



Improving Women's Health and Immunity with Dr. Jeffrey Bland, PhD, FACN, FACB, CNS (ep – 42)

[00:00:00] **Jeffrey Bland:** This construct that woman's health always comes to a medicalization by, Oh, what estrogen derivative do we give? But that's not where we should start. We should start with giving her the best chance with her diet to do the work naturally, and that will a lot of times be all that she needs. And yes, that has been shown in studies.

[00:00:21] **Ginger Hultin:** Welcome to The Good Clean Nutrition Podcast. I'm your host, Ginger Hultin. I'm an integrative practicing registered dietitian nutritionist. Today, I have the pleasure of talking with Dr. Jeffrey Bland. Dr. Bland is the founder of the Functional Medicine Movement, a way of practicing that's incredibly important to me and my nutrition practice.

He's also the founder and president of the Personalized Lifestyle Medicine Institute and the president of Big Bold Health. If you missed the first conversation I had with Dr. Bland, you'll want to go back and take a listen. We took a deep dive into functional medicine, what it is, and why it's important for your health.

Today, we'll start with a look at functional medicine and women's health, as well as sleep, nutrition, and we'll take a look into how all of this relates to your immune system.

Dr. Bland, a special interest of mine right now in nutrition is talking about perimenopause and menopause from a functional medicine and integrative standpoint. And I do believe that women's health has been underfunded, misunderstood, mocked, and I really feel like it's having a day. How do you see women's health from a functional medicine perspective?

[00:01:35] **Jeffrey Bland:** Woman's health means not just physical health, emotional health, health related to their security in our population, their autonomy in our population, their voice in our population, their security. unique contribution, not just in having children, but the way they see the world and how they manage conflict.

There's just so many expectations that are laid on top of women that, from my perspective, are somewhat unrealistic because we don't ask the same thing for men. I have had the privilege of meeting some really extraordinarily important women in medicine and in science, Bernadette Healy being one of those.

Unfortunately now deceased, but was the first NIH commissioner female. really advancing for the first time that we ought to be doing studies in women, clinical studies. And when that happened, I was still fairly young in my academic experience. I was a professor for 15 years in a medical school environment.

And, um, I had not really thought a lot about who were the candidates there in these clinical trials. That they were all men. And then I found that even the animal labs that we would buy our animals from were only selling male animals. That even the animal models that we build the studies from that the drugs are developed come from male animals, rodents.

And so I thought, wow, there's something very peculiar here, uh, about this uncentric perspective. But over particularly the last 20 years and maybe even more recently, the last decade, we started to recognize Through the advocacy of very strong forward looking women leadership in science and medicine that we need to start addressing the full, complete human species.

But I'm very excited to see that we are witnessing a revolution on many levels right now about women's health, women's social health, psychological health, mental health, physical health, metabolic health, all of that is really being seriously evaluated.

[00:03:47] **Ginger Hultin:** This conversation isn't just about balancing hormones. Women's wellness is so much more complex than that. And yeah, it just needs to be highlighted more, I feel.

[00:03:57] **Jeffrey Bland:** We've finally started to take seriously in the medical world the concept of social determinants of disease. When I grew up and went to school, you had sociology, cultural anthropology, They were over in one part of the university, and that was considered as soft science.

That was just social stuff. Then over here was the real sciences, and they're really the hard stuff, the molecules and all that stuff. And in between, maybe it was psychology. So there was this differentiation and hierarchy in knowledge. And we have started to recognize that was a differentiation that was made By some form of bigotry, it was certainly not the real differentiation as it relates to the body of knowledge.

Then now we recognize that our social environment has impact upon the way that our genes are expressed through these epigenetic marks that are placed on genes that is just as real and just as molecularly definable as if we gave a vitamin or we took a drug or we had a surgery. These are really hardwired to our function in ways that we previously minimized or marginalized.

And now we're saying, no, if you have post traumatic stress, it's not just all in your mind. That is imprinting your genes epigenetically to lock you into an immune profile of inflammation. And you are in a hypervigilant state that your hormones change as a consequence of the psychosocial environment that you've been exposed to.

So if you've been subjected to serious trauma, that's not just a Bad day. That is a genomic reconfiguration of how your genes are going to express themselves. The good news is that we now recognize that these marks are reversible.

[00:05:55] **Ginger Hultin:** That made me think about the innate versus acquired immune system. And I'm just wondering if you think of it that way, because I was under the impression that you're born with these pieces of the immune system that are less changeable.

And then as you get exposed in the environment and food and nutrition, and the microbiome, That's more acquired. But do you see it differently?

[00:06:15] **Jeffrey Bland:** Yes, very much so. Because we were only given part of the truth, and the way I learned immunity was very similar to the way you described it. There was this ancient system, the first line of defense, called the innate immune system that learned its lessons Thousands of years ago, I wasn't going to learn anything new.

And those cells were all preprogrammed and that's how they were, whatever our genes were. But over the last 10 years now, it's been found that's not true. The innate immune system is learning as well. It can be taught in a different way than the acquired or adaptive immune system that ultimately then produces antibodies, but you can retrain.

Neuronal immune system. And we've got this system that, when properly balanced, is extraordinarily facile in the ability to respond to change. If it needs to up regulate things, it can up regulate. If it needs to down regulate things, it can down regulate. It has a lot of resilience. But as our immune system becomes aged, and I'm not talking about just age and birthdays, I'm talking about the functional, decrement of our immune system's function over time.

Now what happens is our immune system has less resilience, less plasticity, it has less ability to accommodate change, and so it throws itself into alarm reactions. And those alarm reactions we can see as things like autoimmune disease. So what are we seeing in post COVID, long haul COVID? We're seeing a lot of autoimmune disease because the immune system got reset.

through information that was transmitted through the virus that then epigenetically modified it. But the good news is that those marks that were put on through the infection with SARS CoV 2 can be replaced with new cells that don't necessarily carry that legacy. And, and that's what we've learned also about chronic fatigue.

And now we even think of Lyme and things of that nature. That there is a general principle that is coming out of this. It's much more in the functional space than in the traditional disease space about how we carry these memories of past experiences and how we need to rejuvenate ourselves through therapeutic interventions.

[00:08:24] **Ginger Hultin:** I truly did not realize how adaptable and teachable the immune system is. And I feel like I've learned so much about it the second that the pandemic hit. I just got flooded with questions. A lot of people struggle with autoimmune and struggle with feeling like their immune system is not working on their side. But it sounds like there's so much you can do about it.

[00:08:46] **Jeffrey Bland:** As we know, statistically, over 80 percent of people who get autoimmune disease are female. It would be very easy, and it has been done, to conclude that the female immune system is defective because they get autoimmune disease and men don't get it as frequently.

That's a form of discrimination that is an example of what I was talking about as it relates to bigotry in our whole system of thinking. I look at it entirely differently. Yes, a woman's immune system may be more susceptible to events. That would trigger her producing an antibody against a foreigner, but maybe that is because her immune system is much more responsive to having to have a foreigner live in her body for nine months.

in which she will become tolerant. Her immune system is so adept and adaptive to that change that it can form a whole different way of appreciating these neoantigens that come from the fetus that will then allow her to be tolerant, in most cases, to her baby. But maybe it comes at some cost. Maybe when you have this really big immune capability, there are other things that the immune system recognizes.

More sensitively that it reacts to because that immune system has a greater Sensitivity to certain things that it needs to adjust the physiology of the host for survival And so I look at that and I say we know that estrogen plays a role on immune health progesterone plays a role in immune health the whole complex of Adrenal cortical hormones play roles in immune health.

So this is a complex interrelationship Are we sure that? That these antibodies that a woman is making against her organs are truly auto antibodies. That they are produced against her native tissues. There is a fairly significant body of literature that is demonstrating that what happens over time to our bodies is they become less like us.

They become damaged. And those molecules that are damaged by the process of aging are not us. They're us that's been transformed into not us. So what happens if you have a really sensitive, highly tuned immune system? They start producing antibodies to the not uses. Now, if those are not uses of the adrenal glands, then we call it, Oh, that's an adrenal autoantibody.

Or the thyroid gland, we call it, Oh, that's autoantibiotics. That tissue then, because we have a very sensitive immune system for that woman, says, well, you're not supposed to be here. I'm going to have to produce an antibody to you, not us. So, this whole construct of autoimmunity is mis focused based on what we're learning about immune systems and the genetics of immune systems.

I don't want to discount that you could have Inborn production of autoantibodies. But I want to also recognize that the recent evidence would suggest that maybe why we're seeing so much more ASLE and seeing so much more RA and thyroiditis is because those are not just native autoantibodies. They are antibodies being produced against foreign tissue because of the exposure that we've had to stuff that makes us not us.

Chemicals. Sugar. Sugar binds to proteins to form glycation linkages. That's what we measure with A1C. And that's not us. That's a foreign tissue that our body could recognize. That's why people with diabetes have immune problems because their immune system recognizes the foreigners in their body because of the high sugar levels.

[00:12:35] **Ginger Hultin:** Orgain has an ongoing commitment to planetary health. This includes sourcing high quality planet friendly ingredients whenever possible. with many products being USDA certified organic. Orgain is B Corp certified. Certified B corporations meet the highest standards of positive impact on society and the environment.

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Ginger Hultin: For someone listening that's like, okay, what do I do though? Where do you start when it's this complex?

[00:13:22] **Jeffrey Bland:** We want to lower the load of things on the body that can make us not us. In ultra-processed foods. Ultra-processed foods make us, not us. Food is information. It's not just calories. Food is information for our genes.

And if we're sending our genes information of hostility, alarm, it is producing, then, oxidative stress. Oxidative stress is the body's reaction through the immune system to one of two things. perceives to be a foreigner that it has to do battle against, and in so doing it produces innocent bystander injury to the tissues that we're made of, then make them not us, which the immune system then reacts to.

Glucosidin itself is not dangerous, unless it's delivered in pharmacological amounts, which eating ultra-processed foods will do. We want to stay away from ultra-processed foods that are fat and sugar and no fiber and a lot of salt. That's bad. That's a good place to start. The standard American diet. Yes.

If you'll commit to just giving up high sugar foods for a month, doesn't mean all sugars, doesn't mean give up all fruits up, but probably give up fruit juice. Because that's a concentrated form of, of fruit sugar. And give up added sugar rich foods, with maybe hidden sugars. So be a label reader. If that sugar comes up in the first couple of things in the ingredients, that's a no.

And then cut out confectionery and soft drinks, and give it a whirl for a month. Just, that's all. And then let's see what you look like in a month. People that will do that will say, I feel remarkably better. I'm sleeping better, and my energy level is better, and I don't get headaches often, and my bowels are working better.

So, that's a good start. Okay, now let's add the rainbow diet. We're talking here about foods that unnaturally contain pigments that color the foods into different colors of the rainbow. Those things are phytochemicals that are in fruits and vegetables. We used to say they were antioxidants, but they're actually much more than antioxidants.

They're epigenetic modifiers. They modulate how the genes in our various cells express themselves. So you eat portion sizes each day of orange, red, green, yellow, blue. Vegetables and fruits. What about tomato sauce? Yeah, that's good. As long as it's not got a lot of sugar in it. So you would say you can have steamed vegetables.

You could have various types of legumes that are rich in phytochemicals. Beans. There are many ways of getting vegetables. the rainbow components into one's diet that will get you up into the 1500 milligram per day level or above. Tartarine buckwheat is a specific cultivar of buckwheat that has a unique genotype that produces the highest level of these immune active phytochemicals of any food I know.

So it's like a medicinal food. And we think about food as medicine.

[00:16:31] **Ginger Hultin:** I really appreciate your emphasis on adding things in, from the whole grains with the buckwheat to the fruits and veggies and eat the rainbow, not Skittles, the colorful fruits and veggies, that's an important differentiation. That is such a great focus.

Fruits and veggies and buckwheat and whole grains and beans, they all have carbohydrates and we need that. Especially for fiber for the gut microbiome, but the added sugars are the ones that cause the glycolation and some of the problems with the immune system and other health issues like you're talking about.

[00:17:05] **Jeffrey Bland:** You mentioned something that I've been thinking about recently and that is Often when we're doing counseling about diet, it's all about the things you could give up. It's a very negative messaging. People are more positive about things you should do than the things you shouldn't do. We are giving alternatives that actually are really fun.

They are diversity, they have different flavors, they have different textures, they have multiple ways they can be prepared into different savory or different dishes. Whenever we talk in women's health, often it's just. goes quickly into hormones. Right. So let's just talk for a second about hormones. The traditional woman's hormones, her cycling, her menstrual cycle, or if she's menopausal in the regulation of her extra ovarian hormones.

When a woman goes through menopause, she quote, loses her estrogen. It's really important to say she loses her ovarian estrogen, but 50 percent or more of the estrogen that her body was making from extra ovarian sources. That's why many women going through menopause losing ovarian. They lose their

menstrual period, but they don't have serious night sweats and mood swings and so forth because their extra ovarian synthesis picks up the slack and their estrogen receptors put up their ears so that they're very active and so they travel very well with the lower level of estrogen and they don't feel all the various symptoms.

So, Does that relate to diet? Of course it does. We know that there's a very significant difference in the hormonal levels of vegan women versus women that are on ultra processed diets. There's been many studies published on that. So this construct that woman self always comes to a medicalization by, oh, what estrogen derivative do we give?

Or do we give progesterone creams? Or all of those are part of the therapeutic potential, but that's not where we should start. We should start with giving her the best chance with her diet to do the work naturally. And that will, a lot of times, be all that she needs. And her bones are going to be good.

And her mental clarity is going to be good. And she's not going to end up with forgetfulness. And she's not going to be angry and depressed. And yes, that has been shown in studies.

[00:19:18] **Ginger Hultin:** It just feels like so much of this conversation is hopeful. There's a lot you can do and work on your diet and work on your fitness and the lifestyle aspects, both with women's health, but also with the immune system.

What about aging and the immune system? We talked a little bit about the senescence of the immune system, but what do you do there? I want to talk about aging and then sleep also.

[00:19:41] **Jeffrey Bland:** One of the most interesting things that's been discovered the last few years about Aging in the immune system is that if we look at organ aging in the body, and now people are able to measure differential aging rates in different organs, most people probably never thought that their brain could age faster or slower than their heart or their muscles or whatever.

It turns out that the organ system that kind of ages the fastest is the one that may determine your longevity. And, um, so it's, it's what's called the Darwin Lotka law in biology, the limiting factor. The thing that runs out first is what determines your outcome. And if you then look at what's been learned about the immune system, it turns out that because the immune system is found in every organ of the body, and it participates in communication among all organs, that

the aging of the immune system is the singularly most important determinant of how long you're going to live.

And you can actually predict your longevity pretty accurately based upon the age of your immune system. We're pretty excited that we're now starting to find ways to actually conveniently rejuvenate the immune system using the power of nature, basically.

[00:20:53] **Ginger Hultin:** I don't want to let you go before we talk about sleep and the immune system.

[00:20:57] **Jeffrey Bland:** Yeah, thank you. Um, so we know that the sleep center that orchestrates All of our body's rhythms, it's like the master clock, is the Supraventricular medial nucleus in the brain, in the hypothalamus, and SEM, and that particular clock then regulates circadian rhythms. And then the discovery, once the clock was discovered, it was discovered that, well, lo and behold, that clock can be modified in how it's functioning based upon what you eat, when you eat, how you eat.

So now diet comes to play a role. Then, moving on from that, it was found that The immune system of the brain, which is called the microglia, those cells that are in the brain are embedded immune cells. If the microglial cells speak to the clock of the brain, and therefore they regulate sleep cycling, Both sleep duration and sleep quality.

So now we start to recognize that this concept of chronic and neural inflammation, which is where the night glial cells of the brain that have felt that there's forwarders on board in the body, send signals to the sleep centers. That then causes our sleep to be altered both in duration and in quality.

Now, for most of us, when I just said a bunch of geekism and science, we know from practical experience. We know if we eat too late at night, Or if we eat too much, we know we have bad dreams, sleep disturbances, that we have a sleep monitor, we know we've been waking up and tossing and turning, and so our experience in life tells us that that must be true.

We may not have known the mechanism, and so we know that eating a peaceful diet produces peaceful sleep. And we know that a diet that has immune modulating substances Uh, puts at rest our brain's immune system and lowers inflammation and improves our sleep. Now, I'm a biometric geek. I've probably owned or worn every biometric piece of equipment.

And I've tracked my all sorts of stuff for over 25 years. My, I have an order ring. I've got an Apple watch. Those are simple ones that I use. It's interesting in my own life to see what happens when I get off my rhythm. To my sleep patterns, both sleep quality and sleep duration, we're the first generation of humans that have had access to monitor our body 24 7, 365.

Knowledge is power. There's all sorts of things we learn about how we modulate stress, how we modulate toxins, how we modulate relationships that come through these things that we can measure.

[00:23:48] **Ginger Hultin:** It's been a complete honor to talk to you today. And thank you so much for coming on the show.

[00:23:52] **Jeffrey Bland:** My privilege.

You're doing a fantastic job. Keep it up. Thanks.

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