people with minerals, which is so boring.

[00:59:23] I want to have, like, this is the nootropic that also enhances libido and gives you doubling of lifespan. But if you don't have zinc and copper, it's just not going to work. So let's get everyone their minerals, and then we'll start on the fancy stuff. Do you have any particular formulas or brands that you like?

[00:59:41] **Francesca:** Yeah, I actually take Minerals 101.

[00:59:45] **Dave:** Oh, do you? Oh, thank you. I didn't even know that. Okay. And guys, if you haven't heard of this, Minerals 101 is my broad-spectrum mineral formula. It's at vitamindake.com. Vitamin D-A-K-E.

[00:59:54] **Francesca:** Two things, especially women with adrenal fatigue. So the liquid minerals, there's so many brands. Just make sure it's transparent third-party testing. Go nuts. Pick one. Drinking that in the morning, or electrolytes-- just pick. That is such a gigantic step forward in nourishing.

[01:00:18] Not only from a hydration standpoint, but healing adrenals. But the big one for women, massive-- when I tell you massive, the magnesium deficiency in patients is mind-blowing because I know how I feel when I don't get enough magnesium. And you can eat all the pumpkin seeds you want. This is not that conversation.

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[01:00:39] This is legitimately knowing what you need and getting it. It's a game changer for feeling balanced. I find, mental health wise, without proper levels of magnesium, I'm not the same as I am when I do take proper levels of magnesium, and the quality of my sleep changes. So that's a part of that whole wind down routine at night that I have. It's magnesium-loaded.

[01:01:10] **Dave:** Magnesium is so interesting because there's all these different forms of it that do different things. And I've, for 25 years, been saying, I just take my magnesium at night. You take enough to not get the runs. Too much magnesium equals disaster pants. So for me, it maybe a gram or 1.2 grams. For most people it's about 800 milligrams. I just happen to be large and relatively muscular, or previously relatively fat.

[01:01:38] Studies, though, when I really got into circadian biology as I was working on my longevity book, which is, if you're new to the show, if you read Superhuman, you'll learn a lot about living to at least 180. The peak levels of magnesium in your blood are at noon because you use magnesium to make ATP.

[01:01:57] And you also use magnesium for sleep. So what I started doing was taking half my magnesium in the morning away from thyroid hormone. And I take half of it at night because you have better energy production and better sleep. So I ended up shifting it around, and you probably absorb it better, but I'm not sure. Any thoughts on timing.

[01:02:15] **Francesca:** Because magnesium glycinate just really works so well for women in assisting with getting to sleep--

[01:02:24] **Dave:** Yeah, glycinate would be a nighttime one. Okay.

[01:02:27] **Francesca:** Okay, so definitely that. And then women, of course, that have gut issues, and liver issues, and aren't eliminating regularly citrate, again, at night, Mally is great for all of the women that have hormone imbalances that leave them feeling like they have fibromyalgia, just to be honest.

[01:02:48] So that would be better in the morning. I have patients that do really well with magnesium 3 and 8 in the morning for focus. We see a lot of patients that deal with some sort of ADHD issues, and that, in some mushrooms, works really well in the morning.

[01:03:12] **Dave:** So psilocybin is what you recommend?

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[01:03:15] **Francesca:** Yeah.

[01:03:18] **Dave:** When you said mushrooms, I'm assuming you meant lion's mane, or chaga, or something.

[01:03:21] **Francesca:** There you go.

[01:03:22] **Dave:** Not psilocybin, but yeah.

[01:03:25] **Francesca:** That's for my face.

[01:03:27] **Dave:** That's for evening time on Fridays. But surprisingly, Paul Stamets, who's been on the show, who's a friend, and is, the CEO of Host Defense, which is a large mushroom, high quality manufacturer, he has launched a pharmaceutical company, and I'm an investor in it, that is now looking at psilocybin, plus lion's mane, plus niacin, and it's a regrowing brains-- not just hippocampal neurons, but the entire brain can regrow on that combination.

[01:03:59] So I'm really excited about that as a way to fix the brains of people who've, had strokes or head injuries, which is so common. And we're not going to have time in this episode, probably to get into it, but it's interesting. If you have a head injury, what happens to your hormone levels?

[01:04:16] **Francesca:** Mm. From inflammation, we know. We even see, with so much of the heavy metal toxicity, how that infiltrates the brain. We talk a lot about the liver. You test the liver, you find the heavy metals, but we disregard that the metals in your brain, that brain inflammation, that's real. And I can imagine that those products that are coming, they're exciting me because they're going to help a lot of women.

[01:04:43] **Dave:** They are. They are going to help a lot of women. And we've got to get our estrogen-disrupting toxins out. We've got to get our metals out, and just get your hormones back generally in line, and eat stuff that has enough protein and good fats. And the body is so much more resilient than we feel like it is, but the resilience pathways that are automatic, if those are blocked, you're jacked.

[01:05:10] So your job is to unblock those. And then magically, your body will heal itself because it wants to. So I'm glad you're sharing the message the way you are, particularly doing a great job online. And your Instagram is Dr. Francesca LeBlanc with C.

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[01:05:25] **Francesca:** Yes.

[01:05:26] **Dave:** And I appreciate your work. We'll tag you in the notes on the show. And thanks for being on the episode today.

[01:05:32] **Francesca:** Thank you so much. I'm grateful to be here.

[01:05:35] **Dave:** If you liked today's episode, maybe you should get your sex hormones checked. Seems like a good idea, or your toxic metals checked. Or maybe you should put down the fake burger and replace it with a real burger from a local farmer who treated the animal well and built soil. Because then you'll feel much better, and it'll be great. So I'll see you in the next episode. Just do something to upgrade yourself today. It's worth it.