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 not 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 is thyroid aging you would need?

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 axis, and how that ages in, for instance, you look at basically throughout ages and you get in the elderly that their TSH will basically drop as you get older.

Right? Well then should that mean their thyroid is better, right? According to the endocrinologist and the T4, the 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 doing better now? It's not working, but it may not be the thyroid. It's the up stream regulation of the thyroid.

So the pineal hypothalamic pituitary thyroid axis 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, thyroid bile regulators and, and just so everyone knows what a by our regular, you know, peptides of been kind of here's a peptide.

You know, peptides are amino acid chains. But the bio regulators are special in that they're only 2 to 4 amino acids. And they work different than standard peptides, which are longer.

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

So it works for a genetically and they happen to basically activate genes that are anti-aging and and turn off genes that are either sick genes or, aging genes.

And when you look at, for instance, the study by Kavanaugh, him showing the thyroid by a regular or someone who's low thyroid, or has Hashimoto's, they give them the thyroid bioregulator, and they're very specific for each tissue, like the the liver by a regulator works on the liver.

That's the, basically the famous works on the thymus. The brain works on the brain and thyroid on the thyroid.

Why Standard Thyroid Tests Miss Low Thyroid

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

But the thyroid access by O'Reilly, which is our, integrated peptides thyroid that stimulates that whole access. So what it will do initially you'll see an increase in TSH, right.

So you go okay, well that's makes it means the thyroid is lowered. 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 the that the pineal and hypothalamus is just immune to any dysfunction that the TSH, you know, whatever the TSH is, is if it's if it's low the thyroid high, if it's high though, it's 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 mitochondria dysfunction, low normal T3 and high normal reverse T3.

And and you look at that is what we see over and over and over in sick people in people who are age and they need thyroid, you know, about 80% of 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 which is normal, that even taking thyroid medicine, which is the lever action, but they are not feeling good.

They want 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 the 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 us a little bit about people because everybody's talking about this T4, 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 and studies show that, you know, taking T4 people just don't feel good.

The largest study ever done on anti-depressants, the Starr report over 5000 patients. They had all the different, antidepressants. And they happened to throw in T3 and they gave them T3 thyroid, regardless of their standard, you know, thyroid function tests.

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 T14 3 or 4 to T3, the addition of T3.

And they made the patients hypothyroid because the how much T4 is equal to how much T3 a normal person will, will basically convert about 50% of T4 to T3.

So it's really 2 to 1. But you look in the PDR which still looks at that like what's 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 ten of T3 and their TSH would go up.

But they still felt better. But then they would say, oh, see, T3 is not the T4, G3 is not superior. And it was just it was a set up. 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.

T3 Therapy and Treatment-Resistant Symptoms

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 data just look at the low normal TSH high normal T4 and you go oh your 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. 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 Na hypothyroidism.

Org or any ET and NIH uh.org. But and it just frustrating and you go through all these studies all the time and it just but the 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 opened I did anesthesia initially which was oh no offense the anesthesiologist, but just the most boring specialty ever.

And I went to the family practice, opened up the thyroid optimization clinic, and just doing for doctors out there, just doing thyroid right. And with with T3 that you will get so many patients.

And we do even have the the peptides in the by our regulators at that time. You do thyroid right. And the peptides. And by the way 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 you 23 and now this new world of whole peptides and by regulators, I think, you know, like, finally, the thyroid patients are getting the attention that they deserve because for I will say like for the last 20 years, there has been no change in how we approach thyroid patients, especially from the conventional world.

Everybody's just using this T4 with the rocks. And and now finally they have more options. So I am really excited about it. So now going back towards this thyroid aging right.

You know 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 by regulators, you know, like help with thyroid aging.

Do they reduce inflammation in Hashimoto's patient. Do they improve the antibodies and things. So what is the mechanism. Yeah. So when you look at the thyroid by a regulator 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 axis. So it's going to stimulate that and which also will stimulate like telomeres and improve melatonin production and will also improve testosterone levels and adrenal function and all those.

So it kind of fans out that way. But and then the immune part where it can we would show the thyroid by a regulator. They both low improve the thyroid, levels.

And actually even after stopping for about three months, they were totally in the normal range. And, and so it worked for even after stopping. But the thyroid by regular strictly the thyroid did not affect the antibodies.

And that makes sense because it's from, you know, external it's not the thyroid producing the antibodies, but it affect the, pineal gland, pituitary and the thymus.

So it affects the thymus which affects the immune system. So it modulated. So you have on one side one gets stuck inside the cell cage. Two good stuff outside the cell.

And you can include Tregs and 17 over here. And as same thing as we get older or stressed or sick that one goes down and two goes up. So now you can't fight intracellular 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 each 17. So what the thyroid axis by a regular would do, much like, pineal gland by a regulator will modulate that immune system in the thymus by a regulator.

So giving the pineal and the thymus. So the two ends of that access modulate that immune system. And just doing that. So it's going to lower inflammation.

It's going to improve mitochondrial function.

Thyroid Bioregulators and the Pituitary-Thyroid Axis

And you'll even see the irony changes where now you convert more T4 to T3 instead of going to reverse T3. And 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 does different diagnoses. 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. It lowers TSH saying oh we got enough t a 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 starving for thyroid.

But the pituitary is like, oh, we're we're fine. And for instance, they even did studies like where they this is like a petri dish, but they had, cells from stressed people and they looked and see how much they convert and how much they transport.

Thyroid stressed individuals will have a 50% reduction in T4, T3 conversion and transport of T4 into the cells, which is one reason. Now T3 is energy dependent, but T4 is much more so different transporters.

So when you get stressed or ill, 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 you then you can't make G3. 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 bio regulators, you're talking about two different products, right?

One was a simple thyroid bio regulator which works on the thyroid. And there is another one which is the thyroid. X is bio regulator which works on the whole pituitary hypothalamic axis.

And the thyroid. Is that correct? Yeah. Good. Correct. Yeah. So the thyroid pet has both in there. So and it's just a very interesting how, how we can, we can separate like that.

So we're trying to make them so they're kind of one stop shop. But if you need a brain thing, we have, like, you know, 3 or 4, instead of taking, you know, in each one, typically there's 21 of them, like, you can 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 with Hashimoto's. And again they found that giving the thyroid by a regulator normalized the T4 and T3 levels.

And patients felt much better, more energy and all that as well, with the thyroid by writing. But the thyroid acts just by a regular improve the thyroid levels better and but also dramatically lowered the antibodies against the against the thyroid and also done a lot of, talks on Hashimoto's, Hashimoto's patients.

It's a they're kind of unique because they have also the highest incidence of anti pituitary antibodies, anti dehydrogenase type two antibodies, which actually increases the kidneys type two activity which makes the TSH low.

So and they have one 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 we know we focus on the thyroid. You fix the thyroid then. And 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 lifesaving hormone without thyroid hormone. We literally cannot live.

So that is the importance 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 up in space, but I thought it was ingrained and anything alternative and integrated in medical school that that means no evidence.

And I finally went off. I go like I can't function anymore and went off and and to these alternative thing, I'm like, oh my God, they're more evidence based than what them, what they're teaching me.

And so I did the high dose T3 and I'm like, oh my gosh, I thought 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, I have will have a low TSH. I don't, I won't convert that the T3, in, in the, in the body relative to the, to the pituitary. So I have dysfunction genetic.

Research Results and Hashimoto's Improvements

And I think if I have it, how many other people have it right now and no one ever knows that, but. And even when I thought it was optimal, I needed more because my my basically epigenetics and genetically, was messing up my, my, blood work.

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. Yeah.

And for the others, like, you know, even smaller doses, you know, that doesn't work for them. Yeah. And because the, the knowledge we have is so barbaric, it's we're just guessing, you know, and there's so much information potentially available and 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 would that I, I really feel will replace the TSH.

So, because there's. Yeah. And hopefully we'll have that out in the next year. And what, what will that be looking like and what is it checking like, you know, and like, you know, different like, you know, things it will be checking or what we have because the activity of the TSH actually varies.

And and so if you have a low activity you're not going to stimulate. So it's a, it's basically a 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 it's actually one of the least common you get, you know, the central hypothyroidism and and that is much, much more common, which occurs with aging, with stress, toxins, 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 are trying different things, but nothing is working for them. And they do feel that, you know, all of these symptoms are sometimes related to thyroid, but, you know, even to such a standard test will not, you know, like and they're just so scared to give go because the, the levels are normal.

And it's like doing a, TSH stimulation test on everyone. And looking at the central belt, which no one really does because it's a pain and, you know, it's issues with it and it and the results are great, but it should be very simple.

And, you know, because doctors need it black and white. So so yeah, hopefully we'll, we'll get that out soon. So you talking about central hypothyroidism?

So tell people a 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, is that endocrinologist think it's so rare that it's all or none. Either your, you know, your pituitary gets destroyed or nothing.

But it's exceedingly common. Same thing. I did a review article. The hypothalamic pituitary adrenal access and 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 levels were normal because of central hypo adrenal ism.

So 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 the lowest levels. Okay? I don't need to stimulate anything. And then and then the doctor says, oh, that's fine. You know, 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 the person has. Yeah. Cold hands, cold feet. It lost their lower eyebrow. And me, you know, fatigue, freezing cold, their body temperature 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.

You just give them thyroid. They usually do well, but some studies have found they mostly looking at people who like, get 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 away 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 the thyroid. So they give you back normal levels and you gain 27 pounds.

Central Hypothyroidism and Clinical Signs

How is that normal? Absolutely. That's crazy. Yeah. And those people need more T3. They get their thyroid taken out and and some people, like with Hashimoto's, have 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. Right.

Where, like, a healthy person is not stressed or, you know, totally healthy, can keep warm. It may work okay in a T 43, but in general, I mean, everyone's different, but, the sicker or older, the more T3 they'll need, like, heart failure and like, gosh, people are scared to give a heart failure.

Patients. T3 and it is the best thing ever. I got a bunch of, studies on that, and stuff, but, and, you know, people just reversing their, their heart failure from it and, and reversing their AFib and, and all those things.

So and. Yeah, don't be afraid to suppress the TSH. I mean, don't go crazy and and that but high TSH increases the risk of a-fib as does very low TSH. But the salon 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 ish did not get AFib. Only the people not on thyroid with the suppressed. Yes.

I mean, they were just so sick and they were had sick basically the heart the, the the heart heart, congestive heart failure and heart disease totally suppresses the, the non thyroid 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 by a regulator.

So we've had a number of people with AFib. We give them that. And and they're super like doctors have taken them off of they're, they're so low thyroid still in AFib.

We give them those, it goes off, they fit 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 hormone. So it starts in the pituitary, which is our master regulator which produces this.

Dosages go to the thyroid gland and then produces the before a hormone for you. Now what Doctor Holder was talking about is that it is when you have Hashimoto's or you have a title dysfunction, it's not only your 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. You know, 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 patient itself is not picking it up.

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

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

So it is I think I love the way you put it, 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 going to 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 bio regulator, is that really T4 or T3 or is it separate from them.

So explain that a little bit. Yeah. There's no T4 or T3 in the thyroid by a regulator or the thyroid access by a regulator. So all the increase that we saw was from increase function.

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

And clearly, you know, like in your experience in your studies, you saw that you were able to actually improve those levels in that way. Yeah, yeah. Until there's I'm sure a point where, you know, 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 t like you know, T3 hormones. Then you add this thyroid bio regulator to improve the whole disease process.

Yeah. So you can either do it before or after or during. And we'll have most people are under dosed on thyroid. But we'll find when we start the bio regulators that they can often reduce their dose and sometimes come off of the thyroid, come off the thyroid medications also then.

Right. Yeah. Well, again, that's 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 and I heard the old thing 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.

Safety, Dosing, and Stacking Bioregulators

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 by our regulators that you can, often come off the thyroid if that 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 in so many people are low and it's contributing to heart disease like low normal thyroid is a higher which 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 modifiable risk factor, which is your thyroid and not even not even talk about who have a formal diagnosis, the thyroid just being having into the low range of normal also affects your heart in a very negative manner.

Yeah. And anyway long Covid they're low thyroid. And I just read a study. I 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 bio regulators, any safety profile of patients that we should not be using?

You know, like these bio regulators. 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, oh 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, like when you 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 the that group bless their hearts. I mean, they're just, up against so much, and it actually can help them tolerate, other things.

So the, the thyroid axis, by the way, is going to modulate that immune system, which is so messed up in those, MCUs, in the, seers patients. So, but yeah, very, very safe.

And you could probably take a whole bottle that I'm thing to do that, but, 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 bio regulator says do them ten 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 what kind of cycle I usually 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 work 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 people genetically in that kind of stuff.

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, general, it's very easy to tell, you know, just like look at some blood work or how patients feel. Even better. So 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 to the medications if required.

Yeah. And and patients do have get a sense like well like I'll give sometimes like 20 bile regulators to people peptides and biomarkers on the first visit and and after.

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

And they kind of think they're very good at sorting it out. So, let you get the people that just want to be told exactly what to do, but, we we find that.

Yeah, just to kind of see what, where where you land. The nice thing is very, very safe, and they're not hugely expensive. And, and so we. Yeah, just kind of see where what, what you feel better with and, you know, some doesn't work.

We stop it. So, but it's pretty rare. But 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 the prize, they will stack those peptides, you know, for various different benefits, you know, and then coming together so similar with bio regulators.

What I was hearing from you is that you can stack those bio regulators 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 bio regulators. And there were two studies where they gave them rotating 21 different bio regulators.

Where to Learn More and Final Thoughts

They, they do it for basically a couple of weeks and then stop and, and like three months later and rotate all those for, let's say seven, where they now know about four years and they lost on average seven years in biologic age for every year they did the bio regulators.

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, you know.

So this these are really powerful. And 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 Integrated Peptides and has been sourcing them is 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. It's been my passion for a long time, ever since it got way better and functional.

Very quickly. We have a national Academy of Hypothyroidism nonprofit just information site. NAH any hypothyroidism.org or also and, it's also hepatology integrative sciences.

So any his.org. Then there's our whole medical group where we treat, a lot of this and then integrative peptides where we're, working out all the by our regulars and by a regular 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 and 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 hospital that you shall fix this. And one of the doctors, one was and the other one was Pavlov, as in Pavlov's dog.

And they were you have to do significant research before that. They did dump a ton of money, and they found that the two key bio regulators, 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, you know, stuff like that. So they were trying to protect from that.

So then all the studies, they were all at, 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 as in Russian. So no one paid attention. Then as they started getting translated, there's thousands of studies, thousands.

And so, you know, we have a Russian researcher who just why are we just she just keeps looking up Russian studies. But, and and so that's when it just started finally coming to, to the US.

So 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. So they will purify it down to 5000 Daltons.

But a bioregulator is about $500. So 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 bio regulators. So that's why we're we're switching over and it's so we don't have all of them yet, but that, 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 a game changer for a lot of people. So I'm so glad that you came over here and and 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 exciting for me

as a local, I have more goodies that I can work with me like, you know, with my patients.

Thank you so much. I love the work you're doing and the reach you have and 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 Doctor Holtorf and his, products as well as all this information that he's sharing out there in 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 what, you 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 Doctor Holtorf for people? No. I just always love, love talking with you and, just love all the work. And, I see you all the time on on YouTube.

I'm 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 have to listen to this talk again and again. Couple of things before you get the concepts.

That's okay. You know sometimes you know, yes, you have to use 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 the time. Take care guys. Bye bye. Great. Thank you. Thanks so much.