Ep144 - Dr Catherine Clinton - Quantum Biology

MERYL: Welcome back everybody to the Rebel Nutritionist podcast Today I am like jumping out of my skin excited. I get to interview. Dr Catherine clinton who i'm gonna let her introduce herself, but i'm gonna call her queen of quantum biology I know there's you know more formal things catherine that you that you can that you can you know You are certainly you're in your Well esteemed in the work that you've done.
And so I, I want you to be able to share that with our listeners, but so welcome.

CATHERINE: Thank you so much for having me. I'm so excited to dive into this with you today.

MERYL: Same, same. So how do you I, I'm going to call you queen of quantum biology, but really, how do you describe yourself and the work that you're doing and this amazing work you're bringing to, to the masses? —

CATHERINE: Well, I'm a licensed — naturopathic physician here in Oregon, so I went through naturopathic medical school sort of the same kind of four-year graduate medical school that MDs do, but with a focus on prevention. So we do a lot of nutrition. We do a lot of herbal, botanical medicine, lifestyle choices with a focus on prevention.

And when I was in school, I got really sick. And that's what prompted me to not only focus on gastroenterology and autoimmunity because that's what happened to me. I was diagnosed with an autoimmune condition. Ulcerative colitis, which affects the GI tract. And I was diagnosed with Hashimoto thyroiditis, which affects the thyroid.

And I was diagnosed with Lyme disease and multiple GI parasites and infection. I mean, it was just this domino effect. Right. And so I was in a great place for healing. I was at the naturopathic university in Portland. I was doing work at the allopathic MD teaching school right up the hill, right across the river from an acupuncture school.

So I had all the tools to kind of piece my health back together, but. For those of us who have been diagnosed with a chronic disease, we know that getting to, productive member of society while incredible going from debilitating, debilitated, can't function to functioning in life again.
I was able to go back to school and see patients in clinic and it still wasn't the picture of health, right? And that's when the Doctor that I was doing rounds with clinical rounds with and actually she was my doctor as well. Dr. Ambrose such Ambrose. She's wonderful. She was kind of pushing me to look at **psychoneuroimmunology. And that's just a big word for how our thoughts impact our biology**.

And I was like, really Don't you have another supplement or, an herb? And of course she was right. Our thoughts and emotions have a huge impact on our biology. And at the time I was really, I still am really invested in researching mitochondrial health.

And I stumbled across an article by Martin Picard, who does amazing research with mitochondria. And it was **how our thoughts and emotions impact our mitochondrial function, our production of ATP and energy and, and how that affects disease states**. And it just like blew my mind. It long opened the doors to quantum biology, so to speak, and I haven't left the room. It's so exciting.

MERYL: Yeah, oh, it's I, we were talking off air and I said, I literally manifested you because I had mentioned that I was at a Joe Dispenza retreat and I just wanted to continue to throw myself into this area of. You know, learning of knowing of just understanding it —— because it just fascinates me.
It really when I first started listening to Joe Dispenza many, many years ago it was fascinating then. And it's kind of, it's been this sort of snowball effect for me. And then when I saw the work that you're doing and I'm like, oh, wow, this just kind of overlays on that. Especially when you talk about biology the biology part of it, because not a lot of people are talking about that, and yet it's so important.
So, let's back up a second. When we talk about quantum biology, like, what is that? ———

CATHERINE: Right, that is a great question, right? Because we've heard of quantum physics, we've heard of biology, but not many people have heard of quantum biology, right? And so, quantum biology is It's a new and emerging field. There are dedicated departments at UC Berkeley.
People are doing research at MIT, all over the globe. But it is a new An emerging field. And what **it's looking at is quantum phenomenon in living systems. So we're talking about quantum tunneling, how a particle can go through an obstacle rather than over an obstacle**. Like if we had to kick a soccer ball over a hill, right?
We don't need that in quantum tunneling, that particle can go through that obstacle or **quantum coherence, the idea of two things vibrating at the same frequency or superposition where a particle is taking multiple paths at one time or entanglement where things are connected and inseparable, even if they're. disconnected in space**, right? Even if there's a lot of distance between them.

And so this was something that ever since the birth of quantum physics was an idea that quantum physicists were putting out there. But it wasn't until the early 2000s with Greg Engel and Graham Fleming out of UC And their work with photosynthetic bacteria, **bacteria that act like plants, right?**
They take photons of light and they shuttle them to the photoreactor center so that photosynthesis can occur. And that's a huge part of our existence on this planet. Right. And so they found that. These photons were able to use quantum phenomenon, and we can talk about that more in detail if we want to, but basically quantum biology is the study of these quantum phenomenon and living systems like ourselves, and it really starts to look at our biology at a deeper, much finer, smaller level, right?

So what we learned in school is all about chemical mechanical model Health and how a vitamin or a macronutrient affects our health, and that's still true, right? Quantum biology doesn't negate that or erase it. But what it says is there's this sea of action that's happening at the level of an electron or a proton or a photon of light or a pht on of sound. And that is giving rise to what we see and what we learned in school. And so it's just. Absolutely fascinating.

MErYL: Well, it is. And I think part of where the where, and I don't even know that it's confusion where people can't have a hard time wrapping their head around it because this whole world of quantum, you can't touch, you can't feel, you can't see ─ it.
So part of it is you kind of just have to trust, right. That it's happening. And, for a long time, I and I think when you grow up, let's say, quote unquote, grow up in the medical model where it's like you said, it's the chemistry, it's the touch, it's the feel. And if you can't touch it, feel it, see it. Then it's not a thing and you know, everything else gets dismissed from that and yet what we now know, like you said, from the teaching and the workings and the research of all of these people is **this quantum realm that you can't necessarily touch the field with the naked eye, if you will. Is very real energy in our body and energy in the universe and everything around us and it, and, and one is affecting the other,** right?

Completely. ——— Absolutely. Yeah. So, so one of the things, so thank you for explaining the quantum biology part. So one of the areas, because I always say to my clients, to whomever I'm speaking to, **what goes on in the mind, our thoughts, our feelings, our emotions. Are manifested physically** and people look at me like with this crooked head and go, huh?

What you know and when I say to them their disease part of their disease Is coming from you know, you talk about this unhealed trauma and all that kind of stuff but a lot of disease like you said is the the psycho. What did you call it? Psycho Neuro Immunology. What is that? And can you kind of take us back to how that impacted your you know, what your diagnosis was and then the subsequent healing like what you had to go through.

So people can have a tangible kind of sense because we have a lot of clients with ulcerative colitis and Hashimoto's thyroiditis and you know these autoimmune diseases and yet they can't they have a hard time making the connection that what my autoimmune disease is somehow tied to the thoughts in my head.
So can you elaborate on that?

CATHERINE: Yeah, absolutely. I think it's really important for people to understand. And I think it's nuanced, right? Like, when I hear that, I think like, Oh, someone would have to have these really bad negative thoughts. And, and I didn't, **I wasn't, having really negative ruminating thoughts or, or something like that.**
I just didn't have the capacity to handle stress. So I would spin with stress and I was in that second year of medical school where it's that initiation weed out year. You know, you have

to sign in at 7 a. m. You don't, you don't pass the class, you got to do it the next year. I mean, it was really intense and I didn't have the foundation to handle that.

So my thoughts were stress related, like, Oh my God, Oh, I got to do this. Oh, I got to, Oh my gosh. Total fight or flight mode, right? It was less negative, right? I wasn't Thinking to myself, you're not good or you're bad. You know, I was just stressed out. And of course, we all have a subconscious train of thought, right?

Bruce Lipton talks about this, about how we have **that subconscious train of thought that really installed with before the age of seven. And that's kind of where those negative thoughts come in. And, and that took me a while to realize, Oh, wow, you, you do have negative thoughts.**
They're not in the forefront, right? That's not the, the loud soundtrack in your head. The loud soundtrack was like, Oh, I got to do this. I got to do this. There's not enough time. I'm stressed out. ─ Right. Trying to, to keep up in, in med school. Yeah. **And what that did was it impacted every single function in the body, and it did that mechanically, the proteins in our cells and the cell membranes, it did that chemically with our neurotransmitters and what we how our body reacts to those states of stress and those things.**
thought patterns. They have a much different chemical reaction than if we're at ease and relaxed. The difference between if we're in the middle of a slammed workday versus on vacation without any requirements, right? That state of Being impacts our biology. And then from a quantum biological perspective, this has there's a few different things happening, but the at the forefront is what's happening to our mitochondria and our mitochondria are those small little, like we learned in middle school biology, right?
Those organelles, little bean shapes, little jelly bean shapes inside of and ━–━ they make ATP, our energy source. And **Douglas Wallace has done incredible research showing that any dip in mitochondrial function in the ability to produce ATP ─ is associated with symptoms and a disease onset**, right? He's looked at.
So many different disease states and really showed this association of how important our mitochondria are. And so when we start to think that or start to understand that what we think impacts our ability to maintain that mitochondrial function and that ATP and that energy that's needed in every cell.
In every organ, right? Not our red blood cells, but **in our lungs and our heart and our digestive system, our thyroid. I mean, every single organ system in our body requires our mitochondria to be working efficiently. And so when we Understand that our thoughts are having a direct on and off ability to press function in the mitochondria.**
Then it's like, okay, this isn't just sort of that, that meme of like think positively or whatever. It really does have this impact on our biology. And it doesn't always have to be positive, right? I think that was a scary part for me when, when I said the doctor I was working with was pushing me to look at my own reactions to stress.
I was like, I don't want to like, I don't, you have an herb or a vitamin, like **I don't want to deal with that because. ── That was really scary to me. The idea that what I thought had an impact on my biology because sometimes my thoughts weren't positive, right? And they weren't consciously not positive.**

They just pop up anxiety, fear. And it's not that we have to be in this state of love and gratitude at all times. Absolutely not. It's that We can act talking back about coherence that **we're able to allow that feeling to come and not fight it and allow it to pass. Right? So I want people to also know that it's not this black and white.**
You must think positively or you will be sick kind of thing. You know, we're humans were meant to be angry. We're meant to feel sadness and sorrow and frustration and fear. I think what happens is when we fight with that emotion and don't. welcome it and allow it to stay for the time it needs to be there and then allow it to pass, that it really sinks into our biology.
So it's really powerful, the effect that our thoughts and our emotions have on our, our health and our biology overall.

MERYL: Yeah. Wow. That's pretty, yeah, that's pretty Intense, right? So, so when you were finally said, okay, wait, I realized there is no pill, powder, potion that you're going to give me and I gotta, I gotta do this work.
What was it that you first embraced about it? Because I always know these things are a process, right? I know what my process has been. I can talk about that in a second, but what was that process for you coming into this world of the quantum that you kind of walk us through. All right, well, what would be the first step?
You know, how did you do that?

CATHERINE: Yeah, absolutely. And so I was really analytical about it. Right? So I had my checklist like, okay, I need my light environment to be okay. So I need to be outside in the natural light. I need to be grounding. I need to be in nature. I need to have my circadian rhythm dialed in. I need to be going to sleep at a certain time. And it was a checklist, right?

Yeah, completely analytical. You know, check my boxes every day. And the beautiful thing that happened was that checklist turned into a relationship, a relationship that I had with the rising of the sun or the ground beneath my feet or the trees in my area, it became a sense of safety and belonging that wasn't dependent on Human relationships and the tides that happen there and, and, and all those things.
It was a constant source of safety. And what I see in my patients, every single one of my patients who are dealing with chronic disease have a lack of safety in their life. So what started out as this research base, like, okay, how do I get my mitochondria to function light? And my little checklist.
Turned into this. Oh my goodness. This is a maze. The checklist is amazing, right? Cause cause that has huge impacts on our life, but **this relationship that I've cultivated with the world around me has brought me into a place that I never knew I belonged in and that I belong here at all times, anywhere I am.**
And that was really the beauty of it, I think.

MERYL: Yeah. And I resonate with that so much so because, you talk about, okay, well, let's get into nature. I think people feel like, again, when I, if I'm looking at sort of the bridge between

what, let's say conventional medicine is where it's like, okay, here are these hard and fast hard and fast, like ─ Like a checklist, but it's a different checklist, right?
And then you ask someone to do something like go outside and get some sun and they look at you and they're like, wait a minute, but that's like a prescription, ── you know? And so I feel like it's almost, and you do say this, we really need to create, if we're going to do this the right way and serve, ── serve our community, serve the people that we work with and all of it, the world, right?
We have to create a different paradigm. And I love when you say, Cause I always say to people, just first thing in the morning, get outside, get some sunlight I make it a point, I get up in the morning, I watch sunrise, I meditate, like I have a process ─ because it just, it makes my soul happy. I have finally realized what.

What I need to do on this quantum and to really balance my life. And one of the things that we talk about in the work that we do here are I started out with the five pillars of health, although I'm like thinking, well, now we got to add a six and a seven, right? But, we have to talk, of course, about the nutrition and movement and sleep and stress and the mental and emotional, and I'm going to add environmental, right?

Those are all the things that. create the foundation for where we need to start. But like you say, all of that, it doesn't, **it's not necessarily a pill, a potion, a powder, a prescription. It really has to come from our mind. We really need to create that. ─── We need to almost create a different movie. Reconnect with who we really are at the core**. ──

CATHERINE: Yeah, absolutely. Absolutely. And we can talk about some of my favorite ways to sort of tend to our quantum biology, like light environment and, and all this, but, but **it all really comes down to standing in that flow of energy, finding Our place in the world that, that modern life has really walked us away from.**
And so, yeah, I absolutely agree with what you just said. Yeah.

MERYL: I would love for you. I, like I said, I had listened to one of your recent podcasts and you had started with. Get out in the morning and what the sun does and the circadian rhythm does and why that's so important. You talked about the fight or flight.
Can you walk us through that? Cause I thought that was so powerful.

CATHERINE: Absolutely. And, and good thing you asked that, because **that's one of my top things that I talk with people about is getting out in that am sun**. And the first thing that people think Is Oh, well, I don't get up at this time. I don't, I work this shift, dah, dah, dah, get out.
When you wake up, whatever time that is, ideally, **it's great to see that sunrise. And why is that? Because it is exposing us to a full spectrum of light**. So here I am inside. Now I've got some ring lights in front of me. I've got lights on. ─ I could put more lighting in here. And if I took a meter to measure that, the light is going to be just a fraction of what it is outside.

And I'm here in the Pacific Northwest and we live in this blanket of gray, right? We can tell that the sun is up because it is light gray out, ―– but – it is not the tropics, it is not that beautiful. Sun that you would see on a postcard

MERYL: where we are in Florida. We got that blue sun. Anyway, go ahead. Yeah.
Yeah. Yeah.

CATHERINE: I'm envious of you right now, but, but here we are in the gray and that spectrum of light is going to be so much more diverse and much more rich than the light I have inside, no matter how bright I'm making it inside and what it's. What's happening out there is you see that **there's this full spectrum, right?**
The visible spectrum that we see with our eyes, that red, orange, yellow, Green, blue, violet the rainbow is just a small sliver of that electromagnetic spectrum. And when we go outside – in the morning, we're getting a big dose of, especially at sunrise, like I said, or sunset, right? That golden hour, right?
where it's nice and orange and red that is activating our mitochondria, the UV that starts to become present as the sun rises the infrared energy are, the sun is the biggest source of infrared energy. And what's happening is that not only is it affecting our mitochondria for the better increasing its efficiency to make ATP, but it starts to dump all of – hormonal cascades, right?
We get a dump of cortisol and that's when we should have a dump of cortisol, right? So when I'm looking at lab values of people, I **see people really high at cortisol at night and really low in the morning, struggling to get out of bed. And that's the, an inverse that we see so often in modern day life because we don't have that natural light.**

And we're on this artificial light. This artificial light that's in front of me is just it's not even I know a lot of us have heard of blue light from indoor lighting from our screens. It's not even the full spectrum of blue light. It's a very narrow band of blue light, which is very chaotic for our biology. Our biology. We evolved with this full spectrum of light and what it does when it's **The morning is it exposes us to that we get dopamine that makes us feel motivated and energized serotonin that makes us feel relaxed and happy. There are a lot of different things that are happening on a biological level because we're exposed to that natural light.**

And then if we tie in the circadian rhythm and how Every cell in our body has what's called clock genes, right? Every single cell has a circadian clock, meaning that it is stimulated by light in our environment. So if we can get that full spectrum of light in the morning, it stimulates biological action in Every single system in our respiratory system, our cardiovascular system, our brain function, our digestive system, our hormonal system, our inflammatory state is also dictated by the circadian rhythm.

So getting that am sunlight is really important. A**nd then lowering the lights at night is also really important because that's where we start to see a lot of the skewing as well**. If we are inundated with the This narrow band of blue light, our body's like, okay, wait, it's, it's new. I, I keep going. Right.

And what we're supposed to have happen is this lowering of light where that serotonin that was dumped in the morning with that light exposure that we got by going outside is converted into melatonin. We are able to release. Growth hormone. And these things help repair and scavenge the body from damage and, damaged cells and damaged cellular pathways.

And so this is really important. That sort of yin yang —— getting that light in the morning throughout the day, taking that 15 minute break or that call outside once a day can be really Impactful, even though maybe our day is slammed and we don't have time for that wonderful, beautiful walk outside, which, of course, I'm not — dissing that because that is wonderful and ideal.

But sometimes we get in the state where all we can do is go outside in the middle of the day for 15 minutes and that. is powerful. I want people to know that it doesn't have to be this life of you're out in the wilderness all the time, which would be wonderful, but it doesn't have to be that and then lowering the lights at night.

And that looks like in my house again, here in the Pacific Northwest, it's, it is dark at like four or 5 PM. So we're transitioning to more of orange and red lights that are. Not blocking that conversion of serotonin to melatonin, helping us get that restorative sleep. So, and there's blue —— blocking glasses, blue light blocking glasses that we can use.

There are functions on our phones and our screens to lower the blue lights. I mean, we have lots of options, but starting to kind of **Shift that perspective to understand that that we are meant to have this huge informational input from the light in our environment. So trying to be conscious about that can have huge effects on our health** 100 —percent

MERYL: and one of the things that we and thank you for that explanation because it's great.

I I really want people to hear that and play that over and over again because I think we really diminish you. The effect, the, the, the huge impact — on our health that this can have one way or the other. And I think that's really that's why I said people look at me and go, what?

That has that much of a effect. And I'm like, yeah, it really does. Right. And then you put all of these, all of these things together. You start creating that foundation that really is pretty simple. We make it so much harder than it has to be you start putting all of these pieces together and that's.

Like you've said, right, that's how you rebuild health. It's not this one, like, aha thing that, that health is going that your health is going to be implicated by. So let's talk. Cause one of the things that we talk about also is creating a good yeah, sleep habit routine in the evening, like you said, right.

Lowering the light. But, but, and I always tell people sleep is where our body recovers sleep is where the immune system recovers. So if you are that person that is struggling to sleep or you're going to bed too late, right, when is serotonin made melatonin is made. —— In that 10 p. m. to 2 a. m. window and if you're going to sleep late, late, late, you're missing out on that.

So can you speak to what is creating a good sleep habit routine why that's so important with the chemicals that you've talked
About?

CATHERINE: Absolutely. Absolutely. So It is important, right? For those things that we just talked about the melatonin, the growth hormone, thyroid hormones start to rise in the evening, right?
And like you mentioned the immune system, **I think people don't realize that our immune system is circadian. ─ So if we are having that bright light in the night, we are not having that white blood cell activation. Right? It's, it's really impacting every single system, our inflammatory system, that growth hormone and the repair that's happening there.**

So what I talk a lot about is how, what does that look like? What does a good sleep routine look like? Right? And. We're talking about light, which is, is really important, but we should also mention, or I should also mention that, that **eating is a big instigator of our circadian rhythm. So getting that a. m.sunlight and eating sink our circadian rhythm**. **And so the inverse of that is lowering the lights at night and not eating**.
Right. So making sure that we're not eating. Two to three hours before bed helps sink that circadian rhythm helps us get a deeper sleep ─ Lowering the lights again that all of this is like two to three hours before bed.
I prefer ─ Three but two if we need to **getting that Blood sugar stabilized from that last meal and getting A environment that's conducive to sleep**. And what does that look like? It looks like not a lot of light. We live out here in the country, but I used to live where both sides of my bedroom windows were there was a shining like street lamp out there on both sides, right?
So that. To me was blackout shades right on both of those windows so that I wasn't being inundated with that artificial street light all through the night.
So making sure that our room is dark, making sure that our room is a little bit cooler than it is during the day or that our regular. Environment is during the day, right? I just keep my room a little bit cooler at all times. And that's where I go to chill out. That allows that sinking of hormones that we've been talking about to happen more readily. And then **the last one that I think a lot of people don't realize is our sound**, right?
Like. ─ **We start to notice a pattern when we're talking about these things that there is a influx and a rise and then a dip**, right? Like that yin yang relationship. And that's true for sound as well, right? So having sound is a beautiful medicine and therapy. It's can do so many things to our biology, especially on a quantum biological level.
But **Lowering the sounds and making sure that our room isn't inundated with sound at all times is also a really great way to get our sleep hygiene up to to snuff,** right? So we're talking about not eating and that includes drinking alcohol. That's a huge one for, inducing that blood sugar rise where we kind of wake up a few hours after being asleep and have a hard time going back to sleep because we have that increase in blood sugar from that that alcohol consumption.
And so 2 to 3 hours before bed, not eating, lowering the lights, making sure our room is dark and cool and quiet for us to sleep. And it's become something that ─ is. So wonderful. I mean, I really love these winter months where we can get into that rhythm of solitude and quiet and really start to be more restorative because here, like again, where I'm at in the summer months, it's Sunny, the sun's up till 10 p.

m. So that's like a go, go, go kind of energy. And right now it's like, okay, I need to sleep longer in the winter, right? **It's not only those daily rhythms, but it's the seasonal rhythms as well.** So those are some of my favorite things for keeping our sleep hygiene. ─ Up to date and making sure that we're getting all of those hormones and neurotransmitters and, and biological repair that we so desperately need each night.

MERYL: Absolutely. Which also means staying off your phones. Get off the phone people. So thank you for that. I also want to so I do want to touch me talk about the grounding because I think that's really important. And then I also want to get into a little bit of that psycho neuro immunology, because I think that's fascinating.
And I, and I think so many people are stuck in that where it where. And I see it right with my clients that what is going on in their head and their mind is affecting their gut, their neurological system, which is then causing inflammation and wreaking havoc on their body. So if we can real teach people to reel that in and pay attention, ─ I don't, I can't tell you how many people are just so dismissive.

I have a couple of clients that, that I'm currently working with that there. Yeah, they're saying, **okay, well, I'm working on changing my diet to less inflammation and I'm working on moving my body a little more and yet they're totally dismissive of their home relationship with a spouse, with a partner, and that They're sort of dismissive of, Oh no, that stuff is separate.**
It's not really impacting my health. I mean, I want to talk about that cause I think that's so important, but we'll get to that in a minute. Let's talk about grounding because I love how you explain it. And I think that's another thing one of the things that I was thinking about when I was listening to the podcast and when I was walking this morning is how we've come, we've, we've come so far from what our, how our body epi, well, genetically wants to respond, like what our system should be doing, what we should be doing with the, with the environment and with the with nature, right?
We've, we've come so far from that and yet the things that are going to heal us, we have to go back to those things, right? Those evolutionary things, ─ like we've come so far and it's so depleting and it's so, It's just wreaking havoc on us. And so that's where like, **how do you go backwards in a world where technology is just like thrusting us forward and more disconnected, right?**
So, but speak to the grounding and whatever I said in there.

CATHERINE: Yeah, I, I, I agree. And I. think that that brings me to my favorite analogy with grounding, because I'll get into a little bit of the science and research behind it. But really simply put, I tell people that **the earth is the socket and we are the plug. So we're so used to recharging our devices, our phones, making sure that they don't run out of battery. ── Power. That's our battery power, right? We can actually get. Charge from the surface of the earth**. ─ That's the socket. We're the plug. We've got to plug in. And so what is she talking about? Right? Let's **──** let's back it up and explain what I mean. **So miles up there in the ionosphere. ── There is this influx of radiation coming into our environment, and it's sort of condensed into lightning and as lightning strikes.**

And as we're talking now, there are hundreds thousands of lightning strikes happening all over the globe each second that we're talking. Right? So if there's not a thunderstorm in your area, that doesn't mean that there's There isn't one somewhere else and many of them, right? **And that's what's maintaining this surface negative charge of the earth.**
And a lot of us don't realize that we are negatively charged and are bad. are inside ─ of our body. **Our cells are negatively charged, and this is really foundational for our health. When we see a decrease in that negative charge again, we see symptoms and disease onset. So maintaining that battery, so to speak.**
Speak, maintaining that negative charge is so important and coming in contact with the negatively charged surface of the earth or what is embedded in it is so restorative to our own negative charge. And what does that look like? **That can look like bare feet on the ground. That can look like hands on a tree that can look like wearing clothes or shoes that are conductive of those electrons.From the surface of the earth into our body.**

So is that's supposed to conjure up like visions of a space suit or something for me, what I'm talking about are **clothing examples like silk or linen or cotton**. These things are conductive, meaning that we can sit down on the ground and sort of harvest those electrons and they are shuttled throughout the body to maintain that electrical charge.
And ─ there are grounding shoes out there we can wear, right? So this doesn't necessarily have to be that barefoot hippie hug a tree kind of trope that we, it can be, of course, right. But there's a ways around that. If we we don't want to do that, if we don't like that sensation or it's too cold, right?
A lot of us live in places where it gets really cold to put our bare feet on the ground during the winter months. So those things are available to us and they are maintaining this electrical charge. And what does that do? Well, James Oshman has done it. **Wonderful research on how simply put, it decreases our inflammation and, we can start to think of inflammation as being deficient in electrons being deficient in this.**
Electrical charge. And so it starts again to kind of shift that perspective from this chemical mechanical model only to other things in our environment able to impact and maintain our health. Mm hmm.

MERYL: That's great. And you know, you had the right so there's a reason now we **now we know why going to the beach and being by the ocean and all that kind of stuff makes us all feel so good**. ———
All those negative ions are like shooting through us right.

CATHERINE: Yeah, absolutely. And, and **we get a huge exposure to negative ions, like you said, an ocean spray, waterfalls, rainfall, right? Even just opening the windows on a rainy day lets those negative ions into our environment.** But I think a lot of people also don't realize that.
Negative ions are in the plants and trees around us in the grass and the bushes in the field. So when we go outside and just are in a little bit of a natural setting or by a tree or a bush, those negative ions are released in the wind and we are able to capture those and use those for biological action.

So, so many different teeny things that we don't see happening. But have a huge impact on our health. Absolutely.

MERYL: So **what do you tell someone who lives in a city? —–– How are they getting? How are they getting their little kick of negative ions? –**

CATHERINE: Absolutely. Well, I tell them, first of all, that **concrete still conducts those Electrons from the earth, right?**
Especially concrete that you see grass going through. Sometimes there's a really thick plastic layer underneath the concrete but concrete does conduct electrons, right? And it doesn't have to be a beautiful park or national park or Preserve something like that. **A tree, a bush, a patch of grass.**
All of those things have this available for us. So I would hate for anyone to think that I'm in downtown Manhattan and what is available to me. Well, I know that you've got concrete. I know that you've got –– that you've got – some Patches of exposed earth around you that we can make contact with and like I said, even if we aren't – in an area that's inundated with natural things and trees and bushes that's being carried in the wind.
So we're getting that exposure if we go outside. So that's the takeaway.

MERYL: Right. So if we all of a sudden see a bunch of people in Manhattan, hugging trees, we know they've listened to this podcast and we cheer them on. Right. Exactly. You go, you hug the tree. So one of the things, interestingly, I'm going to shift that and thank you for that.

Cause I, again these are things that I always talk about. I'm so happy to have someone to validate it. Cause you know, sometimes when I say it, people, like I said, look at me. I'm like, where do you get this crap from? You know, I'm like, no, no, no, really, I'm doing the research. I'm doing it. I'm doing it.
You know so it's nice to finally have that validation. And yeah, we'll, we'll make sure we link some of these resources that you have as well. You know, some of these authors that you talk about and where they're doing the research. Cause I think it's important that people can see there is validity behind it.
And I think that's, that's crucial. So let's talk a little bit about this psycho neuro immunology piece. That I think is so very important, especially now, right, where people were mental health and and then, because I always say, look, your gut is connected to your brain, which is connected to the rest of your immune system.
And again, right, you had a autoimmune, you had ulcerative colitis that – clearly was connected to some mental emotional piece. So, so what is this field that this area that you talk about and, and can you elaborate a little? –

CATHERINE: Yeah, absolutely. Absolutely. It's really this positive feedback loop that's happening, right?
So our thoughts can simply put increase our inflammation, increase our. Inflammatory cytokines, the messages that are sent between ourselves, they can increase our

inflammation, and that impacts our immune system and the positive feedback loop of it is that our inflammation then. Impacts our brain function, right?
So it's this circle of I'm thinking this. It's impacting my inflammatory state and my immune system. And then my immune system and inflammatory state become a certain way. And then that's impacting how my brain functions and how that neurological state is set up. **And so how do we get out of that loop if it's just dog chasing its tail kind of phenomenon**. —————

Breath and gratitude can be some of the easiest ways to stop that positive feedback loop to put a pause on those thoughts, to put a pause on that inflammation and that immune sort of dysregulation and that —— Like I said in the beginning, **I would hate for anyone to think that if, if you do have negative thoughts or you have anxiety or fear that you are destined to be stuck in this loop.**
No, we, our biology is really resilient, very adaptive. So we are used to to being this sort of pendulum that swings between safety and danger, right? That's what our nervous system is wired to do. And our nervous system has two different branches to it, right? It has that sympathetic branch. That's fight or flight go.
You need to run away from the bear that just jumped in the room. — branch of the nervous system, right? And then our parasympathetic nervous system is that rest, digest, you've ran away from the bear, you're in the meadow, sit down, have some berries. And our body is wired to be swinging between these two at all times.
And that's something that is measured with heart rate variability. And this is something that Doctors are using Olympic athletes NFL players, looking at how our heart rate — is variable, right? We kind of learned this metronome thing that here's our heart beating at a certain rhythm. And if we run up the stairs, it'll keep that rhythm.
It'll go faster, but they're evenly spaced beats. Right. And that's really far from the truth because of the innervation of the heart. — We are assessing those signals of safety and danger at all times, and the heartbeat has variation to it. **And the more variation there is in the heart rate, the more resilient we are.**
The higher our heart rate variability is, the better our immune system is working, the better our Responses our ability to adapt to a signal of safety. Oh, no, it's danger. Oh, no, it's that being able to ride those waves is really where that resilience comes from. So it's not that we're not supposed to have those signals of danger.
It's that we're not supposed to Day there and becoming conscious of what we're thinking, how we are reacting can be a wonderful way to notice — where we are living. Are we living in this constant state of danger and breath and gratitude can kind of give us that pause, right? So something like a heart coherence exercise and the heart rate.
Excuse me, **the HeartMath Institute is a wonderful resource for so much research looking at the relationship between our heart and our brain**. And when we are in that fight or flight state, we are innervating our amygdalas that center of the brain that deals with fear, quick reactions. When we're in that safety mode or innervating that frontal lobe, that rational thought, that calm decision making.

Of course, that makes absolute sense. We would want to be wired that way, but when we are just in that state of danger at all times in that stress state, then our body can't do what it needs

to do. In that safety state in that parasympathetic state. **So I talk a lot with people about using the breath, using ─ a pause to think about what they're grateful for.**

And that can look like. A daydream, right? Maybe a dream vacation where we would want to go on that can be a memory that can be so many different things. It can be ─ gratitude for being able to take those breaths and being here alive, right? I mean, there's so many things we can do, but a simple heart rate, excuse me, a simple heart coherence exercise ─ Allows us to kind of see that shift and we can maybe do one if you want.
They're only like a minute. And the difference in taking a minute to deep. Breathe through our diaphragm, slow that breath down and think about something that we're grateful for has such a huge impact on our biology. And it's a really noticeable difference, right? There's usually not, people are always like, Oh wow, I feel different because we're not used to taking that pause in our daily life.

MERYL: 100%. And I talk to people about that a lot. You know, I say, look, even if, cause the answer I always get is, well, I can't meditate. I'm like, no, no, no, no. I'm not asking you to meditate. I'm asking you to breathe, ── you know? And so, so we'll send them the Andrew Weil, right? The four, seven, eight breath that just do 4 cycles of that, if you just do right.

And I guess that's kind of, I mean, maybe we can do that, but I, I've talked to a lot my, my audience has definitely heard it from me because I always say, if again, that breath is what is telling the parasympathetic nervous system, like. We're good. We're safe.
We're not in danger. So like calm down. And whereas if we're stressed, right, that short, shallow breath that we're always in that we don't even realize we're in is what is creating disarray in our body.

CATHERINE: ─── Absolutely. **And that's the power to it is being able to observe that in ourselves. Because so oftentimes we're just running, running, running without any cognition that, Oh, I'm just always in a danger state, that ability to observe our emotions, to observe our state, to take four breaths, right?**
Four cycles, like you're talking about. And it's, Yeah. Yeah. Yeah. It's so fast. **It's under a minute and it allows us to assess. ─── Do I need to be in this dangerous state? ─ Maybe not.** Right?

MERYL: Yeah. Yeah. And that's so important. Cause I, I, like you said, so many people are just go, go, go. And don't take a minute to be like, oh wow, let me just do a scan here.
Let me take a minute to see cause people are always like, oh, you're so busy and you're doing this and you're running and you're going and oh, that's so stressful. And I said, whoa, no, no, no, no, no, no. I know where my, I know where I can push and I know where I pull back I've learned my lesson on that.

So I, I have learned not to run at that frenetic pace that I used to run at, right. T**here's a difference between the busy and the productive or what I would call versus that frenetic,**

like, eh, I got to get all this done. I got to get all this done. I got to just chuck my stuff on my list and ah, there's no time.
And Right. ─

CATHERINE: Yeah, absolutely. I mean, that's exactly what I was talking about, about that second year of school where I was diagnosed just like this diagnosis, that one, this one, that one, because, and I didn't even have a sense of it. If you were to ask me, I was like, I'm a pretty chill person and people actually experienced that of me as well.

Right. It's. So powerful for us to observe really what's happening in our body, because I agree completely with what you're saying. **Our body has a language, right? And it will start telling us you are going too fast. You need a break and. Knowing that language, understanding the language of our body is so important to our health.**
It's just foundational.

MERYL: Absolutely. And I look, **that comes back to being connected to ourselves and, and listening, listening intuitively and advocating how many times do I hear someone come in and says, Well, my doctor said this, even though I feel like that** and totally dismisses especially, I mean, it happens with men.
I think it happens with women way more so. **And I deal with a lot of women who are dealing with different kinds of hormonal imbalances, right. And being dismissed about what's going on, whether it's perimenopause, menopause, even young girls who are having issues with hormonal imbalances and just completely dismissed** like, Oh, it's in your head or Oh, do this or do that.
And yet it ends up being a complete disconnect from what's going on inside their own bodies. Absolutely.

Yeah. And so I think, and one of the things I think that speaks so powerful to how, how really powerful our mind is over our body is Joe Dispenza is finally doing the research that is showing. That over the week long event that they do with these people who are hooked up to all these machines, just the power of meditation, like you said, whether it's gratitude and meditation and really introspecting or whatever, right, the heart brain coherence thing, just that alone ——— is making is causing biological shifts is causing their biology, their mitochondria to literally change. ──

CATHERINE: Yeah, absolutely. Absolutely. There's something when I was diagnosed that I was introduced to called **the Sedona method, and there's a book about it, and there's this whole thing, but the, the kernel, the, the nutshell of it is that ─ when we're in a state of ——— Not observing what we're doing, right? There's this practice that something comes in, an emotion, a thought, and if it's overriding and we need to look at it, we think like, okay, is this idea, is this emotion something that I need to have?**
And just the act of doing that, it doesn't matter if we say, ─ I'm feeling such intense anger right now. ── Do I want to hold on to this? Is this something that, that I need to have in my life right

now? **If we say no and we let it go, if we say yes and we keep it. The same thing happens biologically.**
It's not about the emotion. It's about our observation and acceptance of it, right? **It's that dialogue, being able to understand what the body's saying, being able to. Accept it and go with it, rather than be in this unconscious state all the time**, just doing, doing, doing and not observing what our body's saying and whether it belongs there and even if it is negative and giving it the space to belong there, that's so much different than having a state of anger or frustration or, or anxiety or fear, whatever it is, without the acceptance of it, right?
It's really that. meditative space to observe. ──

MERYL: So, and, and I hear that completely. So how does, and this could be, again, this might have to be a part two, but **how does trauma play into that then? Cause so many people you can see people who end up getting sick because of a result of trauma, right?**
Trauma that has now lives in their body. It lived in their mind and it has manifested its way into disease in the body. How do you what is that conversation like?

CATHERINE: Yeah, absolutely. I think it looks. Similar to what I just said, right? So when we experience trauma, especially childhood trauma, we see the stats.
There are pretty astounding, right? **Those that experienced childhood trauma, their digestive systems work differently. Their inflammatory state is different. Their immune system is different and that can last a lifetime** and it can last a lifetime when it's not for a long time. Observed and I think that's the real power to it.
So if we were to experience a trauma and ─ dismiss that or hold if we experience let's, let's take a classic childhood trauma where we lose a parent, right? ─ Now, does that mean that we're not supposed to experience the grief of losing a parent? I would say absolutely not. I would say that pushing away that grief adds to that trauma experience, adds to that increase of inflammation, adds to we see.
see an increase in intestinal permeability, a decrease in those T regulatory cells that help decrease inflammation. We see all these things happening with trauma. And I think it's that disassociation. **I think that when we can understand as a society that it's okay to grieve and feel sorrow for a loss, it's okay to feel.**
angry at things that aren't right when we disassociate or we incorporated it unconsciously into our body, then that's where we have a problem, right? And that's where what we're talking about here, **observing it, being able to have those feelings and, and, and welcome those uncomfortable feelings and let them go when we need to, instead of just becoming that.**
angry person that's part of everything that we do, right? I think that really speaks to how we as a society are uncomfortable with the emotions, right? We are uncomfortable with anger. Yeah,

MERYL: that opens up a whole other ──────── Oh my God, I seriously could probably talk to you the rest of the afternoon. We definitely have to do a part two, because I want to be sensitive of your time But it is so true, right?

You start down this conversation of, wow, where the emotions go, and then the physical, and then how you create those shifts. I mean, I have I, I guess it's, it's sometimes hard for me to even Articulate because I have really been doing this work. In earnest since April, and even more so since September when I went back to the Joe Dispenza and I did an advanced retreat and really kind of honed in on my own introspection and connectedness and connectedness to the universe and all that whatever energy, right?
The source or whatever it is. ─ And it has really impacted my life. Like it has completely changed things in my life for the better. And, and like I literally like look up and I was walking tonight and I'm like looking at the trees and I'm like, thank you. Thank you. Again, that's where it could seem a little woo woo, but I, I really you start to feel it and then the more you feel it, the more it snowballs.

And so I, I really want people to understand like, let **dip their toe into this and. Start to do these small things that you mentioned because if you really start to do them and you really embody them and feel them viscerally, don't just say you're doing them to say, right? Like I always say, it's the thinking versus the feeling.**
Don't just say you've done it. Do it viscerally. Do it intentionally and watch how your life and your health shifts. ———═─

CATHERINE: Absolutely. That's the magic of it. Absolutely. Yeah. Yeah.

MERYL: Yeah. So so I have to cut it there for today because like I said, I want to be cognizant of your time, but we can talk for hours.
So I definitely want to bring you back from part two because there's so much more. I want to talk about.

CATHERINE: I would love that.

MERYL: But yeah, any last thoughts that you want to share with our community with our listeners before we say goodbye.

CATHERINE: Yeah, I just want to thank everybody for for tuning in and just.
really highlight that **all of these tips we've talked about, about the sun and the light environment and going outside and, and observing our thoughts. They're all about cultivating relationships and connection.** And that's really what it comes down to for me. So. Thank you so much for letting me talk so much about that today. ═

MERYL: I was thrilled. Like I said, I just am fascinated and just want to keep picking your brain. I would love to get maybe you can share with us some of those links to the research that's going on and even some of those books and resources so that for people who do want to continue like myself to, to get more information on it.
And and next time I totally want to get into the whole structured water thing and I find that fascinating. So we'll get into that. But I so appreciate your time and your knowledge and your

wisdom. So very much appreciated, appreciated and humbled by by the experience. So thank you. ——

CATHERINE: Well, thank you so much for having me.
I love your work and it was a pleasure to be talking with you today.

MERYL: Thank you so much. All right, everybody. Make sure that you go check out some of those resources and take a little more of a deep dive into this amazing work with that. This is your rebel nutritionist signing off. Make it a great day.