



Conscious Life presents

Getting In Rhythm with Natural Intelligence

Guest: Deanna Minich

Disclaimer: The contents of this interview are for informational purposes only and are not intended to be a substitute for professional medical or psychological advice, diagnosis, or treatment. This interview does not provide medical or psychological advice, diagnosis, or treatment. Always seek the advice of your physician or other qualified health provider with any questions you may have regarding a medical or psychological condition.

[00:00:09] Dr Anu Arasu

Hi, everybody. I'm Dr Anu, co-host of the Hormone Super Conference. Today I'm joined by a very special guest, Deanna Minich. Deanna is a functional medicine practitioner. She's also a lecturer, a scientist, an author of six books and over 50 scientific publications.

She teaches at The Institute for Functional Medicine, The Institute for Nutritional Medicine, and the Institute for Brain Potential. Welcome, Deanna.

Deanna Minich

Thanks for having me. How exciting to get to talk with you about hormones. One of my favorite topics.

Dr Anu Arasu

This is awesome. So your background is so wide that I would like to start with quite a really wide question, which is, can you tell us about the pauses in our lives? Menopause being one of the pauses, but what are the others?

Deanna Minich

I'll take it from a science perspective, and then I'll take it from a more philosophical perspective.

From a science perspective, pauses in our lives, whether it's andropause adrenopause, menopause, perimenopause, melatonopause, postmenopause, all of these pauses are referring to the decline or the cessation of those respective hormones, whether they're adrenal hormones, steroid hormones, or even melatonin.

Physiologically, what happens is we experience this subtle decline from middle age on into our older years. We come to a different baseline when we're in our 50s, 60s, and up, where we have negligible amounts of these hormones, or they're in some way in smaller amounts and maybe in imbalanced ratios.

[00:01:50]

Now, from a philosophical or spiritual perspective, the way that I see this time of life, and we even know this from ancient traditions, is that oftentimes there's less of a focus on the physical and more of a focus on the nonphysical aspects of our being. This also coincides with the time of life where we start to explore things like mission, our meaning of life, our sense of purpose, our sense of connection.

In functional medicine, I think of inside the matrix, we have the mental, emotional and spiritual. And this is when that spiritual aspect of the matrix gets amplified, when we move into these pauses, when we have a little bit more repose, reflection. It's not to say we don't focus on the physical, but I would say we become very contemplative during this pause time of life.

Some people would see that as a negative thing, "Oh, I never want to stop. Life never ends, and I always want to be vital". There is all of that as well, but I think that our ability to integrate our entire being, our physical, emotional, mental, and even spiritual, becomes more front and center. I think when we're younger, we're focused on our career, we're focused on family, we live a very young existence, everything is very external. Achieving, thriving, we got goals.

And then as we move into our later years, it's like, "Okay, well, I did a lot of those things. Now, what's deeper?" So that's how I would see pauses. Pauses are scientific, they're physiological, they're also philosophical, spiritual, and even psychological.

Dr Anu Arasu

Some of these pauses, I suppose lots of us haven't even heard of, like the melatonin pause.

Deanna Minich

That is kind of a newer name, I must admit, so I would give people all of that. I was on a podcast with Dr Dicken Weatherby and we were talking about melatonin, and I was talking about how melatonin starts that steep decline within our 40s and 50s, and further on into our 60s, we're bottomed out. And he was the one that said, well, Deanna, that sounds like melatonopause. And I said, it's interesting that that phrase has not been coined because it is very similar to things like perimenopause, and we talk about testosterone, andropause. So, yeah, it seems like melatonopause fits right in there.

Dr Anu Arasu

Right, and it's something that, from the clinical experience side, it's something that so many people experience, isn't it? The going off of sleep.

At what point should we be addressing these symptoms? Because they can be quite devastating for people.

[00:04:45] Deanna Minich

They can. I would say earlier is always going to be better. So what do I mean by that? What we see is that men in their 20s and 30s are now experiencing testosterone decline. We're seeing greater levels of endocrine disruption just from a planetary perspective, which means that a lot of these endocrine disruptors, a lot of the plastics and heavy metals and such, are interfering with our endogenous hormones.

So I would say we start early. If we don't start early, it doesn't mean that we are necessarily missing out. I think that the body is very resilient. So even people in their 50s, 60s, 70s... There have been studies of people in their 70s and 80s showing that they can still bring back the resilience of the body even at that late stage.

But what I'm getting at when I say earlier is better, is that we want to have a good quality of life. And I think for some people, even when they're young, they don't realize how bad they feel because they're used to operating with this baseline of ultra processed food, sedentary lifestyle, poor sleep, a lack of relationships, isolation, more of a technology driven life, so more artificial blue light. They don't know how bad they feel until they start feeling good. And I want people to have a good quality of life. So that's why I say to start earlier, if possible.

Dr Anu Arasu

Yes. All of these things you mentioned, they are quite linked. Our mood, obviously our lifestyle habits, our hormones. There's a term, psychoneuroimmunology, psychoneuroendocrine system. Can you tell us a bit about that?

Deanna Minich

I'm not the one that thought of that term that goes back to the 1980s. I think of Dr Candace Pert, who wrote the book *Molecules of Emotion*. I think of Dr Bruce Lipton, Dr Joe Dispenza. There are so many different people out there who are, even Dr Deepak Chopra, who actually started this revolution, Dr Caroline Myss. These are some of the pioneers in the area of mind-body medicine, where they acknowledge that as the body feels, so we become.

We actually take on a physicality of those emotions, that those emotions run our behavior, they run our actions, to the point that it could change food choices, how we sleep, how we are active, all of those things. So what that term is referring to, psycho is the mind, the reference to the mind, like a psychiatrist, psychology, so psycho.

Neuro is the nervous system. The integration with the brain, but also the eyes and the entire nervous circuitry. We are hearing a lot about the vagus nerve.

Then we have the endocrine system, which is the endocrine circuit, which I see as the chakra system. So we have the production of hormones that are signaling to different places of the body.

And then sometimes 'immune' is tossed in there. Psycho-neuro-endocrine-immune. And immune is very, I would say, kind of the action oriented part of this entire word, because we have so many immune modulators. They're running around from cell to cell. They're in the gut, and they're signaling further on into the body.

[00:08:16]

So what this term is really getting at is that we have an interconnection, that there is truly no separation of the mind, of the emotions, of the body, of the spirit. And, in fact, just to see the power of the mind, we often think of the placebo in trials. One of the benchmarks of a well done clinical trial is that there is a placebo in it. Well, what is a placebo? We're controlling for the power of the mind.

That just shows you how powerful it is, that it actually has to be accounted for within a study, because if you tell somebody this supplement is going to help you with your metabolic syndrome or your metabolism, you can actually already start to see a change. And I've done a number of clinical trials for myself, just being a part of them as a clinician, and I see that even when a person signs up to do a clinical trial, they already start changing their lives, changing their thoughts. So the power of the mind is very integral to our health.

Dr Anu Arasu

And this, of course, is particularly relevant to hormones, because what you're saying there is that the mind affects the nervous system, which directly affects the endocrine system and vice versa, that when we have endocrine pauses, that changes our entire perspective on life in some ways.

Deanna Minich

That's correct, it's bidirectional. Absolutely. And the way, Anu, that we think of hormones is, in functional medicine, hormones are called the communicators. Around the functional medicine matrix, we have seven different nodes of the body, seven different areas of compartmentalizing body functions, and one of them is called communication. In that communication bucket, we talk about the neurotransmitters, and we talk about hormones primarily. So hormones are how we communicate.

So if we are sensing danger, then there's like a cascade that happens through the endocrine system. The hypothalamus gets triggered to tell the pituitary. It's like the telephone game that some children play at school.

The hypothalamus tells the pituitary, tells the thyroid, tells the adrenal glands, and it's like, okay, we have this circuit. It's like everything lights up. And then when the trigger is gone, now there's communication back from the adrenals, from the thyroid, going back up to the pituitary saying, "Okay, we got this, we address this, we can turn off that signal". It's like a loop. We have a circuit.

And I think that one of the things that happens with people is that this circuit becomes less efficient in some ways, that the signal is not strong. Especially as we move into the pauses, the signal starts to weaken. So we don't get a strong signal now from the pituitary telling the ovaries to ovulate. That signal is dampened, it's weakened, it's less of a pulse.

I think that what can happen, just irrespective of the pauses, is that the communication in the body can change, and that can change because of the inputs, the other communication from the outside in, the things we're eating, the things we're seeing, the things that we're experiencing, our sleep.

All of those things count. So I never underestimate the power of what we eat or how we're living, and oftentimes those two things are very interconnected.

[00:11:49]

How we eat is how we live. How we live is how we eat. Many times you can see what a person is experiencing in their lives just by asking them what they're eating. And how they're eating, and when they're eating, and why they're eating, and how much they're eating. It's more than just the what.

I think we realize that now, where we know much more now about the circadian rhythm, the power of the rhythms that run us, whether it's the moon, the sun, the seasons. There are so many different things that are actually running our physiology. So we need to be attentive to that. Otherwise we're missing out and we're missing the mark.

Dr Anu Arasu

What are some of the common mistakes that you see people making?

Deanna Minich

I think some people overthink things, myself included. They're looking for the, I call it the shiny object syndrome, where they feel like, what's the next thing? Is it methylene blue? Is it CBD? It's always something out there, right? Something that's going to come in and change everything. To me, that can be a distraction. The ultimate guiding principle, based on what I know, what I've experienced with clients, what I know from research, is nature.

We always need to look to nature as to how nature does it? What is nature saying to do? You probably know about this from different traditional medical systems, like Ayurveda, like traditional Chinese medicine, which all operate within the elements. Being healthy and being healed is not really too difficult, if we just look at it very elementally.

Do we have too much fire? Is there inflammation in the body? Is there too much water? Is there dampness, fungus, mold in our homes? Or just even the effects of that in our body? Do we have swelling, edema? What about air? Do we have an issue with air particles and pollution causing disruption at the cardiovascular level? Are we breathing too shallowly because we are stressed?

And then the earth element, which is very simply the soil, the terrain, the microbes, when we take in food, it's not just physical matter of the earth. We are also bringing in the microorganisms that that food inherently brings with it, along with the nutrients and phytonutrients.

I think if we keep things simple, where I see people going is they get distracted. They feel like it's something out there, when really the power to heal is within us already. We need to really just try to align with our personalized needs and interface those within the context of the natural world and be more consistent with that. Not to say that people can't get sick every now and then, because we just kind of tilt that balance.

[00:14:54]

But I always know for myself if I'm not attentive to my emotional health, my mental health, my physical health, even spiritual health, how people feel a loss of a sense of purpose.

I'll just give you a quick story. I don't think my father would mind me talking about this too much, but my father is in his 70s. My father has just been a lifelong go-getter, very action oriented dad. I used to call him Mr Fix It because there was nothing that my dad couldn't do. My dad was like the ultimate, I'd just always go to Dad if I needed anything fixed, I needed anything done. My dad's in his 70s, he doesn't need to work, but he needs to work because he needs purpose. He needs to be around people.

It makes me think of, one time I was having a conversation with Dr Jeffrey Bland, who is the father of functional medicine, and he made a comment about how it's not about retiring, it's re-tiring. It's putting a new tire on instead of just pushing pause and saying, I'm not working anymore.

Some of us love what we do, we can never see that we wouldn't be doing it. For some of us, our purpose overlaps with our work and what we're doing on a daily basis. But for somebody like my dad, that sense of purpose is really pivotal to making him wake up every day. And that can make you unhealthy in body, mind, and spirit if you don't have something like that.

So I think for every person, it's going to be a little bit different. For some people, you're going to have different... If it was a bar chart, you might have been like, "Okay, here's where I am with emotions. Here's my mental health. Here's my sleep". Everybody has these moving bars. We're constantly dynamic and changing. It's really hard to say it's just one thing. Many times, it's the interaction of all of those things as a whole.

Dr Anu Arasu

This is a great way to think about pauses, isn't it? A pause to put some new tires on and get tired all over again, not to just chuck it all in.

Deanna Minich

Right.

Dr Anu Arasu

So the clues, you mentioned some clues from nature. I loved how you spoke about the elements. I also see in a lot of your work the use of colors and colorful phytonutrients. Can you tell us a bit about phytonutrients and any specific nutrients that help?

Deanna Minich

Absolutely. I've been in nutrition science for decades now and I'm going through my own pauses. As part of looking at nutrition science, one of the things that gets a lot of attention is macronutrients. Protein, carbohydrate and fat. A lot of diet wars, a lot of arm wrestling happens around those three things. And then separately you have vitamins and minerals. So you even have the macrominerals, the microminerals, the ultra-trace minerals.

[00:18:08]

There's some complexity there, but then there's a third category that is separate from the macro and the micro minerals and nutrients, and that would be the phytonutrients. Phytonutrients are what are perceived as... They're noncaloric, so they don't give any calorie value. They're not a vitamin, they're not a mineral. They're present in plants specifically. So when I say phyto, that's P-H-Y-T-O which refers to plants.

They are found exclusively in plants, and there are thousands of compounds, literally something on the order of maybe 10,000-20,000 compounds. Within this huge phytochemical category, you have different kinds that are doing different things.

For example, the polyphenols might be one that people have heard of. That is the largest class of phytonutrients. So there are about 8000 polyphenols. Then you have carotenoids, about 700 carotenoids. Then you have sulfur compounds, nitrates, alkaloids. I mean, on and on, there are just so many different families within the larger family tree of phytonutrients.

When I was in graduate school, decades ago, I studied the carotenoids. The carotenoids are what make, I would say, plants pretty. They tend to be red, orange, yellow, and even sometimes like a yellow-green. Many times in the autumn, what you see is that the chlorophyll of a plant breaks down to reveal the carotenoids underneath. That's why during the autumn months you might see the reds, the oranges, the yellows on trees. So when we take in green, many times we can also get the benefit of those carotenoids.

These phytochemicals or phytonutrients, those two terms are synonyms, they are used throughout the body. I would say that, for the sake of making it really easy, they do three things. One is they are working at the level of the cell to help the cell to balance its inflammatory immune responses. So it gets in there. We see that a number of these things can help to just quiet that signal of too much, too much activity, and they act to modulate.

Secondly, they can help with stress response. In botanical medicine, we talk about these phytonutrients, some of them, is adaptogens. They help the cell to be more resilient. So if we need to do a little bit more activity, they can help us. If we need to scale it down, they can do that. It's like they can get a read on our stress response and help us to accommodate.

And then thirdly, they help with hormone messaging. So they can help things like insulin to be received by the cell. They can help things like cortisol be received by the cell better. They do a lot of different things. They're antioxidants. They're involved in really helping the DNA to be protected. They have a role in epigenetics. I think that the more we learn, the more we realize how big and expansive this category is and what they're doing.

I think that in science and in medicine, we tend to just want to pigeonhole something and say, "Oh, this is an antioxidant", or "Oh, this is a hormone". And many times with plant compounds, we see that they do many things. That's called pleiotropic. They're wearing many hats. It just depends on the environment that they're in, and then they accommodate their function based on that.

[00:22:13]

It doesn't take a lot of these phytonutrients to have an effect. Many times when we think of the macronutrients, we think of 80 grams of protein per day. When we think of vitamins, we might think milligrams or micrograms. But when it comes to phytonutrients, it can be very small amounts, like a quarter of a teaspoon. This is why bringing in things like spices, herbs, teas, not just fruits and vegetables, which is the obvious, but the whole spectrum of plants, and bringing those in so that we get more diversity.

I have three principles. Color, which you just asked me about. Creativity, which helps with being a little bit more open and expansive to our food experiences and life. And then the third one is diversity. I think that if we can remember those as it relates to our hormones, getting older, optimizing our vitality. Having more colorful foods means more colorful moods. There's a translation into not just physical health, but also mental health and emotional health.

The creativity, I think, is really important. Healing is an art. And how do we move out of our head and into more of the experiential, more of the feeling aspects, which actually drives our behavior much more. And then the diversity is truly very important for us in our longevity and in our everyday health.

When we have more diversity of food, our gut microbiome becomes more diverse, it becomes more resilient. Our immune system benefits. Goodness, so many different things. Our mental health can benefit just by way of diversity. So I gave you a long answer to your great question.

Dr Anu Arasu

This is fab, and I so see the relevance and hope the audience see the relevance to hormones in particular, because, for example, adaptogens, the qualities that allow plants themselves to navigate stress. We use that so much in hormone imbalances. In your clinical practice, what kind of results do you see with this sort of approach?

Deanna Minich

I'm no longer in one-on-one clinical practice, but I have been in the past, and I do a lot of groups now. When I was in more of a nutritional practice, seeing people, you can definitely see that many of these plants have an impact on people's physiology. In fact, because I was working with people so much in the way of plants and food, I would start to see that they had mental health shifts. They would start to become more positive, more, I would say, inspired.

They just looked and felt better. And because they looked and felt better, they wanted to do more. It was like a positive feedback with changing, even something as simple as food. One of the things for hormones that I think about. So I'm perimenopausal, I'm almost at the point of menopause. Two more months and I'll be menopausal if everything goes well. One of the things that I needed to explore was using certain of these plants that you mentioned, like the ones that are adaptogenic, to help my body to better respond. And one of the ones that I began using is maca.

[00:25:48]

Maca, what I soon came to learn is that it comes in 17 different colors. Maca is a food, it's an herb, it's considered adaptogenic. It originates from Peru, and so in Peru, it's grown at very high altitudes, up in the high winds of the Andes mountains. As a result, it's very stressed, stressed in our minds, like, "Oh, my goodness, if I had to climb that mountain and be in low oxygen", what would your body do? That's a lot of stress.

For a plant, what it can actually do is it can get the plant to produce more phytochemicals that can be beneficial. Now, maca has a long standing use for Peruvians for sexual vitality and hormone health. Things like libido, energy production, a lot of the warriors would use it.

When you look at the use of maca today, and there are so many different kinds of maca, and some of them are more primed for testosterone, some of them are more primed to help the body with estrogen and progesterone. So you have to know what you take. The maca that I take specifically is a combination of maca colors, and it is known as Femmenessence, and there are four published clinical trials.

So that's an example to your question of what is a plant? Because there's so many things out there, we could say, well, turmeric, but you have to know the format, if there are studies on that particular kind of plant for the kind of hormonal response that you want. At least with maca, for me, it has been beneficial, because what we know about that blend of maca is that it can actually nourish the hypothalamic, pituitary, thyroid, adrenal, ovarian access.

For a perimenopausal woman, that's very important, as she's going through all of this shift of hormones, and sometimes the hormones come down, she starts to get symptomatic. For me, my big thing, going through perimenopause, was two things. No, three things. One was I started having hip pain, and I was like, "Where is this coming from? I haven't had pain, I've never been in an accident to that degree or an injury". I started having more inflammation. Number two, I started getting hot flashes. I couldn't believe it, I really couldn't believe it. Because my diet is pristine.

Everything that I've been talking with you about, I feel an integrity, because I'm doing these things. I set the bar really high for myself, but I was still having hot flashes.

And then the third thing was the hot flashes would coincide with sweats at night, and that was disrupting my sleep. So the maca phenotypes helped, I did also need to bring in some plant melatonin. I use a product called Herbatonin. And that was helpful, especially because melatonin, even though it's a neurohormone. It has other functions. It's an anti-inflammatory agent, it's an antioxidant. It helps us at night for the brain to detoxify and reduce neuroinflammation.

So, yeah, I had to tweak a number of things going through the perimenopause for myself. And I must say, I feel so much better. Now in month ten of no cycle, it's so much better than how I started off. I never thought I would have that disruption. And it just enabled me to get in touch with my body faster, try out different things that I know had good science, and just see how they intuitively felt for my body.

[00:29:39] Dr Anu Arasu

I love that so much because I've got this image of how much we can do ourselves, whether it's thinking about the elements or being attracted to colorful foods, but then also the subtlety and how this is the new medicine, because actually, there's a lot of depth in it. What would you say to people listening? What are some of the key things that they could implement right now?

Deanna Minich

I would say the biggest thing is get your light right. What do I mean by that? This is something that's free. It costs nothing. In fact, it could actually save you money to do this. What you do is you make sure that you get morning light. So your eyes are receiving the morning light, and that as it becomes dim throughout the day, you make sure that you're not bathing your eyes in artificial blue light. Because artificial blue light at night is an endocrine disruptor. It's the most societally accepted endocrine disruptor.

Most people know that plastic in the ocean is not a good idea. Most people know that heavy metals in the air, in the food, in the soil, are not a good idea. But what most people don't realize is that they've got that electricity, the blue light from their devices, from their computer screen, from their television screen. Maybe they're going to the gym late at night under artificial fluorescent lighting. All of those things, sometimes it's just a simple principle of that.

So what could you do? Well, again, let's just say you're a shift worker, or the only time you can go work out is at 7 PM, at the gym with all of those bright lights, even though it's dark outside. What you can do, and I keep them here, I wear blue light blocking glasses. If I need to be on the computer at night, or if I need to... One of the things that happened for me recently was I was taking a flight late at night, and what was interesting was that the airline had blue lights. They actually had blue lights, and I was asking the flight attendant, "Why is there blue lighting here? That's not so good for people at night". And she was saying, "Well, it's because it calms people", because it's kind of a dimmer color.

But really and truly, we want more of a red colored light at night. We don't want blue. So when you ask, what can most people do? Where do you start? You get your light right and you get your darkness right. I think that for some of us, we have darkness deficiency. We don't get enough of the darkness.

I think that during the pandemic, here's what happened. People either got really healthy or they got less healthy, and they woke up to being in nature. They woke up, in part, to food, whether on either end of that spectrum, people started hearing about vitamin D, and they heard that, "Oh, my goodness, sunlight. It's so important to get Sunlight. I make vitamin D through my skin." So then people started taking a lot of vitamin D.

They started being in the sun, but they were also in the evening, not honoring the counterpart to sunlight, which is darkness. And darkness is equally important to the sunlight. It's really important. The fact that we have seasonal rhythms is a really good thing, because if we spent our whole life in summer all the time, that could be a lot of oxidative stress. That's a lot of sunlight, that's a lot of UV. We give the body the sense of seasons to repair, restore. Then we come back. Then we repair, restore. Nature has it all worked out.

[00:33:27]

I think it's really back to, what I was saying is, follow the rhythm of nature. If you even have to ask yourself about food. "Oh, my goodness. Well, should I take this powdered supplement or this food?" I always say stay close to food, because nature created that. Humans created the powder. They did their best, I'm sure, but it's still not going to resemble what nature has put together. So always start there.

It's not to say you would never take that powdered supplement, but I do think it's really important to get the connection to light to be right. To me, it's like the framework for everything else. How you're eating, what you're eating, the time you're eating, what time you're going to bed, how long you're sleeping, when you're active during the day. Like the operating system, the framework is circadian, it's lunar rhythm, it's circannual or seasonal rhythm. If we can honor that sense of the frameworks, then it makes all of our choices a lot easier.

Dr Anu Arasu

When you talk about all of the rhythms, of course, we see that this is so important for all of us, men included, because often we can just think about the lunar rhythms and monthly cycles. But there are so many rhythms that you're talking about. Can you tell us a bit more about that, about staying in tune with the rhythms?

Deanna Minich

Well, one of the things that I think about being a nutrition scientist is food. If we eat foods that appear during the seasons in which they are ready and ripe to eat, that informs our hormones. So case in point, and you live in the UK, I live in the United States, so there's going to be a little bit of variability here, but we're still in the northern hemisphere at about the same latitude. So that's interesting. Now, we know that cherries typically come up at certain times of the year, grapes usually come up at certain times of the year. So we don't have access to all of these foods just naturally, if we were just to stick to our local environment.

I think that it's really important because of some of the research, and I'm going to actually be presenting on this at the Personalized Lifestyle Medicine Institute, and also some other conferences, that within food, we have what's called chronobiotics. What is a chronobiotic? A chronobiotic is something that informs time in our body. Through a food, we can signal these rhythms, and the food just does it for us through those polyphenols.

One of the things we see is that... I'm laughing a little bit because I'm thinking of when I used to be at the clinic and I worked with a doctor, Dr Jack Kornberg. And Dr Kornberg would tell patients, when you eat oranges in the winter, when they're out of season, it's like telling your body it's summer and you need to store fat. Typically fruits, lots of fruits in the summer, high in sugar, it's preparing us for the winter. It's giving us a lot of antioxidants, a lot of sugars, and then those fruits go away as we move into autumn and fall. Sorry, autumn and winter.

And in the autumn and winter, we have less fruits and more root vegetables and even non-starchy vegetables. Some of the greens, the kales, the cruciferous vegetables. If we honor that, then we don't change our metabolism. There have been studies with animals that show that when you change the... This can be done very easily in an experimental setting with animals. If you have

animals and you change their light cycle so that it mimics the winter and you feed them a summer fruit, what you see is that they actually exhibit changes in adipose and fat metabolism.

[00:37:46]

It's not to say we should never have an orange in the winter, that's not the point. The point is, when you ask me, "Talk a little bit more about seasons and how do we honor that?" Well, one of the ways is to locally find out what is in season, when? Even when I go to my grocery store, sometimes I talk with the people in the produce section about... I can already tell what is local. Sometimes there are signs that say locally produced, and I can tell that those things are in season. You can also look this up online based on where you live, what is in season?

I know in the UK versus the US, we call things different words. So like courgette or zucchini, or rutabaga, turnip. You have to just look up these things based on your local area so that you know exactly when they're appearing, based on the name that you know them to be.

Yeah, I think food is such a great way to be in tune with the seasons. The food has the intelligence. And when I say food, I'm talking primarily about plant foods. I'm not saying for people not to eat animal foods, if that's within your purview, but the plant foods specifically, because they are in contact with environmental stressors and signals, they embody those signals through phytochemicals. Those phytochemicals then change our physiology and our endocrine system so that we are best primed for metabolism during that time of year.

So that's why I think during the summer months, when fruits of all kinds, citrus fruits, and peaches and plums, they're just bursting. I always make sure I'm eating a lot of those things, but the moment it moves into the cold months, I'm not eating those things. I am moving more now into warm foods. Again, the fire element, because it's cold outside, so warm foods, bringing in more of the root vegetables and less of the fruits.

This is consistent with traditional medicine. I'm not saying anything that's new for many people, but what we do see that's new is now the science is finally catching up with the traditional medicine.

Dr Anu Arasu

Absolutely, that is such a beautiful way to look at it. Just listening to it, it makes one feel very deeply relaxed, because actually there's a blueprint out there to follow. Are there any other take home messages that you would say to people out there listening that they should try to implement if they're having a hard time during menopause or perimenopause or andropause?

Deanna Minich

I would say, being that I'm going through it myself, I'm coming from a personal place on this. What I would say is that everybody is going to experience pauses in their own way. Some women go through Perimenopause, they have no symptoms. There's no difference between being premenopausal and perimenopausal for them, it's just like just nothing. No difference.

And then you have other women where all of a sudden they were okay for many years, and now they're on a roller coaster. Day by day, their body, their mind, their brain feels scrambled. They

have nausea, they have pains in their body, they're very irritable, and they're like, "Where is all this coming from?" What I would say is, all of this can be, in some ways, I would say, blunted in some respect.

[00:41:30]

Physically, as we were talking about, with certain plants, making sure that we've got a really good diet, we're taking care of, even physical activity. I'll just say to everybody that one of the ways that I had to change things, I didn't have to change my food so much, because I must say, my food was, I mean, this is what I do. I was already doing so many things, so that was good.

The second thing that was not so good for me that I think most people need to be attentive to is their activity. So for me, I've done yoga since... I'll be 53, so I've been doing yoga since I was 19, somewhat irregularly, but I'm even a yoga teacher, so I know yoga, but yoga didn't work for me in my 50s. Yoga alone is not enough for a perimenopausal woman like me.

I'm very bendy, but I'm not strong. So what I needed to do was actually course-correct my activity and build in more resistance training and increase just weights. Having strength training, having that resistance, like moving against force, that was really important. Because if you think of your muscle, the muscle is a major organ of insulin sensitivity, which can change for women going through the perimenopause. So if your muscle becomes fatty because you're sedentary, or now you don't have estrogen, which is priming the metabolic pathways. Something has to continue to support the muscle.

So shifting gears and moving over to doing more resistance training can be helpful for people. You may need to change. In another year, I may need to be thinking about a different type of activity regimen. So what I would say to everybody is plan to be flexible, plan to be dynamic.

I remember waking up one morning and I told my husband, "I'm just being curious about this process of going through perimenopause. I'm just curious what my body..." It's like puberty in reverse. For me, going through puberty, I had so many... You just feel like you're just moving so quickly. But now I have wisdom from living several decades now beyond puberty.

So now I can enter into this phase, into this pause with more of a gentleness and more curiosity. I can bring out creativity in other ways because my body is no longer creative at the level of my ovaries. So I need to find other ways to be creative.

What I would say, there's a lot that I'm suggesting there. One is to honor your own personal process. Don't compare yourself against other people. Number two, look at activity and see whether or not you need to change things up. And I would say, number three, just find your refuge in creativity and/or community. Connecting with other women or other men going through their own process. That can be very helpful for some people.

Dr Anu Arasu

There is so much there. Deanna, is there anything else that you're working on at the moment that you want to let us know about or otherwise, where can people find out more about your work?

[00:44:58] Deanna Minich

I'm always working on something. So I'm 're-tiring', that's what I'm doing. I would say the best place to find me and all the things that I'm working on are on my website, which is www.DeannaMinich.com. I have a blog on there, which is a more meaty, sciencey blog.

I also have a resources page with a number of different educational downloads for people to take as they would like. Something like an *Eat The Rainbow* tracker, a *Food & Mood* guide, a number of different things that people may want to engage in.

Dr Anu Arasu

Fantastic. Thank you so much for being here today.

Deanna Minich

Thanks for having me. Wonderful to have this conversation with you.