Deuterium - Restoring Tissues and Organ Function with Sub-molecular Medicine Transcript

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Introduction and Guest Background

There's a six-year-old male who came to me and thought, oh my God, I have young twins. I'm losing my mind. And forgetting my wife. Driving her crazy. What do I do?

And so did the same thing with him. About 10 days later I got an email thanking me profusely saying that he had his brain done. So it was that quick. This is Dr.

Talks. Well, Dr. Petra Daphalar, I am so excited to have you on the segment of Regenerative Medicine Summit. We're going to be talking about some fascinating subjects today that people are going be really, it's not very well known and it should be well-known.

So I'm excited we get to cover that in depth today. Yes, thank you. I've very excited get into it with you and there's a lot of great new developments.

It's fun to talk about them and report these. Yeah, let's get started. Well, let's do a little intro of you so people know a bit about your background.

Dr. Pietra is a naturopathic doctor, certified in nutrition and functional medicine. She primarily practices deutonomic medicine, and that's what we're going to chat a lot more about, which is the science of water movement in a body.

And she was born and raised in the Netherlands. That's a reason for her beautiful last name and moved to New York in her 20s. She has spent the last nine years in California where she graduated from Bustier University in 2016. After four years of seeing patients in Santa Monica, my old stomping grounds, now I live in Idaho.

She currently only consults patients via telemedicine since the 1st of January 2021. Her credentials have also been recognized and certified in Hungary, which extends to most other European countries.

And that's where you live right now, right? I am back and forth, but I spend the majority of time in Europe. Yes, I have to admit, it's been a very good thing for me.

Yeah, beautiful. So tell me a little bit about, you know, we're talking about deutonomics and with that we have a substance called deuterium. What is that and why should people care?

Yeah, great questions. Water. water is H2O, as we all know, two hydrogen atoms and one oxygen atom. And there is a natural occurring twin brother, if you like, of hydrogen that is called deuterium.

Deuterum differs from hydrogen only in that it contains a neutron. That makes it twice as heavy and twice Now, this changes many things. It changes the properties of any molecule that has deuterium in it rather than a hydrogen and replaced by it.

And so this is a fascinating area of research, which we call deutonomics, is to understand how exactly this change is how our bodies function.

What Deuterium Is and Why It Matters

And so we call that the kinetic isotope effects because deuterium being attached to a molecule, to molecule of water, will now integrate into other molecules in our body.

For instance, if we think about the backbone of DNA that is made up of ribose sugars that have hydrogens attached, but if there is a deuteronium attached instead, that will change the shape.

and the structure and possible rate at which it can be repaired or not. And so if deuterium is taking that position of hydrogen, then we can get a epigenetic type of change without any genetic mutations whatsoever.

So it's fascinating in that sense. And then, of course, you can think about, for instance, in cholesterol. A cholesterol atom is 44 hydrogens and 27 carbon atoms.

It is a beautiful double ring structure. When sunlight comes onto our skin and starts giving biophoton energy to the hydrogen bonds and they start to resonate.

And that resonance actually breaks open this one bond between carbon C9 and 10, and it opens up and then you have vitamin D. Now, if there is a deuterium atom attached on that position, you need much more strength to open that bond.

You cannot open the bonds. So would that possibly contribute to low vitamin that we see all over? In the world right now, we think so. So there's many places where deuterium changes completely how we function.

And I know we're going to get in more into that later on. Just to kind of, for me to clarify, so deutereum is almost like a hydrogen atom, but it has an extra neutron on it, you know, which just makes it heavier.

I mean, double. Yes, so a hydrogen is the smallest possible atom on the periodic table, right? And so that has an atomic weight of 1. So adding a neutron makes it an atom weight 2. It doubles the weight and the size of it.

That's how you can think of that. And so wherever a hydrogen is in action, so for instance, our body largely are fueled by the movement of protons and a proton is of course a Hydrogen without an electron.

And if there is a deuterium there and the proton tunneling that is supposed to happen that helps us transfer energy and do so many processes, there's deutereum that just stops right there.

So you're talking about like the electron chain transport and that where you have. than the hydrogen proton that kind of supports a movement of the electrons.

So you have these kind mini motors, you know, throughout the whole electron and chain transport. And so the neutron, the extra neutron on the Hydrogen just kind stops that whole process or interferes with how energy is then produced through that process.

That's correct. And you're now specifically speaking of mitochondrial processes. Yes. The nanomotors, the motors you are talking about are the nanometers of complex V of the electron transport chain.

That is where we generate ATP. The protons get shoot out and as that happens, we generate ATP. But first on complex four, a very other, very important other process happens and that is where we create the metabolic water.

And that's another unknown, pretty important process that happened where, where produced deuterium depleted metabolic, water, and, that water is crucial for many other processes, which I will explain to you shortly.

Yeah, so these nanomotors are in complex five. And if a deuterium atom is being trying to send out, you can think of it as a rotating motor that goes as fast as 9,000 cycles a minute, like a Ferrari engine.

If you all of a sudden put something in there that's twice the size, it just crashes. And so we have many, many of those nanomotors, but if there is a lot of excess of deuterium, that will destroy mitochondrial function.

That's fascinating. And you're talking, so in essence, anywhere there's a hydrogen, we can then see interferences. If there was a deutereum there instead of a, of the hydrogen like you were talking about, cholesterol then being

converted to vitamin D, you know, because it's heavy.

We require a huge amount of energy for that bond. I mean, we know if you have big objects that are kind of tied together, that creates a stronger energy.

And so now we have to use a lot of energies to break that apart. So anywhere there's a hydrogen like carbohydrates or fats or anywhere, anywhere.

Mitochondria, Energy Production, and Metabolic Water

Hydrogen is all over the place. I mean, our bodies are 70% water, right? So, to put it in context, if you think of other important biomarkers that we measure, we have two to four times as much deuterium than circulating glucose.

If we look at calcium, we have five times as much deuterium. If you look in magnesium, you have 10 to 18 times this much in our bodies. And so we looked at these as it's very significant and it is completely over overlooked in medicine.

We believe deuteronomic standpoint is the foundation. we need to understand where this is happening, where we needed deutarium, how how we can facilitate optimal functioning of these processes.

And that's really what it comes down to. So you wonder also, because since deuterium exists, I mean, obviously it exists in nature for some reason, does it serve a function as well?

I suggest that we have too much deutereum, but if we had it at a normal amount, it serves a Yeah, it's actually very important for us. And earlier this year, a very interesting paper was published by Roman Superuf at Karolinski Institute in Sweden.

From my home. Yes. This is an excellent paper that posts very, very good questions. What Superuuf did is he looked at the deuterium content of bone in different types of animals.

And he compared a swan to different forms of seals. He found that the gray seal had the absolute highest concentration of deuterium that was ever measured in any animal tissue and something in the range 340, I might not recall that correctly, but it's extremely high.

And that's not a parts per million that we see in any other tissues or in foods or into body of water that they exist in. So the question was, why is it there?

How is is there, what is its function? And so he was very specific. He actually looked at the content of the amino acids, breakdown of which ones contain the most.

And as proline and hydroxyproline had the highest levels of deuterium, leucine was a third, a lower third but very high for both the prolene and the hydroxyprolene.

their deuterium in those connective tissues provides strength. That's what it's doing there. And so seals, of course, have to dive down very deep for their food.

They have be able to withstand the pressure of that body of water on top of them and then still being able breathe. So that is what we believe is the reason why these tissues are so high, these bones of those animals are high in deuterium.

And it's fascinating and it has great consequences for human health, bone health as well, right? So for osteoporosis, might this also be due then to a mitochondrial dysfunction that bones no longer have the ability to place enough deutereum in the connective tissue to maintain strength.

I mean, I think that makes a lot of sense. So there's so much to learn and that's where the deuterium needs to be in

right places. Now exactly what those pathways are, that needs be discovered.

We need to understand that better. But yeah, this is really, really fascinating. Yeah, and to understand kind of the intelligence, how did the intelligent go wrong than to place Deuterium in the wrong locations rather than in more of a connective tissue where you want that integrity into bones rather then in, in mitochondria where it becomes almost like dirty oil.

It just kind clogs up the engine and you can't. Yeah. That's right. So. Where do we find deuterium? I mean, is there certain areas that have more deutereum than others?

Is it certain foods? How do you control the amount of deutarium that we eat or drink? Yeah, great questions. So yes, there is a great variation in the content of deuterium depending on what type of substance you're talking about.

If we're taking about water, that's one thing. And if we talk about foods, another. Let's focus on that for a second. We look at the center of continents, we find that the PPM is lower, particularly in higher elevations and that is because, again, the properties of deuterium changed the rate at the temperature at which water is frozen.

So it freezes at four degrees Celsius. And so the water that has high end deutereum will rise to the top, will freeze, and below that, the lower deutarium water will flow down.

certain areas in Russia and other areas of Eastern Europe that had her lower deuterium because of their location. And those populations live much longer with much less health issues.

So it's much higher when you go to the seaside and to ocean side. The approximate content of the deuterium for most drinking water that we are drinking in the US and in Europe varies between 148 and 150, 52. It depends.

And when I say that, then I mean parts per million. So out of a million hydrogens, about 150 are deuteronium atoms. And so if we look at foods, then there is a very different hierarchy.

So fats are actually natural fats, I have to admit. To point out, natural fat are much lower and they are the lowest of all foods in deuterium.

Where Deuterium Comes From in Water and Food

Coconut is particularly low, but also very good butters or pork fat or particular fats from cows or Whatever animals have lived a life that was respectful of their habitat and their diets, those produce the best fats and the same for their animal protein.

So that again, that will be the next level. highest quality animal proteins that you can consume. And then all of the green vegetables are next because the process of photosynthesis is also a depleting mechanism.

Then you start getting hitting that sort of point of where the levels of water is. It's the same, about 150. What's interesting, for instance, is about coconuts.

The coconut fruit places their deuterium in the water. So coconut water's actually one of higher higher deuterium foods that you can drink, 160 I believe is something to that extent.

And then you have grains that are higher and then the processed foods and the modified fats and genetically modified organisms, all of those are much higher in deuteronium content.

So it almost then proves or kind of points towards the ketogenic diet. Some of the reason why that is beneficial, people dealing with like cancer or whatever it may be, because of low deuterium content in that type of a diet, then it sounds like.

That is correct. That's why the ketogenic diet works. There's no doubt. It's absolutely the case because that

provides the substrate for these important biochemical processes that keep deuterium out of the mitochondria.

So if we think about, for instance, glycolysis and the TCA cycle, they have many steps. Glycolys is about eight steps and that removes almost on every step there is a water exchange reaction.

and hydrogen gets replaced to make sure that there's no deuterium left on it and that we have hydrogen before it goes further down the biochemical pathways.

Fortunately, the research of tracer-based metabolomics has identified for us the very specific positions on the sugars where these exchanges take place.

And so we know that from glycolysis and we also know from the TCA cycle. So there is eight enzymatic reactions in the tca cycle and three of those replace hydrogens with water coming from water that is the metabolic water produced by us.

And again, to make sure that there's no deuterium coming into the mitochondrial matrix. And if one of those enzymes is impaired, either for overload of toxins or a possible genetic variation, which are extremely important for mitochondria enzymes, this starts to back up.

There's not an efficient clearing of deutarium. The enzyme metabolites start to rise and you can see that in organic acid tests. And the only way to overcome that is stop the deuterium from coming in.

slow that down so you can maintain mitochondrial function or reverse any damage and the new mitochondria that you create are now functioning again. And that's why depletion is so important so that we can restore tissue function and organ function.

That's been shown to be possible in the research, but also in my clinical observations, I have seen really very, very beneficial effects of depletion.

That's fascinating. So just for the listeners, so glycolysis and TCA that relates to energy production within the cells. It's the breakdown of foods really.

Is the break down of food that we consume for production of our energy, that's what it is. And the enzymes involved in that are obviously crucial for being able to break down that food.

And so you want them to look right, to be three-dimensionally looking okay. If they aren't, then what you've done is that you used up a lot of energy to produce these enzymes.

Then you have to use a lots of energies to get rid of them. And so you had no net benefit, but you just only had expanding energy. So that's why deuterium deplete, I mean, make sure that there's no deutereum in that process becomes so important because you spend so much energy trying to produce something that doesn't benefit you.

Yeah, I mean, and this goes a step further, particularly in the TCA cycle. If there is this interruption of these metabolites, what you start getting is reverses, the cycle reversing.

You get metabolic crowding, you get the Warburg effect. That's devastating piece of this if it all goes wrong, if there's just an excess of deuterium.

So explain metabolic crowd and Warberg effect? Yes, those are big, big words. So because these metabolites are not being able to go down these very, very important pathways, it starts to back up and they need to somewhere, so you get branching.

They come out of the cycle and go different directions at alpha-ketoglutarate or at oxaloacetate. they go in other directions. And if it happens in certain positions, it can start functioning as a substrate for DNA synthesis, and that's not what we want.

Deuterium, Ketogenic Diets, and Metabolic Crowding

Or it's can go back another direction and try to create essential fatty acids for us, but that is not possible. So that gets stopped. Ultimately, we start reverting to using glucose for energy production because the TCA cycle is no longer being able to produce it from fatty acids for us.

And that is known as the Warburg effect. When we are producing, when we're using glucose in the presence of oxygen and this is what's caused by the metabolic crowd.

And with the Warburg effect, we look upon that as a big reason for how cancer cells or how cells that become cancers, how they produce energy. And so obviously we want to avoid that in any possible way.

So deuterium then plays a huge role in moving that process forward towards making a cell function like a cancer cell. That's right. And cancer is only one of the manifestations of this metabolic crowd.

It could be neurocognitive decline, it could diabetes, hypertension. it sort of depends on your particular susceptibility for any of those dysfunctions.

So tell me a little bit more about that. So one with deuterium and what are some of the diseases that it relates to? I mean, obviously we talk about mitochondria and how we produce energy and I would assume that relates everything, but are there certain ones that really are susceptible?

Certain diseases are really strongly correlated with this. The first one would be cancer. We know that for sure because that's really also where the most research has been done, but it's any mitochondrial dysfunction.

And as you know, 85 plus percent of all chronic disease is due to mitochondria dysfunction and so it examples. Okay. I'm going to give you a couple of clinical examples so you can put it in, in context.

For instance, secondary amenorrhea. And this means a young woman who previously had a perfectly normal regular cycle, all of a sudden her menstrual cycle stops for a period of 18 months, let's say.

And so she gets assessed for all the possible reasons why. I ended up including a deuterium test and we looked at her tissue levels and her saliva levels, and they were elevated for someone of that age.

Her estradiol was at that point when we measured less than So, that was the level of a post-menopausal woman. And so, she was 20 years old. There was no reason for it.

None of all the differential diagnosis, all of those pieces we looked at, none of them applied. And so I placed her on a deuterium depleting protocol and that included the deutereum depleted water as well as the diet.

And this was challenging because she was in college, but she did it. A month later, we had an estradiol level of 40 and six weeks later she had her first period and two months into fall, We had a level estrdiol of 120. So her cycle came back and it was restored ever since.

That's one example, then there's another. Let me just stop there because I'm really fascinated. So you're telling me you didn't add any hormones, any bidentical, you don't do any of that, put her on a deuterium depleted protocol, which included the deutereum depleting water, and just from that alone, her estrogen rose to normal levels.

Yeah, well, I do want to point out we did challenge her with high-dose progesterone first to see if we could get anything going. Literally I tried everything in the book that I was taught my different education processes and we didn't all.

And so then the final stop was like, last, sorry, second, you know, what was it, idiopathic, hypothalamic, Amenorrhea, amenorrhoea. And I was like, yeah, we're the idiots that can't figure it out.

There had to be a reason. We've got to figure this out, so I figured, okay, let's do it. I'm going to go for depletion and it worked. That's amazing. So how do you measure?

You measured your tissue and saliva. You can actually then measure your deuterium level to see where you're at? Yes, so I don't know how available currently the breath samples are.

Hopefully we'll have those at some point again, but the saliva measurements can be done by Quicksilver Scientific. You can buy the test online. Anybody can just order that and you can also test your water.

I'm just sending you a little tap water sample so you know. And that gives you an indication of how your body is handling the incoming deuterium and how well you're able to excrete it and high those levels are.

Ideally, they are in the lower 130s, but therapeutically, we really want them under 125. That's hard. You have to work on that because so much of the water that's coming in is at 150 and the foods can be high.

Then there's all the lifestyle pieces that play a role for you in order that help you excrete the excess levels. And a lot of us are not living in that way anymore.

We're inside, we're on the fake life, on to the computer, We are moving, you can go on and on. So all of those factors play your role with that. Okay, fast.

Obviously hormones, your talked about deuterium, Hormones are like steroids, you know, so you have all little hydrogen that's part of that kind of fatty substance.

Health Conditions Linked to Deuterium

And so if you had a lot of deuterium inside of, that then that will interfere with how those hormones function. Yeah. That's right. So, and then there's a case of seizures.

This young woman again in college, she needed 14 hours of sleep. She had 40 to 50 seizures a day. I was really interfering with her lifestyle, as you may imagine.

Couldn't drive a car, couldn't hang out with her friends at night, you know, on and on. Couldn' study. And so we did the same, put her on a strict ketogenic and deuterium depleted water plan.

Within eight weeks, she was sleeping only eight to nine hours a night. seizures dropped to five a day. And then with ongoing additional therapy she did, she became seizure free.

So, you know, that's another one. Then there's a six-year-old male who came to me and thought, oh my God, I have young twins. I'm losing my mind. Am forgetting my wife.

am driving her crazy. What do I do? And so did the same thing with him. and about 10 days later, got an email thanking me profusely saying that he had his brain back.

So it was that quick. That's incredible. And that's just using a deuterium depleting protocol. So yes, but also the lifestyle piece, right? I want to be clear about that.

There's so many pieces to it. When we sleep, we deplete deutereum, so sleep hygiene in all ways is crucial. It's not just the water, food for sure is one of the most important pieces.

So we went through the food, we want, went, through, the, food. We went though the water. So they're actually deuterium depleted water that people can buy.

Okay. Yes. When you go on these protocols, it is good then to introduce deuteronium depleted water and it depends, you should do that kind of slowly or quickly, or do you have negative side effects from doing it too fast?

You could, yes, you could. So first of all, there are some spring waters that have a deuterium content of about 140 ppm. That's already a lot better than most people's tap water.

Then I believe there a few waters even lower, but again you should always test it. The deuterium depleted water is water, so it's very heavy and it is being shipped to you.

It's being sold in very low concentrations. 10, 18, 25 ppm. So none of those waters should be drank straight up. Any concentration below 50 can actually cause something called isotopic shock.

And you have an effect. Yes, you feel it. You would definitely risk heartbeats, increased heart beats, issues with your gums, all sorts of things. So it's not a great idea to do that.

What you want to and it really depends on how much water you drink, what your medical condition is, What your weight is and then come up with a good starting point to deplete your DTM levels.

Sort of a wellness concentration would be 125 ppm. That would great. But a starting point for a more complicated medical condition, you would maybe go down to 105. But then if someone is heavier in weight over a certain amount of weight, then you want to perhaps be even a little bit lower.

So there's all these considerations to be made starting an article like that. And so if somebody's dealing with like cancer, for instance, yeah, which obviously is a, you know, it's a big issue.

So then you would start with maybe like a hundred or 95 or, I mean, where would you start? I have used the intervals that were first written about and used by Kábor Siamiai, who is the Hungarian HT in Budapest and who also started later on producing some of the deuterium depleted water.

He drops down at 105, then to 85, than to 65. There is a 45 and he also uses a 25 that's being sold for veterinarian use. But yeah, I generally started 105. Again, this depends on the weight of the person, the amount of water they drink and also the condition, type of cancer they may have.

And how much of this should they drink and how water should the drink? I mean, what are in your point of view? Because it almost sounds like if you drink a lot of the normal water, then you are actually adding deuterium to your system when you're trying to deplete it and using that deuteronium depleted water.

So what should it look like in a day? So I ask my patients to first of all, reduce the amount of water that they are drinking. I think there is a great marketing scheme going on where everybody is being told that the have to consume half their body weight in ounces and there no biochemical or biophysical justification to make that record.

And if you drink too much excess water, you will also slow down your own metabolic water production. and we want to encourage that. You also will slow down antidiuretic hormone and you will suppress that because so much water is coming in, you're not required, so you just need to go and urinate and that's it.

But again, antediuretics hormone has many other effects. It also governs gonadotrophic releasing hormone, and so if you suppress ADH, you suppressed that hormone.

You suppressed your steroid hormones. And that was, by the way, another key in this secondary amenorrhea case, that young woman was drinking a lot of water.

So reducing that down can make a great difference. Then, slowly, right? I'm not saying just one day put it in half because that's going to you know, you're going to feel that.

Go slowly and come to an area where that's good for you. I'd like, I also asked them to replace the water that they use to make coffee or tea with the deuterium depleted water and don't drink anything else beyond that, so that gets a little restrictive for some, but it's manageable.

You can bring your water bottle with you you and just, you know, make sure that you sit from that and not from the restaurant water or whatever. And yeah, that's really how to approach it.

Testing and Deuterium-Depleting Protocols

Then depending on your condition, how long you do it, and how you stay at that PPM, if it's an ongoing process, then you may want to drop it down after a period of six to eight weeks.

And see where you are at. And, you know, once you've depleted deuterium, You can then look again and see what's left. What else do we need to address?

Let's see, where the biomarkers went. Let see with your blood tests look like. let's what your symptoms are like and then start focusing in on targeting those symptoms that are still persistent.

So you talk a lot about metabolic produced water or metabolic active water. what was the term you're using? Metabolic water. So that's something that the body then produces itself and how is that different from other types of water that we drink?

Why is it so important? Yeah, so this water is produced by our cells and in the mitochondria in complex four, and this is deuterium depleted. And this, water, is what we think of structured water or interfacial water.

You've heard those terms as well, right? Those in body, that's the water where all our cell and tissues are bathed in this type of water that had a bit of a gel-like structure to it.

And the viscosity changes if there's too much deuterium in that. Infrared light, for instance, makes it less viscous. So that's why infrared light is also so functional for that, but this metabolic water, the quality of it and the deuteron content of, it determines how well you transfer information and energy between cells and tissues.

Yes, yes. And this is produced then by processing things like fats and proteins, you know, breaking that down. So we actually make metabolic water from the food substances then.

That's exactly correct. So you can think of it as a camel, right? A camel carries this fat hump on its back. And that's how it's able to survive in the desert.

It breaks down fat to produce water for its own body. That is what we do. There's been studies done that looked at how much water we produce of a hundred grams of fat.

And in fact, you produce 110 grams of water from 100 grams fat. If you take 100g of carbohydrates, we produce 50g water. So it's a very different process.

That's why, again, that ketogenic diet is that why fats are good for you. Natural, beautiful, clean fats, are a good thing for us. It's like putting the highest grade fuel into your Ferrari engines, basically.

That's how you can think of it. So we talked a lot about food. Are there herbs and lifestyle habits that one can have that will then maximize the depletion of deuterium so we don't have such high levels?

Yes, there absolutely are. So you first asked about herbs. Let's take that one on. Yes. There are very specific herbs that we know are so crucial for us because they are deuterium scavengers, if you will.

So, herbs like olive leaf or dandelion or cilantro or parsley, they're very high in specific binding size to bring in hydrogen and pick up deuterium and take them out.

They literally clean it out, so we know this from studies that were done, Phenformin, and that was a drug used in cancer therapy and it worked very efficiently.

The authors of the papers that published them did not understand that it worked so efficiently because it depleted deuterium in very specific pathways, but it was a metabolic drug, not a cancer drug which is very interesting.

There's papers on that. They're beautiful. Herbs are very, very powerful for us because as Stephanie Seneff has said, the name of game in the body is to get rid of deutereum.

We have to it out in any way you can, in lot to make sure it doesn't get into the mitochondrial matrix. And glyphosates obviously, I mean, that's another one that she goes after quite a bit, interferes with this process a lot?

Absolutely. It also prevents the depletion mechanisms that would normally function perfectly fine because of its presence. Yes, it alters all of the reactions and particularly with NADH, That's a big piece of it.

How can NADH, what does that do? It's a mitochondrial enzyme that helps again transport certain nutrients from one spot to the next. And we need plenty of it and we needed to function well.

There's lot of interference that happens when glyphosate gets part of this picture. Okay, so it interferes, yeah, because I mean, NADH or NAAD, you know, that you can stop and sort of IVs or sub-Q or whichever way is known as kind of like anti-aging.

It's now this anti aging rage where we want to live as long as possible and NAB play a huge role in that. And then the glyphosates and interfered with that process, how we produce energy and which would then obviously impact the deuterium as well.

So with lifestyle, I mean, you mentioned that we, sitting in front of a computer and being inside is not really conducive for deuterium depletion. So what should we do?

We need to be outside and we need, when you and I talk, we needed to put these kinds of things on to just kind of make sure we protect our eyes. I love it.

These are your amber glasses. Yeah, I have my ambers. I, have, my revs for when it gets, yeah, when at night time we, we protect.

Metabolic Water, Herbs, and Lifestyle Strategies

So I had my infrared light here at nights that I put to kind of balance out the spectra, candlelight in the evenings, try and get away from the LEDs and all of the fluorescent lights.

They're a disaster. As we know, they just destroy our melatonin production. that's producing for the majority in mitochondria as well. So it's extremely important.

That's one piece. Manage your light environments. Go out in the daylight. Ideally, you go out on the mornings before 9 a.m. You get some real light into your eyes and your pupils to set circadian rhythms, to adhere to those.

Make sure that the food you eat is grown locally so that light information, bio-photon information of the foods you consume is the same as that you ingest and that is on your skin.

Your digestive system has all sorts of ways of knowing exactly and you want them all to be in coherence. really important. So that piece, I think it's very useful to focus on movements, whatever is a form of movement you like.

Whether that's skating, whether it is swimming, or whatever you walk, all good. Just do it. Dance. And body work is great. You know, massage, acupuncture, to just move any kind of energy and Lymph fluids is excellent.

Breathing exercises, breath work, the Jim Hoff method, and the Puchenko method. All of those, they deplete. So if you think about how your body gets deuterium out, it's through your urine, your stool, through tears, to your sweat, though your breath.

And all of these need to be optimized so that you can let go and not get things in you and stuck. Does that make sense? Yeah, absolutely. I love what you said with the foods.

So, when they grow organically out in sunlight, I mean, obviously, they will then absorb a different type of vibration. And it would, if you would in another type of environment.

And also you don't have the chemicals and they interfere with that vibration, the natural vibration. So it's not only kind of the, chemicals in the food, it is also that it alters the vibration of food.

When you eat food that is altered, that the vibrations are altered. It then interferes with how we naturally should vibrate. That's right. And then there's a new aspect that has just recently come to my awareness that it's the effects of the electromagnetic frequencies that aren't just affecting us too, right?

And that's another important piece and we haven't touched upon that, but I ask my patients to mitigate all of those exposures as well. But the foods that we eat are being exposed and that creates a whole different chemical structure in the plants aswell.

So that brings out the turbines, that bring out why so many crops are not able to withstand the drying periods anymore. They just dry out. The virus we had in 2018 in California where things just went up like that.

And that's because of the extra turbinates in them. So the food is different for us. We have to think about that too. There's a lot to consider. Yeah, so many implications that take place when we think we're doing things more efficiently and smarter, but we are stepping away from nature and all of a sudden we create things that has consequences that now we have to address.

And if we just did it the way it was supposed to, we didn't have deal with all these consequences. Yeah. Dr. Petra is such a pleasure. I mean, this is a huge topic and it's something that I don't feel is being discussed enough.

And I'm really glad that you're bringing, yeah, helping to bring this to the forefront so that… People can understand the importance and also how to implement it in their own daily lives to maximize how they feel, their energy.

I mean, because this is not just for disease prevention, yeah, it is, or just disease or disease, prevention. This is for optimum living. I have to say that's my favorite patients that come that say, what can I do to stay healthy?

You know, and that, that it, this is a wonderful way to do that. To keep all these considerations in the back of your mind when you decide what you're eating that day or how you are going to spend your, your days and weekends.

So yeah, prevention is key to all of that but yeah. Thank you. I'm so happy to talk about it and stay tuned because there'll be more coming every day.

We find another piece of the puzzle that is fascinating. And where can people go for resources to learn? Yeah. So actually Deutonomics is now being taught at the Vrij Universiteit, which is the University of Amsterdam and it's called the Submolecular Medicine course.

And that will be until January of 2023. And my website has a lot of information on there as well. It's drphd.com. I recently put up some more interesting videos that explain some of these mechanisms in great detail with images that my beautiful daughter designed.

So it's very, very helpful to kind of look at it that way. If you are interested, please take a look and learn more about Nutronix. Thank you so much.

Thank you for tuning in to Doctor Talks. We hope today's episode has enlightened and inspired you on your path to optimal health. Each day is a new opportunity to make choices that empower your well-being.

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