



## Conscious Life presents

### Thriving Naturally: The Right Foods and Nutrients

**Dr Alan Christianson**

*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. And today I'm joined by Dr Alan Christianson. Alan is a naturopathic endocrinologist. He's the founding president behind the Endocrine Association of Naturopathic Physicians. He's also the best selling author of *The Hormone Healing Cookbook* and *The Thyroid Reset Diet*. Well, welcome, Alan.

**Dr Alan Christianson**

Hey, Anu. Thank you so much for having me.

**Dr Anu Arasu**

So great to have you here, Alan. And, I mean, I don't know where to start because there's so many ways that we could take this, but I guess to go really broad, first off, why do our hormones even drop in the first place?

**Dr Alan Christianson**

Yeah, it's an interesting thing. They do so much to regulate our body's health, but they get thrown off. We've got nine some odd thousand chemical pathways going at any given moment, and hormones regulate a lot of those. Yeah, so diseases can happen.

The glands that make hormones or the glands that regulate those can just get out and out broken. That can occur. They can get out of balance. We can have dysrhythmias that form. So things may work, but they're just not adapted well to our current circumstances. And then last thing is that things can change with age. And this has been talked about a lot, and we thought in the past that a lot of aging was just wear and tear. And there's debates now.

There's some thought that some facets of age may be deliberate; that our bodies may deliberately, like a planned obsolescence, so to speak, that our bodies may deliberately curtail functionality in ways that might help future generations, might make more resources available for other

generations, but don't help those who are aging. So some hormonal declines may be deliberate mechanisms based upon our age and our genetics. So, yeah, those are the main three factors.

**[00:01:58] Dr Anu Arasu**

My gosh. So we are actually being designed to make space for the next.

**Dr Alan Christianson**

So we're leaving more bananas for the younger monkeys.

**Dr Anu Arasu**

Well, it's nice to know that there's a rhythm and a purpose behind it all. How should we navigate that, with that rather strong start? What advice do you have for us to navigate that?

**Dr Alan Christianson**

Well, the better our bodies can maintain homeostasis. There's a lot of factors that challenge that homeostasis, and the fewer things that we can have challenging it, and the better it can work on its own, the better our health is in so many ways. And thankfully, there's a lot that we have control over.

And it's great that you're doing this event. You're going to teach people a lot of things they can do on their own, but there's tons of power we have with our simple choices of what we put on our forks, how we manage our day schedules, how we interact with the world around us. We can make some really big differences.

**Dr Anu Arasu**

Yes. I mean, you've written books about this, and I guess when we really delve into the science of food as medicine, for example, it gets quite technical. Can you tell us a little bit about the medicinal properties of food?

**Dr Alan Christianson**

Fascinating story. So food gives us stuff we need, it gives us fuel, it gives us building blocks, it gives us essential cofactors, the nutrients that we die without. There's the macro and the micro, the proteins, the carbs, the fats, the vitamins, the minerals. Pretty straightforward. We know that certain things have to be there for our bodies to have basic functionality, but that's just the beginning of the story.

There's so much more beyond that. And what we're now learning is that our bodies are just exquisitely co-evolved with a range of foods, especially plant foods, that this whole host of different compounds in these plant foods help our bodies regulate. And our bodies not only are bettered by them, but are almost expecting them to be present for our normal operations.

Yeah. So we depend upon all these different signals from a big range of foods just to work normally.

**[00:04:15] Dr Anu Arasu**

And this is something we've heard about a bit, the natural intelligence of plants. What does that mean?

**Dr Alan Christianson**

Yeah, it's a fascinating thing. So plants themselves are engaged in a complex battle for turf, for survival, and owning a certain amount of land that they can gain photons and soil from. They can control that. And they're fighting against insects, they're fighting against other plants, they're fighting against microorganisms, and they've got a complex chemical arsenal that does this.

We talk about the pesticides that are added to food but foods make more pesticides than are ever added on. Foods make tons of pesticides. And the weird story is that over the millennia, our bodies are adapted to these compounds. So a lot of them we call phytonutrients, which is a very positive sounding term. In truth, they're phytotoxins. They're things that, in crude amounts, taken out of the context of whole food matrices, they could kill us.

But in the context of a food and in the quantities found in food, these things help our bodies adapt. So, yeah, these are phytonutrients, and plants make them for defensive purposes, to help supportive plants around them grow for their own needs. And over time, we've adapted with them, and we've also been engineered in ways to where we respond in ways that help plants.

Small example, seeds contain compounds that increase the rate of peristalsis; they cause the gut to move a little faster. Well, that'll make an animal dump out more seeds more quickly so the plants can grow better and have some fertile soil. We help them, they help us, and there's this very complicated relationship that takes place.

**Dr Anu Arasu**

Wow. I mean, you mentioned the aspect whereby they could be considered toxins.

**Dr Alan Christianson**

Yeah.

**Dr Anu Arasu**

Is there a way that phytonutrients can be...we could consume them in a way that is harmful to our health?

**Dr Alan Christianson**

There is, especially when they're isolated, when they're taken out of whole plant foods. Yeah. Many plants are simply poisonous, by and large, we don't eat them. We figured out what those were quite some time ago. And, yeah, the compounds that we now eat, the foods that we consume, they have these toxins. But in the context of a diet that has a big range of foods and in the amounts naturally occurring, these things are not harmful for us.

**[00:06:49]**

You can find some unusual cases of people who consume massive amounts of one food in ways that are not normally prepared and they've harmed themselves. But, yeah, the foods that we eat, typical quantities, variety, normal preparation routes, no, there's much more benefit than harm.

And actually, I would love to bring up this topic because in many facets of pop health culture, well-meaning people misunderstand this. And they hear about elements of foods that, taken out of context, could be scary, and people get frightened of foods, and that doesn't really serve us.

**Dr Anu Arasu**

Give us an example of some of the foods we might be talking about here?

**Dr Alan Christianson**

A very simple example could be phytic acid. There's a compound called phytic acid that we find - I mentioned before about seeds and laxative properties - so phytic acid can do things like that. And it can bind up with certain nutrients.

So, yeah, many have looked at this thing in isolation and thought about how it could act in a test tube and thought, "Oh, wow, if we eat that, yeah, in a test tube, this can damage intestinal cells. Therefore this might damage our intestinal cells, this might weaken our immune system, this might cause us to malabsorb nutrients".

And here's the thing. Biochemistry is so vast and complicated that you can make a story supposing anything you want, and it can sound plausible. So you've really got to look at what actually happens to humans; like real world, high quality studies.

And people that consume natural foods normally prepared rich in phytic acid, they do better in so many ways than those that don't. They have lower rates of colorectal cancer. They have better absorption of key nutrients.

So, yeah, you can make theories about certain phytonutrients being bad or scary, and it's a tough thing because people can become...there's a term called orthorexia where they're so fearful of eating right that they do psychologic or even gastrointestinal harm.

**Dr Anu Arasu**

Yes, that is a big one, isn't it? Because people are educated, they're learning, and they're trying their best, and this can almost tip over into something else. What kind of phytonutrients should we be eating?

**[00:09:12] Dr Alan Christianson**

Boy, as big as a range as possible. There's so many great ones. And you'll hear ideas about eating the rainbow, different colors of foods, eating different portions of foods, the leaves, the above ground stems, the roots, a lot of ways you think about that. And it really comes down to variety.

There's some that are talked about as superfoods that get a lot of attention. They're kind of sexy. They're out there quite a bit, and they're fine. But even the boring everyday stuff has a lot of great attributes. The things in our spice cabinets are all superfoods in their own rights.

So, yeah, a big range of plant foods. Some of the favorites I talked about in the last book were beets, walnuts, oats, cayenne, onions. There's so many. And these are not exotic foods, you can find them. But small additions and small modifications with these natural foods can make huge differences.

**Dr Anu Arasu**

So what's your view on the term superfoods? Sexy superfoods.

**Dr Alan Christianson**

If it gets someone to eat more produce, that's totally cool. Sometimes we get obsessed about the highest numbers of this or that, like the antioxidant potential, the ORAC score or whatnot, and that's fine. But it's also in terms of how much of that food you consume and how often you have it.

So blueberries aren't the highest ORAC score, but we can consume many grams of them, hundreds of grams of them, quite easily. So, yeah, you don't need to have the most exotic thing like acai in a few fractions of a gram, you can have 100 grams of blueberries. Yeah, it's not as concentrated per se, but there's more of it, and the dose makes up for that.

**Dr Anu Arasu**

Beautiful. And what about phytoestrogens? What are they?

**Dr Alan Christianson**

Yeah. So this is so fascinating. All the things that we find in you and I, by and large, you can find in plants. You know, when my son was little, he was a big fan of Lego building blocks. He made things, these Lego toys. And with a small set of Legos, you can make a car, you could make a dinosaur, you can make a person. And biochemistry is kind of like that. There's a rather small set of legos.

I'm looking outside and I'm seeing like an oak tree. And me and that oak tree share tons of biochemistry. I mean, we're obviously quite different, but we've got the same kinds of building blocks.

So plants make estrogens like humans make estrogens. And what happens is that the estrogens from plants aren't the same when we ingest them as like ingesting estrogen from a contraceptive or a foreign estrogen from a plastic.

**[00:11:47]**

This is a pretty exciting story. So in the body, we have estrogen that does many different things, some that we could roughly think of as desirable, like helping collagen, helping bone density, helping brain cells repair. And some things we may want to be cautious about, like encouraging growth of extra breast tissue or thickening the endometrial lining or affecting coagulation pathways.

And what we know about phytoestrogens is that they have this almost magic property of helping estrogen where we want it to have a boost and slowing it down, where we'd rather have it not do as much.

So we can call these selective estrogen response modifiers. And phytoestrogens actually help estrogen receptors that we want to be amplified and they slow the ones we'd rather have down regulated.

**Dr Anu Arasu**

It's a lot of cell signaling. Why don't animal products have the same ability to signal to our cells?

**Dr Alan Christianson**

I missed something there. What was that?

**Dr Anu Arasu**

Is there a reason why animal products - meats and dairy products - do not have the same intelligence, let's say, or the ability to signal to our cells as plant-based products?

**Dr Alan Christianson**

Yeah, that's fascinating. So we do find hormone residues in animal products as well. As far as complex cell signaling, we do know that there still are lectins present, that all cells make lectins make signaling molecules. As far as their regulatory properties - not been explored as much. There's not as much data around that.

And we think that there's functionalities of hormone similarities and also less ways in which our consumption of animals affected the animals and their propagation, more direct ways by which us consuming the plants had direct effects on the plants and their propagation and growth. So we think there's more ways in which they're cross-regulating, but, yeah, but it's less known that.

**Dr Anu Arasu**

Fantastic. I mean, phytoestrogens are often cited as one of the possible reasons why women in Japan may have much easier menopause. What's your opinion on that?

**[00:14:02] Dr Alan Christianson**

Lots of good evidence around that, and it's fascinating. There's compounds we find naturally occurring in soy, and there's what the body then makes out of those compounds. So there's one compound called equol, which certain types of the gut flora can make out of soy. And this is a dramatically useful phytoestrogen that goes a long ways towards minimizing the symptoms of perimenopause and menopause.

And some are around 80-90% of most Asians, their flora can make this quite readily out of soy compounds. That's lower in non-Asian populations. It's probably more like about 40-60% of non-Asians that can convert that as well.

And we think it's a function of not just that one food, not just the soy, but the broader full dietary matrix, like all the other foods that contribute to the change of their flora. So that's why it's not ever just one thing, but it's this larger context of food diversity that makes the biggest difference.

**Dr Anu Arasu**

So would you advise all women going through the perimenopause to try phytoestrogens, or do you think that actually the efficacy is going to differ quite greatly depending on the individual woman and her genetics and her ethnicity?

**Dr Alan Christianson**

It will differ. There are many phytoestrogen compounds that worked in different ways. What I talked about in terms of that conversion difference was specific to a genistein from soy, like one exact one. So with many out there, and again having a variety, most can see a big difference on lowering symptoms, that can be quite an effective thing.

Figs aren't thought about quite as much, but they're dramatically useful in phytoestrogenic effects. Flax is often thought about, also quite useful, but there's a big range of those, and with the mix of those in the diets, we see a much lower rate of symptoms.

**Dr Anu Arasu**

Yeah, figs definitely get left out of the list...

**Dr Alan Christianson**

One cool study showed that as little as oral ingestion of a couple of figs per day could lower systemic symptoms. So hot flushes, night sweats, but also localized symptoms, atrophic vaginitis, vaginal dryness, discomfort, could lower these symptoms as much as HRT could.

**Dr Anu Arasu**

Tremendous, isn't it? One of the questions we often get is from thyroid patients, because it can commonly happen that during this time of perimenopause, or menopause, that people's thyroids can go off. Is there any risk in taking, consuming phytoestrogens if one has hypothyroidism, for example?

**[00:16:35] Dr Alan Christianson**

Yeah. So phytoestrogens, let's even go straight to soy. So that's the most concerning particular compound. And there's phytoestrogen extracts and there's actual found in foods. I changed my mind about this many years ago. For quite a while, I've had a thyroid-focused practice, and the content that I've shared for quite a while, I kind of went along and said, "You might as well avoid soy, might be a bad thing".

And I had a friend that called me out on that. He said, "Look, I've seen strong evidence about soy lowering the risk of women having osteoporosis and heart attacks. These are a big deal. Are you sure that they need to avoid that if they have thyroid disease?". And I said, "Huh. Honestly, I've not done the personal work on that".

So I spent about three weeks going through all the available literature on soy and thyroid disease, and I reached out to all my thyroid expert friends. I said, "Hey you guys, I got no agenda. Forward me what you've got. Is this a problem? I want to really give a definitive answer".

The short version was, after going through everything, there was one study that looked like it could have been the culprit. All the other things I found were not really relevant or didn't show there was a problem. But one study itself looked like it could have been a problem.

It took people that had a risk for thyroid disease, and the punchline of the study was those that consumed more soy had a higher rate of developing thyroid disease than those that didn't. Like, "Oh, okay, let's check this out".

So, in terms of detail, they had subclinical hypothyroidism, and those that had a high soy diet, plus soy isolate supplements had a higher rate of lapsing into overt thyroid disease than those with a lower intake of soy supplements, but the same soy diet.

So that was the whole thing. I dug deeper in that. The problem was that they didn't take into account the expected rate of lapsing into hypothyroidism. Had they done nothing?

So both groups were on soy diets. Both groups were taking soy supplements. One was on a higher dose of soy supplements. But they failed to say, "What if they were doing nothing? What was the expected rate of onset of hypothyroidism?". So, in their situation, both of these groups had a lower rate of developing thyroid disease than would have otherwise been expected.

But the group on a massive dose of soy supplements did a little worse than the group on a lower dose of soy supplements. But both groups were better than baseline. So that was the closest thing I could find to a negative study and it wasn't even a negative study on deeper analysis.

**Dr Anu Arasu**

Totally, so it wasn't placebo controlled, is what you're saying?



**[00:19:08] Dr Alan Christianson**

Yeah. They failed to take into account the baseline rate of change, what would have occurred had nothing been done. But there's clear data now that not only does it help in terms of lowering menopausal symptoms, but, yeah, cardiovascular risk, bone density, also breast cancer risk.

For quite a while, we weren't sure about women that had had hormonally sensitive breast cancer. Maybe they should avoid soy. Well, there's recently been a study done in which women with hormonally sensitive breast cancer were divided to receive high soy diets, or no soy recommendations. They stopped the study early because the rate of recurrence and the rate of death was clearly lower in those getting this recommendation for the soy diet.

**Dr Anu Arasu**

This is very interesting, isn't it? And some of the literature has suggested that phytoestrogens might weakly bind to the estrogen receptor and so therefore can almost modulate the effect of our own estrogen. Sort of, if our estrogen is too high, they may counteract that. Conversely, if our estrogen is too low, they may counteract that. What's your opinion on that piece of work?

**Dr Alan Christianson**

Yeah, exactly that. And I've seen data suggesting that not just, like controlling the crude amount, but different receptors, alpha receptors, beta receptors, the good effects of estrogen, the bad effects. And I think about that almost like a key and a lock. So you've got this lock that you want some doors to stay closed and some doors to open.

So what these compounds can do is they can help the good locks work better by cleaning them out. The bad locks, like you break a key off in there, now they won't open anymore. So, yeah, they can do both things at once. They can help the body work with its own estrogen better where you want it to and block it where you want it not to.

**Dr Anu Arasu**

And I think this is where natural intelligence really wins the game, trumps medicine. Because we have a bit of a sledgehammer and we can get a receptor to do something, but we don't quite end up with the sophistication of what these plants seem able to do.

So from what I'm hearing, from what you're saying, there's a lot of stuff that actually women should proactively be doing and can proactively be doing diet wise. Is that right?

**Dr Alan Christianson**

That was the whole inspiration of the hormone healing cookbook. I spent about a year and a half going through medical literature on thyroid disease and food, and I kept finding all these studies that were useful for regulating estrogen, especially, and it was great, but it didn't belong in that book, so I kept putting those aside, and there was so much of that.

I said, "This has to come out somewhere". And I wanted to make a simple guide for that. So we always think about the big symptoms of hormone change, about weight struggles, fatigue, brain

fog, sleep problems, mood changes, these big things that show up so often. And there's so much evidence from good studies that simple dietary change can help these things.

**[00:22:10] Dr Anu Arasu**

You've told us what will help hot flushes. Hit us, what's going to help weight loss?

**Dr Alan Christianson**

So this is a cool one. One of my favorite foods, actually, just...we did a big shopping trip yesterday, and we didn't get our onions. My wife was doing some errands. I said, "Can you pick up some more onions, too?". We go through, like, a couple a day, basically.

So one study - and this goes back to isolates of phytonutrients versus whole foods. So this study wanted to see if quercetin from onions could make people lose weight. And the study ended up being a bust, that the high quercetin onions didn't cause more weight loss than just random onions. But I didn't think it was a bust because both groups had substantial weight loss. It wasn't different.

So the magic onions didn't do something different than the regular onions, but both groups - and all they did was add roughly 20 grams of onions per day to the diet of these people - and they saw about a 5% decrease in visceral fat, measured via MRI over the course of just several weeks. So, yeah, just small amounts of onions and all kinds worked fine. It wasn't some special extract. It was just onions. And they made a huge difference.

**Dr Anu Arasu**

Are there times when people should be worried to do this themselves? And I guess there's some conditions, aren't there, where someone might struggle to digest raw onions? Let's say, if they have SIBO or they have some sort of gut issue...But how much should people just run with it and read a book and go and try these things? And at what point should they ask for advice?

**Dr Alan Christianson**

Yeah, if you're under medical care for some condition in which you're prescribed a special diet, talk to your nutritionist, talk to your doctor. Hope your doctor has given you some guidance that's sound, but, yeah, talk to your experts who are helping you personally. But barring those situations, when you go to a supermarket, no one has you check a card or pass a test. You can go buy what you want in a supermarket. So you're safe to do that by and large.

**Dr Anu Arasu**

Yeah, absolutely. And as you're saying, there's so much. I mean, there's hormones, there's weight loss...Energy, that's a big one. Are there things that we can take to naturally increase our energy levels?

**[00:24:29] Dr Alan Christianson**

You know, this is so cool. And it was fun seeing how this data came about, too. So some studies took people that were tired because they had a medical condition. They had had a stroke. They were on chemotherapy. Other studies were those that had been diagnosed with chronic fatigue and no explanation. And a third group of studies took endurance athletes. So they weren't complaining of fatigue. They wanted to make more energy.

So all these things, the common thread is these were all ways in which the body was needed to call upon to make more energy. One of my favorite examples here was beets...blood doping, kind of a big scandal in cycling not that long ago.

**Dr Alan Christianson**

So, blood doping, you can take someone else's red blood cells and put them inside of yourself, and you can raise your body's oxygen converting potential by 20%, which is huge. Well, using beets, you can raise it by more than that.

**Dr Anu Arasu**

My God. So this is consuming. How many beets do you have to consume to self-dope?

**Dr Alan Christianson**

So they're different sizes, right? So medium sized beets, about two or three. Not ridiculous amounts. And fascinating story, too. It's not even just getting something into your system. It's about actually chewing the beets, having them interact with your saliva.

So there's so much about whole foods, the context of actually eating whole foods. These things almost always fall apart when you try to make it into isolates or purified forms. And this is one more example that you actually have to chew the beets and taste them and swallow them, and then they become phenomenal.

**Dr Anu Arasu**

What about cooking methods? Because some cooking methods, of course, are more aggressive than others and can affect the nutrient content. Do you think that's important? Or generally, if people are consuming whole foods and cooking, they're going to benefit?

**Dr Alan Christianson**

Yeah, there's not a lot of big problems. I guess the one thing is that if foods are boiled for long periods of time and you're wasting the water, if you're boiling them and you're consuming soup, not a big deal. But really, the things I'm talking about are pretty heat stable.

There definitely are examples to where you can find reduced amounts of certain antioxidants or more heat fragile compounds, but they reduce, but they don't go away. They're still present in good amounts. And then the other thing too, is that so many of these effects, they don't require massive quantities.

**[00:26:58]**

Phytonutrients, their work, there's a process called hormesis. It's not that they help us in proportion to how much is there; it's they help us in proportion to they signal our bodies, so we don't need a massive dose for an effect. And if we lose them along the way, they can still be effective.

In the case of like, broccoli has a thing called glucosinolate, and a little speck of that, when that runs through our liver, our liver panics and thinks, "Oh, wow, it's a dangerous world, I'd better get stronger". So it's not that you need this huge quantity of it, you need enough for a signal.

So, yeah, you can have, you don't need massive green food blenders all day long. Small amounts, regular amounts, lots of variety, cooked or not cooked, they can work if we get them.

#### **Dr Anu Arasu**

That's a really interesting point, isn't it? Because I think a lot of us have been under the impression that our soils are depleted and that in order to get the nutrients we need, we would have to consume huge volumes. And for that reason, many people feel disheartened or rely on supplements. Where, in your view, do supplements have a place, if at all? Where does that come in?

#### **Dr Alan Christianson**

Yeah, there are certain things that I mentioned before, like the vitamins and minerals that vitamin D, for example, we don't get a lot of that from our diet. And if we're in certain latitudes, we may not get a lot from sun exposure. It's added to some foods and everyone eats those foods. So there are examples to where nutrients can be appropriately added in.

But I think more so in those cases about the essential micronutrients, phytonutrients, there is certainly a place for herbal medicine, short term, certain purposes. But when things are taken out of context, they work differently.

A case in point could be green tea extract. No one was ever harmed by normal use of green tea, but green tea extract is a leading cause of liver damage. Just normal amounts and supplements. So, yeah, so taken out, they're not the same as they are in the whole foods.

#### **Dr Anu Arasu**

That's a great distinction. So, for essential micronutrients, we may need to be testing and replenishing. But actually, for phytonutrients, this magical chemical properties, they work as a whole complex.

**[00:29:18] Dr Alan Christianson**

And the thing is, we can talk about the active constituents of these various foods, but ultimately, like in the case of beets, the active constituent in beets is beets. There's not just one thing, it's this whole complex that matters. Yeah.

**Dr Anu Arasu**

Again, with things like turmeric, there are sort of various forms that it comes in and people get very bogged down now about how to take their turmeric. What would you say to that? Is there a way to make it simple, or is it really this complicated?

**Dr Alan Christianson**

Well, the thing is, this is funny. We have all this evidence that people who traditionally consume high amounts of turmeric have wonderful health outcomes. There's good data around that. And then somewhere along the way, we think, "Oh, but I've got to put it straight in my bloodstream for it to work". Well, they weren't doing that!

Sadly, there was a death of someone a few years ago from intravenous turmeric. People have always thought, "You've got to purify this stuff, make it stronger". And I said, "Well, no, the traditional cultures use this in their diets, and they had better health outcomes because of that". Kind of a funny story but the closer one gets to the equator, the more broad use we see of a lot of culinary spices and herbs.

And these things were natural preservatives, they were natural antimicrobials. They helped in areas that didn't have refrigeration and had warmer climates. And they were useful in tons of ways. And turmeric is a great example of that. And we can absorb it fine when it's cooked and added to foods, foods that have a wide range of proteins, fats and carbs. We have no problems assimilating that.

And even further, all the benefits may not be from assimilating it. It can be helpful just by being present in the intestinal tract, even the parts that are not absorbed, it can act upon the gut floor in useful ways. So, yeah, it could work fine.

**Dr Anu Arasu**

What if we are not from an ethnicity that is used to using these types of spices? I mean, how much does our genetic constitution affect these things? Should we be eating an eastern diet if we're from the west, or vice versa? Should we be changing things up? What's your opinion on that?

**Dr Alan Christianson**

You know, it's funny. I was talking a moment ago about oak trees. We have differences, genetic differences for ethnicities, for sure, and from person to person. But we share 60% of our genetics with oak trees. So people are different. We talk about how different we are from one to the next, but none of us photosynthesize, all of us require oxygen...We're alike a lot more than we're different.

**[00:32:05] Dr Anu Arasu**

Right, yeah. So we can't just live on light just yet...And, I mean, we've covered a lot for general hormones, anything else you'd say to the thyroid patients out there?

**Dr Alan Christianson**

Well, yeah, so back to nutrients, in general. Nutrients are needed within a certain range, and it's odd, but the more you get outside that range, the more the same problems can emerge.

It's really tempting to think about nutrients as things that just make something go more and more; the more you take of a nutrient is, the further you push of a gas pedal, the faster the car will go. Someone's tired and they heard that, they heard that low B12 can cause fatigue, so they want to get as much B12 as possible.

But nutrients aren't like a gas pedal, they're kind of like keys for the car. So if you lost your keys, your car won't go very fast at all. Once you have your keys, more keys will not make your car go faster, your car is going to do what it's going to do, and if you get 1000 sets of keys, your car will not go 1000 times as fast, and that's exactly how nutrients are.

Now, in the case of the thyroid, this is a fascinating story that goes back to the very beginning of life itself, but iodine is this energy-rich atom that's not like any other elemental nutrient. It's way by itself in the periodic table, and all other nutrients in our bodies float around in our blood, and the amount in our blood approximates what our tissues need.

Iodine is not like that. It's so microscopic that places where we use it, we've got a special gatekeeper, and that gatekeeper closes the gates if we've got enough, and it brings out the vacuum cleaner if we need more. That doesn't exist for any other nutrient, but because of that, there's a narrower range that works well, and some people have genes that make their range even narrower.

So many can get amounts that are above what they need quite easily nowadays, and they've shown that regulating iodine can reverse thyroid disease for between 60-80% of people with Hashimoto's subclinical or overt hypothyroidism. So it's a very unique thing.

**Dr Anu Arasu**

So that's one example, I suppose, where testing could be really important.

**Dr Alan Christianson**

You would think so, wouldn't you? And that would be a logical thing to think. But the drawback is that the body has all these iodine compartments, so there's blood levels or urinary levels, and then there's what's in the thyroid. But further yet, there's how the thyroid is responding to it and what that person's individual tolerance is.

So some of the studies that took people and did closely regulated iodine diets would look before and after and say, "Okay, did their iodine levels beforehand predict who would respond to this and

who would not?". They really don't. Iodine tests are only useful to see if someone has gotten down to a therapeutic level. But they don't predict who might respond to an iodine-regulating diet.

**[00:35:14] Dr Anu Arasu**

Right. But it's a tough one, isn't it? Because, as you were saying, take iodine. That's such a key one that comes up for thyroid patients. People can be scared; they think they might need to take extra, they don't know how much. The doses that are being recommended could vary hugely, I mean, from micrograms to milligrams, kind of huge...Where does one start? It's a bit of a minefield.

**Dr Alan Christianson**

Yeah. So the thought is, do you likely need more or less and where do you fall on the continuum? So, prior to 1992, we had 112 nations on earth that were categorized as severely iodine-deficient. After 2014, we had zero. The United States has had six documented cases of iron deficiency since 1980. And those are people that were on diets consisting of one food and/or they had significant bowel surgery. So getting low in that is not likely.

On the flip side, we look at the populations that are exposed to too much. And so in the US, for example, between about 30-40% per age, gender and ethnicity is known to be at levels that can be unsafe for those prone to thyroid disease.

So if someone has thyroid disease, my argument is that they can safely regulate it, not eliminate it, (and you shouldn't eliminate it) and you can't, it's in all foods. But by avoiding the big, outlying foods, you're more have to come down to a safer, healthier range. And for many, that means reversing the disease.

**Dr Anu Arasu**

Percentage of thyroid problems do you believe can be significantly altered or reversed, improved or reversed by diet, dietary change?

**Dr Alan Christianson**

They're so, so different. The different types of thyroid disease, the garden variety situations are those that have Hashimoto's or some degree of hypothyroidism that are put on medication. Now, forget me and my iodine story. Just what's in conventional literature, they argue that 85-90% of those on thyroid medication never needed them to begin with.

And many papers have now shown that if people go through protocols to deprescribe and lower their medication, 84% can take less with no adverse effects, and half can come off entirely.

Recent studies have also then added the angle of iodine-regulation. Thyroid meds have a ton of iodine. That's part of what they do. So if someone is also regulating iodine, their odds of not needing medication, healing their thyroid, they only get higher. But this is stuff that's in really irrefutable and very conventional journals.

**[00:37:46] Dr Anu Arasu**

But this is people who are actively, as you say, regulating other aspects of their diet to...

**Dr Alan Christianson**

No, not at all. 84% was people that were doing nothing. They were just given a schedule to lower their medication. No. And to your point, if they're doing other good things, that's only going to make the odds better. But even without doing any good things, most people can have their thyroid improve pretty significantly.

**Dr Anu Arasu**

Yeah, there's so much in it, isn't there? There will be that. And on the other hand, I suppose there will also be patients that just feel lousy if they drop their doses. But I guess there's horses for courses and all sorts.

What about men? Men going through andropause, men who have got burnout? Anything different there that you would add, dietary wise?

**Dr Alan Christianson**

You know, high level? Our story is the thought that hormones are just these things that "high does this and low does that". And the more we get into the whole story, we realize that our blood tests show us, like, a few inches on the top of the ocean, and we know that there's some things that we can't test for that are going on behind the scenes, like membrane permeability, receptor activity, whatnot.

**Dr Alan Christianson**

So there's known unknowns, and that's maybe a few more feet in the ocean. But there's unknown unknowns that go on almost limitlessly. So, yes, men have less testosterone, but when men are healthy, they don't have changes in symptoms necessarily. Testosterone could be higher, lower. They can still have healthy sexual function, good exercise performance, good recovery, all sorts of that.

So, yeah, there is an argument that it's all about just this one thing is gone. We got to put this thing back in that is just ignoring so much research about complexity and hormone regulation that, yes, we can modify our hormone expression in tons of ways.

**Dr Anu Arasu**

The similar advice really; coming back to the rainbow diet and coming back to the natural intelligence of foods, spices...

**Dr Alan Christianson**

You know the way to think about it, there was a movie about the queen's - not a movie, but a Netflix show - about The Queen's Gambit, about this gal who is this chess master, right. Okay,



cool. So imagine you're watching her game and you see a move that she's making that you think could be done better. You're probably not, right. She probably knows that...

**[00:40:20]**

That's how I think about measuring hormone levels. We're looking at a game taking place by grandmasters. This is the body's intelligence against entropy. And these are grandmasters locked in this struggle. And we're seeing, like, one little tiny corner of the board we don't know better than they do.

Now, on the other hand, let's say that she hasn't eaten for the whole day. We could give her a meal, and that could help. We're not second guessing her moves, but we're supporting her process. So we can do that with the body. We can make sure it's well nourished. We can make sure we've got sleep and exercise. But I don't think we can really get in and rearrange the moves better than the body can do by itself.

**Dr Anu Arasu**

And that is such a recurring message, I think, that has been featured in this conference because I think we've really, really showcased the complexity of how many issues there are surrounding hormone balance. Alan, where can people find out more about you and your work?

**Dr Alan Christianson**

Easy thing is Dr Alan Christianson @ Dr Alan Christianson, social media. Also my [website](#). Tons of content coming out every day, many times a day. And thyroid focused, hormone focused, that's a big thing. And always eager to get readers questions and give more content based upon that. So, yeah, tons of things are there available.

**Dr Anu Arasu**

Oh, amazing. And any projects that you're...Or anywhere, any areas of interest that you are focused on in the upcoming months?

**Dr Alan Christianson**

Upcoming months. I'm between books right now, actually. I've spent so much time going from big project to big project, so I've got no exaggeration, thousands and thousands of blogs and videos, and I've got about, like, five books worth of content that I've written that's not published.

So right now, I'm not making new stuff. I'm doing a better job taking what I've already made and helping that be more accessible for people, helping people better connect with what can help them. So that's the focus, is no new stuff, better access to what's already there.

**Dr Anu Arasu**

Wow. Thank you so much. I mean, you've already given us so much access to so many things to think about. Thank you.

**[00:42:30] Dr Alan Christianson**

Well, and thank you for hosting this event. This is great information for people, and this is the stuff that really matters, is what they can do on their own.

**Dr Anu Arasu**

Thank you.