Introduction to Thyroid Aging

All right, so I'm really excited for a discussion today because I think a lot of people are these days talking about aging, longevity issues and things, but nobody is talking about thyroid aging.

This is a topic that no one even discusses about. So I'm really excited. So why don't you share like a little bit your information about in terms of what does thyroid aging even mean?

You know, that's a very good question. And if you think of thyroid aging, and I'll go through some data, but it's also the same as a sick person, right?

So you look at how the immune system affects the thyroid, the pineal hypothalamic pituitary thyroid access, and how that ages. And for instance, you look at basically throughout ages and you get into elderly, that their TSH will basically drop as you get older, right?

Well, then, shouldn't that mean their thyroid's better, right, according to the endocrinologist? And the T4, free T4, will stay pretty much the same, but the free T3 drops.

So wait a minute, how could that be a, you know, the thyroid's doing better? No, it's not working, but it may not be the thyroid, it's the upstream regulation of the thyroid.

So the pineal hypothalamic pituitary thyroid access gets aged. And if there's any inflammation, toxins, pesticides, stress, all that basically will suppress this access.

And when you look at the studies on thyroid bioregulators, and just so everyone knows what a bioregulator, you know, it's peptides. Everyone kind of hears of peptides.

You know, peptides are amino acid chains, but the bioregulators are special in that they're only two to four amino acids, and they work different than standard peptides, which are longer.

Why Standard Thyroid Tests Miss Low Thyroid

The standard peptides work on the cell surface, and then you have secondary effects. The bioregulators are small enough, as long as they're tapped, they absorb, go into the system, go into the cell, into the nucleus, and attach to the basically DNA repressors or activators.

So it works epigenetically. And they happen to basically activate genes that are anti-aging and turn off genes that are either sick genes or aging genes.

And when you look at, for instance, the study by Cavison, showing the thyroid bioregulator, someone who's low thyroid, whereas Hashimoto's, they give them the thyroid bioregulator, and they're very specific for each tissue, like the liver bioregulator works on the liver, basically the thymus works on the thymus, the brain works on the brain, and then thyroid on the thyroid.

Now, it actually rejuvenated the thyroid and made it work better, so the T4 and T3 levels normalized. But if they had Hashimoto's, it didn't change the antibodies.

But the thyroid access bioregulary, which is an integrated peptide's thiropep, stimulates that whole access. So what it will do initially, you'll see an increase in TSH, right?

So you go, OK, well, that makes the means the thyroid's lower. No, no, no. it's actually making it normal. So now

it's able to stimulate because most and you talk about this, like how the standard blood tests miss so many low thyroid because they think that the pineal and hypothalamus is just immune to any dysfunction that the TSH, you know, whatever the TSH is, if it's low, the thyroid is high.

If it's high, the thyroid is low. If it's normal, it's normal. No, no, no. that most people that are low thyroid, whether they're aged, sick, and, you know, stressed, pesticides, plastics will have low normal TSH, high normal T4, which is because T4 is not getting into the cell because of mitochondrial dysfunction, low normal T3, and high normal reverse T3.

And you look at that as what we see over and over and over in sick people, in people who are aged, and they need thyroid. About 80% of the population could use thyroid, but their blood tests are so-called normal.

Absolutely and this is a very common story that we see in our clinic too where you know as you mentioned that people come that quote-unquote that TSH is normal they're even taking thyroid medicine which is the levothyroxine but they are not feeling good they have all of these different kinds of symptoms but the doctor said well it is not your thyroid maybe see a psychiatrist and more importantly like you know they have never been looked at into what is damaging their thyroid or whether they have this conversion issue or whether they have thyroid hormone resistance.

So all of these issues that you're talking about makes complete sense now. So tell a little bit about people because everybody's talking about this T4 to T3 conversion, why that is not happening.

And even more importantly, like when they're taking the T4 and still not seeing that improvement. So what is this thyroid hormone resistance? Yeah, and studies show that, you know, taking T4, people just don't feel good.

The largest study ever done on antidepressants, the Star Report, over 5,000 patients, they had all the different antidepressants and they happened to throw in T3.

And they gave them T3 thyroid, regardless of their standard thyroid function test. And it turns out thyroid outperformed every antidepressant. It improved depression when the antidepressants didn't, less side effects, like less anxiety, less everything.

But you look at the study and it's nothing in the abstract about T3 because they didn't pay to be in the study. And so T3 outperformed all that. And there's all these studies like saying comparing T4, T3, or T4 to T3, the addition of T3.

And they made the patient's hypothyroid because of how much T4 is equal to how much T3. A normal person will basically convert about 50% of T4 to T3. So it's really 2 to 1. But you look in the PDR, if everyone looks at that, what is the equivalent?

You'll see 4 to 1, 5 to 1, 6 to 1. And so they would take away basically 50 micrograms of T4 and add 10 of T3.

T4 to T3 Conversion and Thyroid Hormone Resistance

And their TSH would go up, but they still felt better. but then they would say, oh, CT3 is not, T4-T3 is not superior. And it was just, it was a setup.

Also another, we talked about kind of depression, bipolar patients, 135 bipolar patients, totally treatment resistant. They took on average 14 different medications without any improvement, just no improvement.

They just gave them all T3 again, didn't matter what their levels were. 80% responded, which again, they didn't respond to 14 different meds and 30, almost 30% total resolution of symptoms.

So, it shows just how many people are low thyroid, and that's just in the, you know, in the depression world. And those patients will have that low normal TSH, high normal T4.

So, the endocrinologists look at the low normal TSH, high normal T4, and they go, oh, you're high thyroid, you know, you're relatively high. In fact, a study out of Harvard, they looked at that and said basically, oh, depressed patients are high thyroid.

No, they have a low free T3 and high reverse T3. So it's just a misnomer, and you know how it's just so frustrating. There's so many studies, and we outline a bunch of those on our nonprofit site, the National Academy of Hypothyroidism, nahypothyrores.org, or NA8.

neih.org but and it's just frustrating and you go through all these studies all the time and it's just but this they keep repeating the same things tsh tsh tsh and it's just doing people and i'm telling you the first clinic i i opened i did anesthesia initially which was no offense to anesthesiologists but just the most boring specialty ever and i went into family practice opened up the thyroid optimization clinic And just doing for doctors out there, just doing thyroid right and with T3, that you will get so many patients.

And we didn't even have the peptides and the bioregulators at that time. You do thyroid right and the peptides and bioregulators right. You can treat basically anything.

Yes, you know, like, and that's very exciting time, you know, like to for the thyroid patients right now, because, you know, previously there was only T4 and now like, you know, at least, you know, like some of the practitioners are opening to trying T3.

And now this new world of whole peptides and bioregulators, I think, you know, like finally the thyroid patients are getting the attention that they deserve.

Because I will say, for the last 20 years, there has been no change in how we approach thyroid patients, especially from the conventional world. Everybody is just using this T4-Leotiroxine.

And now, finally, they have more options. So I'm really excited about it. So now, going back towards this thyroid aging, you're talking about there are various factors which is causing it.

And this thyroid aging is not only related to your age, but what is actually aging your thyroid, which is the inflammation, the infection, the stress, and all that stuff.

So how does the thyroid bioregulators help with thyroid aging? Do they reduce inflammation? And in Hashimoto's patient, do they improve the antibodies and things?

So what is the mechanism? Yeah, so when you look at the thyroid bioregulator, it's going to act on the thyroid. And we're not quite sure it's going to work on the genes in the thyroid that have been altered from age, stress, chronic infections, toxins, pesticides.

And then the thyroid access works on that pineal, hypothalamic, pituitary access. So it's going to stimulate that, which also will stimulate telomeres and improve melatonin production.

And it will also improve testosterone levels, adrenal function, and all those. So it kind of fans out that way. And then the immune part, where it showed the thyroid bioregulator, they both improved the thyroid levels.

And actually, even after stopping for about three months, they were totally in the normal range. and it's a work for even after stopping. But the thyroid bioregula, strictly the thyroid, did not affect the antibodies.

And that makes sense because it's from external, it's not the thyroid producing the antibodies, but it affects the pineal, hypothenic, pituitary, and the thymus.

So it affects the thymus, which affects the immune system. So it modulated, so you have on one side, TH1 gets stuck inside the cell, TH2 gets stuck outside the cell.

and you can include Tregs and Th17 over here. And same thing, as we get older or stressed or sick, that Th1 goes down and Th2 goes up. So now you can't fight intercellular infections, you can't fight cancer as well, you can't monitor for cancer, but now you have all this inflammation and risk for autoimmunity with Th17.

So what the thyroid axis bioregular would do, much like pineal gland bioregulator will modulate that immune system and the thymus bioregulator. So giving the pineal and the thymus, so the two ends of that access, modulate that immune system.

How Thyroid Bioregulators Work

And just doing that, so it's going to lower inflammation, it's going to improve mitochondrial function. And you'll even see diadrinase changes where now you convert more T4 to T3 instead of going to reverse T3.

And then I don't want to get too much in the weeds, but the pituitary is totally different than the rest of the body. It doesn't make reverse T3. It has different diidonases.

So when you get stressed or sick or ill, it actually increases T4 to T3 conversion. It stimulates transport of T4 and T3 into the pituitary when you're sick, where the rest of the body actually decreases it.

So the pituitary sees more thyroid. So what does it do? It lowers TSH, saying, oh, we've got enough T3. But the rest of the body, it's the opposite. You get less T4, T3 conversion.

You get less uptake of T4 and T3 into the cells. And so the rest of the body is starving for thyroid, but the pituitary is like, oh, we're fine. and for instance they even did studies like where they this is like petri dish but they had cells from stress people and they looked and see how much they convert and how much they transport thyroid stressed individuals will have a 50 percent reduction in t4 t3 conversion and transport of t4 into the cells which is one reason now T3 is energy dependent, but T4 much more.

So different transporters. So when you get stressed or ill and you have mitochondrial dysfunction, which is now a big topic and anti-aging that you can't, you basically can't bring T4 into the cell.

So then you can't make T3. T3 does lower with, with all those issues, but it's not as much. And which is why, as people get sick, the T4 level stays high, not because of increased production, because it's not getting into the cell.

So what's in the serum does not necessarily tell you what's in the cell, and that's what you want to know. Absolutely. So basically now when you're discussing about thyroid bioregulators, you're talking about two different products, right?

One was a simple thyroid bioregulator which works on the thyroid and there is another one which is the thyroid axis bioregulator which works on the whole pituitary hypothalamic axis and the thyroid.

Is that correct? Yeah, correct. Yeah. So the thyropep has both in there. So, and it's just very interesting how we can, we can separate them like that.

So we're trying to make them so they're kind of one-stop shop. If you need a brain thing where like, you know, three or four, instead of taking, you know, each one, typically there's 21 of them, like who's going to take 21, you know, different pills.

So we're trying to combine them and come out with a lot of new ones. But, but the thyroid we've been very happy with and a lot of great testimonials and reviews from.

and then I think you did a research study and then you know you had amazing results with that so why don't you share about the little bit about the research study where you use it what kind of results that you saw in terms of like let's say thyroid levels or antibodies or maybe like symptom improvement what what was that about Yeah, so it was a smaller study, but individuals with low thyroid, with Hashimoto's, and again, they found that giving the thyroid

bioregulator normalized the T4 and T3 levels, and patients felt much better, more energy and all that as well with the thyroid bioregulator, but the thyroid axis bioregulator improved the thyroid levels better, but also dramatically lowered the antibodies against the thyroid.

And also, I've done a lot of talks on Hashimoto's. Hashimoto's patients, they're kind of unique because they have also the highest incidence of anti-pituitary antibodies, anti-dehydrinase type 2 antibodies, which actually increases the iodinase type 2 activity, which makes the TSH low.

so and they have but who checks for that right we can't do it clinically and and they have a ton of again pituitary inflammation hypothalamic pineal inflammation and they tend to have multi actually multiple hormone dysfunction although you know we focus on the thyroid and you fix the thyroid then everything's a vicious cycle of medicine as you know so if you can help the mitochondria all of a sudden these other systems start coming back and and so your thyroid is just is key because it affects every cell in the body.

It does you know and that's what people don't realize that you know thyroid hormone is life-saving hormone without thyroid hormone we literally cannot live so that is important of that particular hormone in the body.

And and when I was really sick with chronic fatigue syndrome before it was even called chronic fatigue syndrome and very evidence-based. I still am very evidence-based, but I thought I was ingrained in anything alternative and integrative in medical school and residency.

That means no evidence. And I finally went off. I go, I can't function anymore. And went off into these alternative things. I'm like, oh my God, they're more evidence-based than what they're teaching me.

And so I did high dose T3 and I'm like, oh my gosh, I felt so much better. And I just found out because we're doing new epigenetic testing that I have a gene that basically makes it so I will have a low TSH.

I don't, I won't convert the T3. in the body relative to the pituitary. So I have dysfunction genetic, and I think if I have it, how many other people have it, right?

No one ever knows that. But even when I thought it was optimal, I needed more because my basically epigenetically and genetically was messing up my my blood work.

Research Findings on Thyroid Bioregulators

That's very interesting because you know and that's where you know like sometimes the blood work lacks you know a lot of times you know we still do not know the exact pathology as well as you know like there is so much hidden in our genes that we are not unknown about because certain people even with high dose of medication they don't get better while some people even with lower dose of medications they're having like side effects with using them.

So like, you know, some of my patients, you know, like with T3, that's what, you know, like we feel sometimes, you know, like with like high dose of T3, they become very anxious or having palpitations for the others, like, you know, even smaller doses, you know, that doesn't work for them.

Yeah, and because the knowledge we have is so barbaric, we're just guessing, you know? And there's so much information potentially available and it's so complex, we have to make estimates and use the tools that we got.

Unfortunately, the standard medicine doesn't think we need to do anything else. I'm actually working on a new thyroid assay, actually, that I really feel will replace the TSH.

That's awesome. Yeah, and hopefully we'll have that out in the next year. And what will that be looking like? You know, what is it checking? Like, you know, any different, like, you know, things it will be checking or what?

Yeah, because the activity of the TSH actually varies. And so if you have a low activity, you're not going to

stimulate. So it's basically a TSH activity assay, which now, because what's the number one cause of hypothyroidism?

People say Hashimoto's. No, that's the one that we can detect, but it's actually one of the least common. You get, you know, the central hypothyroidism, and that is much, much more common, which occurs with aging, with stress, toxin, especially illness, especially chronic infections, inflammation.

So it will detect all that. So it will likely detect 80% more low thyroid than the TSH. Wow, I think a lot of people will love that test because right now people have been suffering for years and years, going to different doctors or trying different things, but nothing is working for them.

And they do feel that, you know, all of their symptoms are sometimes related to thyroid, but you know, even TA, such as a standard test will not, you know, like- And they're just so scared to give it because the levels are normal.

And it's like doing a TSH stimulation test on everyone. at the central but which no one really does because the pain and you know issues with it and the results aren't great but it should be very simple and you know because doctors need it black and white so hopefully we'll get that out soon.

So you're talking about central hypothyroidism so tell people a little bit more about it like you know what does exactly mean central hypothyroidism because I think most people might not know about it.

Yeah, so central hypothyroidism, and the problem is that endocrinologists think it's so rare that it's all or none. Either your pituitary gets destroyed or nothing.

But it's exceedingly common. The same thing I did a review article, the hypothalamic pituitary adrenal access in chronic fatigue syndrome and showed that the overwhelming majority, 90 plus percent of people with Chronic Fatigue Syndrome had low adrenal function, even though their cortisol and HH levels were normal because of central hypoadrenalism.

So a central cause, the same thing with low thyroid. So we think that the pituitary is immune to aging and everything and whatever it says goes, and it's so far from the truth.

that it kind of it peters out it just it's like this is this level is okay i don't need to stimulate anything and then and then the doctor says oh that that's fine you know you're you're normal and and they could have every symptom in the book you know and doctors have lost that skill they want to just look at a lab and a person has yeah cold hands cold feet you lost their little eyebrow and eminy you know, fatigue, freezing cold or body temperatures, 96, their pulse is like 54. And they're either the best Olympic marathon runner or they're low thyroid.

And there's so many people like that. And, you know, clinically, they're just totally hypothyroid and just give them thyroid, they usually do well. But some studies have found that they mostly looking at people who like give their thyroid taken out, you cannot get normal levels by giving back T4 in the tissues, except for the pituitary.

So by, and people will get their thyroid taken, let's say for cancer. And the average weight gain is like 27 pounds, right? So they're saying, Oh, well, we're going to take out your, your, your thyroid because you got a suspicious lesion and we're going to get, well, don't worry.

We'll just give you back thyroid. So they give you back normal levels and you gain 27 pounds. How is that normal? Absolutely. That's crazy. Yeah. And those people need more T3 to get their thyroid taken out.

Central Hypothyroidism and Hidden Thyroid Dysfunction

And some people like with Hashimoto's, they've been there a long time, you know, they're kind of destroying their thyroid slowly. So the same thing. So the sicker the patient in general, the more T3 they will need.

Where like a healthy person is not stressed or, you know, Totally healthy. T4 may work okay in a T4, T3, but in

general, I mean, everyone's different, but the sicker or older, the more T3 they'll need, like heart failure.

I'm like, gosh, people are scared to give heart failure patients T3. And it is the best thing ever. I got a bunch of studies on that and stuff. And people just reversing their heart failure from it and reversing their AFib and all those things.

And yeah, don't be afraid to suppress the TSH. I mean, don't go crazy and that. But high TSH increases the risk of AFib, as does very low TSH. But the saline study, that they always point to say, see, low TSH increases the risk of a fib, right?

But if you dig into the data, everyone that was thyroid and had a suppressed TSH did not get a fib. Only the people not on thyroid with the suppressed TSH, I mean they were just so sick and they had sick basically the heart.

The congestive heart failure and heart disease totally suppresses the TSH, so non-thyroidal illness. And they're the ones that got Afib. So really the answer was that thyroid protected from getting Afib.

But I'm not saying you can't go crazy and get, you know, a ton of thyroid and cause it. So you got to be careful. But a lot of things will prevent AFib.

BPC 157, it will actually modulate the calcium channels in the heart and then also the heart bioregulator. So we've had a number of people with AFib, we give them that and they're super like doctors have taken them off all thyroid, they're so low thyroid, still in AFib.

We give them those, it goes off the AFib and we're able to ramp their thyroid back up. Wow, that's crazy. Yes. So again, breaking down for people a little bit more.

So what you're talking about was that, you know, like in terms of how our body produces thyroid hormones. So it starts in the pituitary, which is our master regulator, which produces this TSH, which goes to the thyroid gland and then produces the T4 hormone for you.

Now, what Dr. Holdorf was talking about is that it is when you have Hashimoto's or you have a thyroid dysfunction, it's not only a thyroid issue, it is actually a pituitary issue.

Your master regulator in the body, which is your pituitary, is not working or is being damaged, which most of the time a lot of sick people will have it.

We do not have a test, you know, perfectly check it. And that's the reason, you know, like you might be feeling all the symptoms, but your regular testing like the THC itself is not picking it up.

Is that correct, Dr. Haldorf? That's perfect. You got it. Absolutely. So this is where the beauty about the bioregulators I love because, you know, like there is no particular medication that fixes the pituitary axis and things, but your thyroid axis bioregulator works on the whole cascade of things.

Is that correct? Yeah, it does. Yeah. So then that's the key. And now, you know, with the pineal bioregulars are getting a lot of play with the anti aging and increasing telomere length with his biologic age.

So it's it is I think I love the way you put it and I haven't heard someone put it that way is anti aging the thyroid. and so many people that need that.

So I love that. I'm gonna steal that from you. That's great. So now a lot of people might be confused in terms of asking this question. So this thyroid bioregulator, is that really T4 or T3 or is it separate from them?

So explain that also a little bit. Yeah, there's no T4 or T3 in the thyroid bioregulator or the thyroid access bioregulator. So all the increase that we saw was from increased function.

And that is amazing because we feel that Hashimoto's disease is kind of a dead tissue in the thyroid that we're dealing with. You cannot rejuvenate that tissue.

And clearly, like in your experience and in your studies, you saw that you were able to actually improve those levels in that way. Yeah. Yeah. And so there's, I'm sure, a point where it's kind of diminishing returns.

If you've killed off a bunch of the thyroid, you may not be able to get there, but we find that a lot of that can come back. They're inflamed, dysfunction, they go into what's called cell danger response and the mitochondria start producing reactive oxygen species instead of energy.

So you can reverse all that and then it can bring the thyroid back, certainly. Absolutely. So this is in addition to people who are taking the T4 or T3 hormones, then you add this thyroid bioregulator to improve the whole disease process.

Yeah. So you can either do it before or after or during. Most people are under dosed on thyroid, but we'll find when we start the bioregulators that they can often reduce their dose and sometimes come off of the thyroid.

Come off the thyroid medications also then, right? Yeah. Again, that's a very good news because a lot of people, again, once they go on the medications, they're told that, okay, they will take it for lifelong basis.

I mean, some people do need it, but if there is a chance that you might be able to get off of the medicine, why not give it a try? Yeah. And here the old thing, it reminds me of medical school, like, oh, once you go on thyroid, you have to stay on it forever.

No, no, no. You can take, especially with T3, you can reset the thyroid which can help and usually if you get stressed again it goes back but it's not like you're going to poison the thyroid if you give t4 t3 that you can go on and off of it we do it all the time and then especially with the bioregulators that you can often come off the thyroid if that's someone is real you know people they don't like taking meds i mean most people.

So it certainly is possible, but I would say the key is to be optimal. And so many people are low and it's contributing to heart disease. Like low normal thyroid is a higher, just low normal doctor.

Oh, you're just low normal, higher risk for heart disease than if you have high cholesterol, diabetes, okay. Or you smoke. Wow. Really? That's crazy because most people now these days, you know, everybody's obviously concerned about heart disease, you know, since, you know, like COVID happened.

And then, you know, like nobody pays attention to this one modified risk factor, which is your thyroid.

Safety, Dosing, and Stacking Bioregulators

And we are not even talking about who have a formal diagnosis of thyroid, just being having into the low range of normal also affects your heart in a very negative manner.

Yeah. And anyone with long COVID, they're low thyroid. And I just read a study, it just happened to come across it yesterday. that people who got COVID and the vaccine is going to be way worse, but 20% of people had documented significant low thyroid after having COVID.

And this was like a year, a year plus out. So, you know, it's just adding to, and again, the immune dysfunction and the inflammation and that, and especially vaccine induced, I've never, you know, long backs, long COVID.

T3 is a core treatment of that. Absolutely. Now the next question a lot of people will say is a safety concern in terms of side effects. So are there any side effects of using the bioregulators?

Any safety profile of patients that who should not be using you know like these bioregulators? Yeah, I haven't seen any side effects. And I'll, I'll say even from the, like, even like, let's say BPC 157, like I would normally say, well, no,

no one ever gets side effect, but the mast cell activation people, the chronic inflammatory response syndrome patients, when they say they're sensitive, you got to listen because like, you know, we tell them like, you know, basically look at the pill for a week and then smell it for a week and then, you know, imagine it, whatever.

But I have not seen a side effect from it yet. But if it's going to be someone, it's going to be those that group bust their hearts. I mean, they're just up against so much and actually can help them tolerate other things.

So the thyroid access by where he's going to modulate that immune system, which is so messed up in those MCAS and the sears patients. So but yeah, very, very safe.

And you could probably take a whole bottle. I'm saying to do that. it will have a limit, it will go up and just produce, it won't just keep going up and up because it's not stimulating, it's modulating.

And is it like a treatment where you use it for a certain amount of time and then you know like it does a job and then you stop it or is it something that you keep on doing it for long-term basis?

That is a great question and normally so the biggest supplier of the bioregulator says do them 10 days for a month and then off three months. but there's only there's two long-term studies with that for aging where they did that all the other studies they don't do that so it's kind of the wild west in terms of dosing and and you know we'll kind of cycle you just say five days a week and we'll do it for three months and see how they do then you can stop for a couple weeks and see the nice thing is it does seem to have a tail where it will have an effect So, but I think each right now we don't have any like set dosing schedules or anything like that because it's not like, oh, this is how long it lasts in the body.

So you can stop taking it here or, and the fact that it lasted so long and a lot of people that showed it, it really affected epigenetically and that kind of stuck.

And some people may do totally fine after that unless they get stressed or get an infection or something like that. So we don't know. It's very individualized, but generally it's very easy to tell, you know, just like look at some blood work or how patients feel even better.

you follow both the blood work as well as how the patient is feeling and then based on that you know like either continue or discontinue the you know the thyroid regulator and then also make changes with the medications if required.

Yeah and patients do have get a sense like well like I'll give sometimes like 20 bio-regulators, the people, peptides and bio-regulators on the first visit.

And after, and someone won't see them for six months and they go, okay, well, this one worked, this one doesn't. They get a good sense just from like, oh, I didn't take that one today.

And they kind of, they're very good at sorting it out. So many of the people that just want to be told exactly what to do. But we find that, yeah, just, you know, kind of see where you land.

The nice thing is very, very safe and they're not hugely expensive. And so we just kind of see what you feel better with. And if something doesn't work, we stop it.

But it's pretty rare. The overall majority of people do notice a difference. So basically like, you know, in the peptide world, a lot of people, you know, like when they're using peptides, they will stack those peptides, you know, for various different benefits, you know, and then coming together.

So similar with bioregulators, what I was hearing from you is that you can stack those bioregulators together for various benefits. And then, you know, that is still fine to do that.

Yeah, and that's actually their design for that. So, and you look at the studies on, let's say you do medications, you

stack meds, the risk of a side effect just goes up exponentially.

But it does not go up when you do the bioregulators. And there were two studies where they gave them rotating 21 different bioregulators. They do it for basically a couple of weeks and then stop and like three months later and rotate all those for, let's see, seven, where are they now?

They're about four years. And they lost on average seven years in biologic age for every year they did the bioregulators. Wow, that's amazing. So in three years, they lost 21 years in biologic age.

That is amazing. I don't think there is any single other thing which has shown such a better result. These are really powerful. That is awesome. So that's the reason I love these bioregulators.

And obviously like, you know, this is the new thing which has been there in the market for some time now. And then obviously, you know, your company, the Integrative Peptides has been sourcing them as the best quality of those bioregulators.

So why don't like, you know, tell people like, you know, where they can find more information about you as well as these bioregulators and you know, that nonprofit organization where you have about the thyroid.

Yeah, so we have had, thyroid's been my passion for a long time, ever since it got me better and functional very quickly. We have a National Academy of Hypothyroidism, non-profit, just information site, n-a-h, n-a-hypothyroidism.org, or also, it's also Nescahypothyroidism Integrative Sciences, so n-a-h-i-s.org.

Resources and Closing Remarks

Then there's our whole type of medical group where we treat a lot of this, and then integrated peptides where we're bringing out all the bioregulars. The bioregular expert is the site that has the focus on the bioregulators.

But we switched over from Russian supplier. All these were basically discovered during the Cold War in Russia and where their cosmonauts, their high-speed jet pilots, and their submariners were aging very quickly.

and getting very sick. So they went to a group of doctors and scientists in Russia and said at the KGB hospitals that you shall fix this. And one of the doctors, one was Cavison, the other was Pavlov, as in Pavlov's dog.

And they were had to do significant research before that. They did dump a ton of money and they found that the two key bioregulators, again the pineal and the thymus, essentially prevented this rapid aging that they were seeing.

And they're also worried that the Americans were coming out with these weapons that was like blind people and stuff like that. So they were trying to protect from that.

So then all the studies, they were all a military secret. So no one knew about it. And they just gave it to the military and the Olympic team, who did pretty well during that time.

And then with the fall of the Soviet Union, they started publishing, but it was in Russian. So no one paid attention. Then as they started getting translated, there's thousands of studies, thousands.

We have a Russian researcher who just keeps looking at Russian studies. That's when it just started finally coming to the US. The Russians have been the key makers of it, but we now found a German supplier because it's very difficult to purify all these bioregulators.

They will purify it down to 5,000 Daltons. But a bioregulator is about $500. So you really, when you get that, it's very purified, but there's a lot of stuff that isn't a bioregulator.

So the new ones will have down to 2000. So much higher percentage of active bioregulators. So that's why we're

switching over. And so we don't have all of them yet, but that's coming.

Absolutely. So that is so great. And obviously, we can keep going on and on, you know, for hours, you know, because with your knowledge, you know, and with your expertise and things, we can keep going.

But I think I think people have enough information, they still will like to keep or like, you know, listen to this talk a couple of times before they actually get what, you know, like we're talking about and like how this is so important to make it as a part of your thyroid healing process.

And it can really be game changer for a lot of people. So I'm so glad that you came over here and then share this information. And, you know, you're bringing so many new things, you know, like every time I talk to you, like, you know, you're working on something new and this is so exciting for me.

I said, okay, well, I have more goodies that I can work with me, like, you know, with my patients. Well, thank you so much. I love the work you're doing and the reach you have.

and how people respond to you and you're just able to break down these complex you know issues and to make it understandable for patients so you got a gift and a thank you and you're just doing great things for people so I appreciate it.

Absolutely that means a lot really a lot so guys please again we have all the information about Dr. Holdorf and his products as well as all this information that he's sharing out there into the comment section in the description.

So please check it out. Learn from yourself. You know, look at those bioregulators for sure. See like, you know, which they are useful and obviously work with a qualified professional who can help you to navigate, you know, all of these complex issues for that.

Any parting words you have Dr. Haldor for people? No, I just always love talking with you and just love all the work and I see you all the time on YouTube.

I'm a big fan. So thank you. It's an honor to be on your summit. So I always enjoy the time together. Absolutely. It's same here. You know, like I'm always looking forward to chatting with you, learning new things, which is coming out.

So thank you so much for the work that you do. Guys, please, again, you might ever listen to this talk again and again, a couple of times before you get the concepts.

That's okay. You know, sometimes, you know, yes, you have to brew your brains and listen to this new information. Hopefully you do that. But this is it for me today.

I will catch up with you again later. Till that time, take care guys. Bye-bye. Great. Thank you. Thanks so much.