

## Peptides and Neurohacking

Dr. Kent Holtorf interviewing  
Dr. Heather Sandison, ND



Dr. Kent Holtorf ([00:04](#)):

Hi, this is Dr. Kent Holtorf with another episode of the Peptide summit. Today we are fortunate to have Dr. Heather Sandison with us, and she's going to be talking about integrating peptides for optimal brain optimization, or for comprehensive brain optimization. You got a double optimization there! But very excited to speak with her. She's well known, see her at many conferences, and she trains doctors and speaks about all our unique topics. And we'll get in. I'm sure we're gonna learn a lot about how to fix some of the toughest patients, especially the neurodegenerative and cognitive problems that are so prevalent and so poorly treated today. She's the founder and the medical director of North County Natural Medicine and founder of Marama, which is a residential facility which I imagine takes up a lot of time and is tough to run. She specializes in, again, neurocognitive medicine and neurohacking. I love that term. She is trained to specifically address imbalances that affect the brain, including autism, ADD, ADHD, depression, anxiety, and Alzheimer's. She has trained with some of the top, top names in the country and around the world, Dale Bredesen, Dr. Neil Nathan, Dr. Bill Walsh, and Ritchie Shoemaker, who is a little tough to work with, in addition to regularly attending and speaking at integrative medicine conferences across the country and throughout the year. Her main philosophy centers around taking deep dives into treating the cause of the imbalance in the body, including toxic burden, nutrient balance, stress management, structural integration, infection resolutions, so really looks at the whole body which I think is key with so many illnesses now. She believes the power of the body will heal itself. Dr. Sandison's passion is to guide and support patients and to co-create strong foundations for optimal health through sustainable lifestyle changes and the best medical interventions to support balance of the body. Yeah, I think the patient has to be an active participant or that just doesn't work. She's dedicated to learning all there is to know about the brain health and considers her amazing patients at NCNM and residents at the Marama residential center some of her very best teachers. Very interesting, sounds very humble. And you can learn a lot if you listen to your patients. She's been awarded a research grant, which are very tough to get, to study the effects of individual interventions and patients struggling with cognitive decline at her center. She's earned her naturopathic doctorate at Bastyr in Seattle, and she currently serves on the medical advisory board of Neurohacker Collective and is a regular host of the Collective Insights Podcast. So Dr. Heather, thank you so much for being on. I'm looking forward to hearing all the things you're doing for some of these toughest patients with neuro cognitive degeneration and all the other cognitive dysfunction,

which seems like so many people are diagnosed with nowadays and so many people have a problem. Let me ask you, what do you think is the cause of the rise of all these problems that I don't think we had 20, 30 years ago?

Dr. Heather Sandison ([04:07](#)):

Yeah. Thanks so much for having me. First of all, it's such a fascinating conversation, right? A lot of people suggest that in the case of autism or Alzheimer's that maybe it's that we have improved diagnoses, right? That we see more doctors, we have more doctors, that there's more people in the world so of course there's going to be more patients. However, I would disagree with that. I don't think that fully explains the rise in incidents. So the number of patients per, say, 100 in the population that are being diagnosed with diseases, these longterm chronic neurodegenerative diseases. And I believe that toxicity plays a huge role. Now, I actually—you listed as you read my bio—who has time for all that? But you listed the 5 things that basically I believe contribute, that can be causal really, not just contribute, but can be actually causal when it comes to complex chronic disease and that's toxicity, which has definitely exponentially risen over the course of the last generation or so. Over the last 80 years. So certainly hitting our baby boomers very hard. The other thing is nutrient balance, right? Remember the 80s, when we were told that fats were bad? Well, our brains need fats. They use fats actually most efficiently for fuel. So things like ketones, we've found that one of the best diets for a neurodegenerative brain is a ketogenic diet because the brain so efficiently uses ketones for fuel. And you get rid of the detriment of high levels of both insulin and blood sugar in the brain. So toxins, nutrient balance, structural integrity, right? You've got to have—the way a chiropractor would think about it, you've got to have blood flowing to your brain. You've got to have the toxins able to get out through the venous system, through the lymphatic system. We've learned more and more over the last few years about how that lymphatic system in the brain is so integral and how a lot of that happens at night. If we're not flushing the system, then those toxins can build up and certainly cause that degeneration at the cellular level. So that structural integrity of the head and neck particularly. Also, you know, if you've been hit over the head with a baseball bat, clearly traumatic brain injuries can cause neurodegeneration. We see that. And then stress, we all know that there's very clear literature that when we're under stress, we don't remember as much. It's harder to make those neuro connections. And then infections. There's a very—I actually don't even know if someone has connected this as a cause, but certainly correlated. We see in autopsy reports the brains of people with these degenerative diseases, whether they're Lewy body, or Alzheimer's, or Parkinson's, there are viruses and bacteria in these tangles—in the neurofibrillary tangles, or in these plaques. What you can see histologically under a microscope, you can find some of these bugs in there. So it suggests that there's a contributing factor when it comes to infections. Dental infections in particular can be a trigger there. So I believe that the reason there's a higher incidence is because all of these things are more off balance. We're more stressed. We don't eat as well. We don't exercise so our structure is off. We spend all day sitting at computers or sitting in the car commuting, and then there's more toxins in the environment. So that is what I would say is driving the rise in incidents.

Dr. Kent Holtorf ([07:37](#)):

I think I completely agree. What do you think of McDonald's work? Where he found basically all of—he was head of Harvard Brain Bank and in the biopsy of Alzheimer's patients he found Lyme in all of them. I'm just thinking that everything is infectious, but I also think, let's say, we call it Lyme disease, which I think is a lot of things. But I think if someone just says Lyme, they're going to be fine. It's all these other things and I had it myself. Emotional stress, especially with a divorce, just killed me. When I lecture, I show how stress—everyone thinks it lowers immunity. No, it modulates it, lowers the good part, but causes all this inflammation. And I had it since I was born and I have the worst memory of anyone. I can remember medical stuff, but that's about it. But then—and just thought growing up that one pupil was bigger and all this stuff, but then just two weeks ago, I broke my nose, concussion, for the I don't know how many time. Yeah, all the toxins, like I'm scared of taking an Alzheimer's test because I don't know if I pass, you know? So generally do you—where do you start? Let's say ADD—so do you also do like ADD patients? Let's just start there, ADD, ADHD, [inaudible]—

Dr. Heather Sandison ([09:09](#)):

[Inaudible] kind of the things that come up as children are growing. So what I do is really a comprehensive approach. I like to play in this area of cause. I know that a lot of people will say, "Well, why don't you just add more magnesium?" Or, "Why not put them on this?" Or, "Try that!" And instead of doing this sort of—

Dr. Kent Holtorf ([09:30](#)):

Adderal defficiency, right?

Dr. Heather Sandison ([09:32](#)):

An Adderall deficiency, right. Instead of doing this sort of, let's pick from the tree and choose these things that are most interesting this week, I really like to get the data and patients need to be on board. I'm a data person. It's part of who I am as a provider. So I really encourage patients like, let's fill in the model. Let's figure out how many toxins you have. Are they there? And kids unfortunately can be exposed to toxins. It's in umbilical cord blood, right? So they can get it from mom, particularly firstborn, right? Mom is downloading a lot of her toxins through breast milk or through that cord blood. So, it's not like kids come out totally a blank slate when it comes to toxic burden. So we do look in kids, of course we're careful about how we pull that out so that we don't cause more cellular damage than we're trying to prevent or restore. But I do, I just go straight to the model, right? All of these things are potentially causal, let's measure them. Let's figure out which are the ones contributing to the imbalance in your system, and then let's fix it. Let's create balance there so that every cell, every mitochondria, every piece in your body can function more efficiently, and better, and create more balance. This should resolve itself. I believe with all of my being, my religion, my truth with a capital T, is that the body is divinely designed to heal itself. And what we need to do is get the gunk out of the way that's screwing that up and we need to add

good nutrients and we need to add meditation and these stress management strategies, 'cause we can't eliminate that completely. Also some stress is good for us. It's about balance.

Dr. Kent Holtorf ([11:17](#)):

Yeah, yeah.

Dr. Heather Sandison ([11:17](#)):

That really—I use an hour and a half to 2 hours for initial consults because I treat complex medicine. Usually there's quite a bit of history to take. Then we are going to plug people into this model and I don't want to leave any of it out because it can all be contributing.

Dr. Kent Holtorf ([11:35](#)):

So you're probably researching, like me, everyone's got a problem. You just like—keep breathing more. "I'm gonna find that..." Yeah. [Laughing] Like basically the golden trick here.

Dr. Heather Sandison ([11:51](#)):

The magic pill.

Dr. Kent Holtorf ([11:51](#)):

Yeah. You know? Well, let me ask you, what is the test you like for measuring toxins, heavy metals, and what are your treatments?

Dr. Heather Sandison ([12:04](#)):

So, I follow Neil Nathan pretty closely when it comes to mycotoxin illness—mold and mycotoxin water damaged buildings. We see great results with that. And it is a new science, so we're constantly learning more. I really appreciate the support of my peers, my colleagues, we're all collecting data, we're all getting information, we're all collecting experience. And we share that regularly—

Dr. Kent Holtorf ([12:27](#)):

That's nice.

Dr. Heather Sandison ([12:27](#)):

—with Dr. Nathan really spearheading that. So that makes me feel much more confident in the process, especially because it can be challenging. It can take a long time, but I see people get better. So the testing that I'm doing there now is through real time, we do recommend some sort of provocation. So either a hot shower and sweating the night before, and then collecting a first morning void of urine. It's a urinary mycotoxin test. So either heat or glutathione to provoke that. We do feel like we get results that more match with the patient's experience and potential

exposure is when we do that. I know there is argument in the field about whether or not you should do that, but I do support that. Then for heavy metals, right now I've shifted to using Chris Shade's

Dr. Kent Holtorf ([14:15](#)):

Did everything right.

Dr. Heather Sandison ([14:16](#)):

Did everything right! Yeah. Then we ran this testing and all of her organophosphates, the glyphosate was one of the higher ones I'd ever seen. And it turns out her hobby was Japanese flower arranging, Ikebana. So she was doing this—like this incredible human, she was doing this to donate the flower arrangements to like low income families who had family members in the hospital. Just this incredible human being. But we didn't—I would never have thought to ask her, like, is Ikebana your hobby? She was up to her elbows like 2 days a week in the worst pesticides and herbicides, like the stuff that they won't even spray on food that people would consume. Right? They leave the worst ones to flowers, so she was getting a ton of absorption.

Dr. Kent Holtorf ([15:04](#)):

Oh, I didn't know that!

Dr. Heather Sandison ([15:04](#)):

Yeah. We never would have known if we hadn't run this test. So that Great Plains test has tipped me off.

Dr. Kent Holtorf ([15:09](#)):

I've been sitting in my bathroom for the last 8 months [inaudible]—

Dr. Heather Sandison ([15:14](#)):

Yeah. It doesn't always—we don't always get a slam dunk like that. Like, "Okay, you've gotta wear gloves or change hobbies." But we often do run into things where we can mitigate that exposure or change the exposure and bring that down. Generally—

Dr. Kent Holtorf ([15:30](#)):

Is that the main thing? Is there any chelating type thing or try to just increase detox?

Dr. Heather Sandison ([15:37](#)):

Some people talk in terms of glyphosate. Some people do talk about there being specific things like glycine that can help to pull that out a little quicker. Certainly glutathione. My approach is a very naturopathic one when it comes to toxicity, I really like to open up the emunctory or—that's a

fancy word we use for the organs of elimination. So get people breathing. We forget that the lungs are an organ of detox. Get people sweating. A lot of us have spent a lot of our lives in 73 degree air-conditioned rooms and cars and we haven't been sweating regularly. So we've sort of lost that reflex, plus we're putting on deodorants and things like that. So getting people breathing, getting them sweating, drinking more water, making sure there's regular daily bowel movements. I can't tell you how many times I've had a patient say, "Oh yeah, I have a regular bowel movement." I'm like, "Okay, well how often? Daily?" "Oh no, just like once a week." And they consider that normal! That's not normal. It's not. You're going to build up toxicity. Unfortunately we live in a world where there's a relatively high toxic burden on the planet right now. So we need to make sure that we have these organs open. So what did we say? I think kidneys, liver, lymph, bowels, and lungs. We need to open all of that. I think of it as like the river mouth. So we want to have that river mouth open before we start adding things like glutathione or other—[inaudible]

Dr. Kent Holtorf ([17:07](#)):

Yeah. And if the cells don't have energy they can't get rid of these heavy metals, you know?

Dr. Heather Sandison ([17:13](#)):

Precisely. Yeah, yeah. And this is it.

Dr. Kent Holtorf ([17:16](#)):

It's a vicious cycle, right?

Dr. Heather Sandison ([17:16](#)):

It really is. And sometimes they're starting in multiple places, but this is a really great place for peptides. I actually really stress that people should be identifying—at least identifying infections and exposures before considering peptides. A lot of my reasoning behind that is that the body, the neurological system is sending a message to ourselves. Right? And oftentimes I see a lot of mold illness and what's happening is that as people are exposed longer and longer, they're more and more reactive. And sometimes that can mean an autoimmune reaction. Sometimes it can mean histamine responses. So things like food intolerances, or hives, or just feeling awful every day, feeling terrible after even just drinking water. People become more, and more, and more sensitive. Part of that is that the neurological system is sending our bodies a symptom and it wants us to pay attention to get out of that toxic environment. So if we then add a peptide, say like BPC—you and I both love BPC-157—but if we add something like BPC to try to get a patient to be more tolerant of things, then we're sort of overriding that signal. BPC essentially is a cell signaling peptide that sends this message that the gut cells should behave like they're healthy, right? To break it down.

Dr. Kent Holtorf ([18:44](#)):

It does block the effects of toxins, but yeah, but you still have the toxins.

Dr. Heather Sandison ([18:49](#)):

But if the toxins are still there, then do we really want to override that message? I think that what—as providers, it's important to have an order of operations. What are we going to do first so that we don't make the patient sicker? And I think a lot of times there's a message. If we down-regulate—if our brain is down-regulating the signals that tell us to have more growth hormone, sometimes there's a reason for that. Sometimes our energy—like you mentioned cell energy, we need enough of it. Our energy shouldn't be going towards finding a mate or getting laid, right? If we're sick, it should be going towards healing. So maybe there's not that much testosterone in the body driving libido, and if we just add more testosterone, do we really solve the problem? Or do we just put a bandaid on it? Even though [inaudible] functional medicine.

Dr. Kent Holtorf ([19:39](#)):

[Inaudible] And I find too, and it's like how people in the same household and one person's full of mold and the other people aren't, it's really interesting. They usually have Lyme, whatever makes them unable to detox it, or whatever it may be. They're much more sensitive to it. Even with my own situation, so my girlfriend has just developed terrible dermatographia where you basically rub something and it makes a big welt. So very mast cell, she has this cough and she has mold and I'm negative. And we had a mold guy come out—not a lot, you know? So I don't know if she's getting it here, or food, she's vegetarian, or what. But it's interesting the different tolerances too, which are genetic combined with everything else too.

Dr. Heather Sandison ([20:38](#)):

Yeah. So we've talked about structure briefly. I talked about it more on the macro level, but at the molecular level, certainly we see this with neurocognitive function, the APOE-4 genetic and the ABP genetics. There's a handful that really influence whether or not someone is susceptible to Alzheimer's. So you can have a lot of toxicity, that doesn't necessarily mean you're going to end up with Alzheimer's, but if the right constellation of things, the perfect storm comes together then it could lead there if you have that susceptibility. For other people, it may end up being an autoimmune condition. For other people, you know?

Dr. Kent Holtorf ([21:12](#)):

Yeah. I think that's with everything.

Dr. Heather Sandison ([21:14](#)):

Oh, absolutely.

Dr. Kent Holtorf ([21:14](#)):

You might have a diabetic gene if you eat crappy, but if you eat great you won't get it. And epigenetically. I think even in the womb that was transferred not only to your kids, but your kid's



kids. Which I think is a reason why obesity is there. Kids are exposed to all this stress hormones in the womb and toxins. Like they're showing autism, maybe the number one thing, even above vaccines, is Tylenol. So wanting to get that out, tons of studies, I'm like, why don't we ever hear about this? You know? It's crazy the toxins that we have. So with that, so you're getting good results or just detoxifying these kids?

Dr. Heather Sandison ([22:02](#)):

Well, it certainly—

Dr. Kent Holtorf ([22:05](#)):

I probably shouldn't say just because it's not an easy thing,

Dr. Heather Sandison ([22:08](#)):

It's part of the approach, right? So I wouldn't say that there's any one thing that's the magic answer. There's so often that I wish I could talk to a patient and they've shared this horrible story and how much they're suffering and I want to give them the magic pill. I wish I had that! And unfortunately, it's just not that easy.

Dr. Kent Holtorf ([22:28](#)):

It's not life. Yeah.

Dr. Heather Sandison ([22:31](#)):

Yeah. So it's about supporting the system. And certainly I think toxins are a great place to start.

Dr. Kent Holtorf ([22:37](#)):

Great, great. Let's—I know we're short on time. What other peptides do you use?

Dr. Heather Sandison ([22:43](#)):

Yeah, so we had a quick conversation about how I really love the ones that I can get ahold of. [Laughing]

Dr. Kent Holtorf ([22:49](#)):

That's a big problem right now, yeah.

Dr. Heather Sandison ([22:51](#)):

It's an issue being able to get ahold of them. Peptides are—I would say since I finished school 10 years ago, whenever it was now, eight years ago, not that long, not that old—since I've added a couple of things that have really profoundly changed my practice. So Bill Walsh's work was one



early on and then training with Dr. Bredesen was another, training with Dr. Neil Nathan is another. And then peptides, I would say are like one of the profound things that I have added to my practice since starting naturopathic, this career.

Dr. Kent Holtorf ([23:26](#)):

They saved my life and they've changed my practice. Yeah.

Dr. Heather Sandison ([23:29](#)):

They're incredible. And sort of the philosophy around them that what we're doing is we're looking for what's missing in a dysregulated state and what's actually there in a healthy state. So instead of focusing all our energy on figuring out what's wrong with this diseased person, we're saying, "Okay, well, what can we add that brings more health?" And as a naturopath, you know, of course I love that. But then to watch the results, to watch people's lives completely transform with adding just peptides, with that being the only thing, to watch ANAs—the antinuclear antibodies that markers for autoimmune disease—to watch them go to normal after years of treatment is just, I mean, it brings you—

Dr. Kent Holtorf ([24:12](#)):

The patient probably loves that too, you know, seeing it on paper.

Dr. Heather Sandison ([24:15](#)):

Oh yeah. Seeing it on paper. Getting good sleep finally, after years of insomnia. Having more energy, there are so many things. I had a patient whose Crohn's disease completely resolved. I mean, just—

Dr. Kent Holtorf ([24:28](#)):

Oh, we've had so many patients. A 9 year old going to get a colectomy, and a little BPC and TB4 [inaudible] and then we ended up later adding KPV, and totally fine. She would've had her whole life with a colectomy, you know?

Dr. Heather Sandison ([24:45](#)):

People schedule for surgery, getting the GHK-Cu, that has been amazing.

Dr. Kent Holtorf ([24:56](#)):

I just—there's so many things as well. Yeah.

Dr. Heather Sandison ([24:59](#)):

Yeah.

Dr. Kent Holtorf ([25:00](#)):

So it's a copper peptide used a lot for cosmetics.

Dr. Heather Sandison ([25:04](#)):

Yepp, I use it every day on my forehead for my wrinkles. [Laughing]

Dr. Kent Holtorf ([25:07](#)):

Hey, you have great skin, so you're a walking billboard for it. So you haven't used really the Dihexa? Which there's a lot of studies, clinical trials on that. 5-amino 1MQ, mitochondrial boosters. They're just so hard to get, but we are, again, probably coming out with a 5-amino 1MQ, which boosts mitochondrial function, which is another theory of even aging. We just—mitochondria stop working in a vicious cycle, you can't—the cells don't work and then it just affects every system in the body, the detox, and then everything gets worse. BPC also helps mitochondria as well. But what else have you found that—?

Dr. Heather Sandison ([25:54](#)):

I think in terms of integrating the peptides, I tend to use them after we've gotten rid of the toxicity and then when we've fortified with nutrients, right? Because—so mitochondria, if you're going to increase mitochondrial numbers per cell or something, if you want more mitochondrial function, you have to still have the building blocks, right? We can send all the signals we want, but if the nutrients aren't there to support that, then the peptides aren't going to be able to—that signaling isn't gonna have any effect.

Dr. Kent Holtorf ([26:25](#)):

What's the use?

Dr. Heather Sandison ([26:28](#)):

Yeah, what the use?

Dr. Kent Holtorf ([26:28](#)):

You like NAD?

Dr. Heather Sandison ([26:28](#)):

Love NAD! NAD is so important. It's one of those cofactors that makes all of this possible. So we have to have all of the pieces, right? Again, there's no magic pill. Peptides are the closest thing to that—well, magic injection.

Dr. Kent Holtorf ([26:43](#)):

You make sense. You make sense.

Dr. Heather Sandison ([26:44](#)):

But we've got to have the other pieces.

Dr. Kent Holtorf ([26:47](#)):

That's rare in medicine. "I do it because that's what I learned." You know?

Dr. Heather Sandison ([26:52](#)):

The other thing is really getting a hold of that stress management, right? So we talked about some of this neurological signalling, that becoming a pattern. So what I've noticed in my practice is sometimes we can get rid of all the molds. You can move out of the moldy environment. You can even divorce the toxic partner. And then, that signaling is still there. It's sort of like this learned programming. So limbic retraining is a big part of what I suggest people do. Whether it's with Joe Dispenza or Annie Hopper, there's a lot of great people—there's a group out there as well.

Dr. Kent Holtorf ([27:23](#)):

How long does that take and how often do they do it?

Dr. Heather Sandison ([27:26](#)):

People do it daily and I have patients who feel better in 3 days. It is very quick.

Dr. Kent Holtorf ([27:32](#)):

And that's the limbic system where all the fear and—yeah.

Dr. Heather Sandison ([27:36](#)):

Yes, yes.

Dr. Kent Holtorf ([27:36](#)):

It makes sense. I think of it kind of like a feral cat, where if you immediately bring in a feral cat, it's going to be like a regular cat. But if it's got its wiring and environment for a month, you try to

bring that cat in, no matter what you do, it's so difficult. So, man, you must have made some people's lives so much better.

Dr. Heather Sandison ([28:00](#)):

I certainly hope so. There's—the world needs problem solvers and that's—

Dr. Kent Holtorf ([28:05](#)):

And their family members! My gosh.

Dr. Heather Sandison ([28:07](#)):

Yeah. Yeah. We need these people to show up to be part of our communities, to be engaged in their families, and help the world make it a better place, right? Like, it sounds so cheesy, but that's really why I do what I do when I watch these families who have loved ones who are sick or ailing, and they're not able to engage with them. They become more of a liability than an asset to the community.

Dr. Kent Holtorf ([28:31](#)):

Oh, just think of the dynamics change. And just—oh, you've just made so many lives better, I can just tell. How long—I hate to ask this question and put you on the spot because you may not be able to answer it. Like, how long does it usually take, let's say for an ADD patient or an Alzheimer's patient? It depends on how bad, I guess. What's the success rate?

Dr. Heather Sandison ([28:55](#)):

Yeah, in some cases. Well, thank you for asking. So that's what we're doing at the clinic right now. We are currently recruiting for this study where we are trying to answer exactly that question. What's the success rate? If I spend the money, spend the time and do commit to this program, change my diet, get the toxins out, do all the testing, how likely is it that myself or my loved one will get better? We don't have the answer to that question right now. So Dr. Bredesen has published case studies. I've certainly seen it in my clinic that this is absolutely reversible in some cases. [Laughing]

Dr. Kent Holtorf ([29:28](#)):

It's scary how no one funds these things. If they want one pill, basically one outcome. That's not how the world works.

Dr. Heather Sandison ([29:41](#)):

Yeah. Hopefully we're contributing to that. Hopefully we're contributing to that paradigm shift.

Dr. Kent Holtorf ([29:47](#)):

That's awesome.

Dr. Heather Sandison ([29:47](#)):

There was a study—they're just rehashing these same old drugs. It's like \$47 million taxpayer dollars went back into studying one of these drugs that sort of had already been proven not to be effective. And yet people keep talking about the Bredesen protocol like there's no scientific evidence saying that it works—

Dr. Kent Holtorf ([30:05](#)):

[Inaudible]

Dr. Heather Sandison ([30:08](#)):

Yeah, it's so crazy.

Dr. Kent Holtorf ([30:10](#)):

And you look at the studies on these drugs and the lines are like—they do little things to manipulate the data and it's barely better than placebo and billions of dollars they make with all the side effects.

Dr. Heather Sandison ([30:27](#)):

So my first Bredesen patient, I was not feeling overly confident. Because I was still under that assumption that there was nothing that we could really do. I'd heard Bredesen talk, but I'd never done it myself. I had a patient, my first patient come in and she had a MoCA of 2. We sent her home. They were really excited about it. Her husband was very, very supportive, really wanted to be doing this program. Got all of it started right away. She was better three weeks later. It was unbelievable. It—literally, I was moved to tears. I was sobbing. I could not believe it.

Dr. Kent Holtorf ([30:58](#)):

Wow.

Dr. Heather Sandison ([30:58](#)):

You know, not everyone of course gets that kind of result. The easiest patient to treat is to prevent, right? Like if it's adage, it's way easier. It's way less expensive. It's way less heartbreaking to prevent this kind of disease rather than try to go in and reverse it. It does take awhile. The analogy Dr. Bredesen uses is like this great big tanker ship going through the ocean at full speed. We've got to first slow it down and then we have to slowly turn it around and then we've got to get going in the other direction. So what—I ask patients to give me a minimum of six months commitment.

Dr. Kent Holtorf ([31:34](#)):

That's nothing!

Dr. Heather Sandison ([31:36](#)):

No, it's nothing.

Dr. Kent Holtorf ([31:36](#)):

Compared to—oh my gosh, a progressive illness like that. It can go on for years, and years, and drain the family of income and just be so difficult. They're not the same person, you know?

Dr. Heather Sandison ([31:50](#)):

It's a challenging program to implement. If patients can do it, then—

Dr. Kent Holtorf ([31:56](#)):

They have to be full onboard.

Dr. Heather Sandison ([31:58](#)):

They have to be fully onboard. And that's challenging when there's cognitive decline. So that is why I opened Marama, the residential care facility. It's an immersive experience in this protocol because—

Dr. Kent Holtorf ([32:09](#)):

Wow.

Dr. Heather Sandison ([32:09](#)):

It's challenging. I saw so many families suffering and they were asking me, "Where do I send my loved one? I want them to be able to do this, but I can't be the one to cook. I can't be the one—I've got to go to work. So I can't keep them from walking on the street."

Dr. Kent Holtorf ([32:24](#)):

It sounds like it could be the future model. How many beds are there?

Dr. Heather Sandison ([32:28](#)):

We have 12 beds currently. Certainly we hope—my goal is really that we shift the entire industry. So I suspect—

Dr. Kent Holtorf ([32:37](#)):

If you show the outcomes and it saves money it may be huge. You selling stock?

Dr. Heather Sandison ([32:44](#)):

[Laughing] Well, we hope to expand. I literally opened a nursing home March 1st of 2020, and then COVID hit. So that has been an interesting—it's been a wild ride this year. But I—

Dr. Kent Holtorf ([32:58](#)):

I worry about other regulations and, you know?

Dr. Heather Sandison ([33:02](#)):

Oh, yeah. We waded through all of it. But our first resident moved in the first week of March. So she's been there now 6 months—we're recording this in September—and her MoCA score went from a 19 to a 24. So our first resident is already better, measurably better. Our second residents, they moved in about 12 weeks later. And they are already doing better. We're not quite measuring it yet, but talking in paragraphs rather than one word answers, engaging at a totally different level. And also mood, just the mood changes, sleep changes—

Dr. Kent Holtorf ([33:38](#)):

Oh, that alone, because like they can be with their loved one and the loved one is not cussing at them, you know?

Dr. Heather Sandison ([33:47](#)):

Exactly, exactly.

Dr. Kent Holtorf ([33:47](#)):

God, I hope there is a trend of funding these things and changing that, 'cause what do they get when they go to a neurologist? Six minutes? They take this and this, bye.

Dr. Heather Sandison ([33:57](#)):

And meds that don't work.

Dr. Kent Holtorf ([33:59](#)):

They don't. Oh, hey, you're doing wonderful work. Obviously you're very caring and I don't know when you sleep, but I'm very impressed with all that. I just wish you the best of luck for the



country and the world. I think you're just doing some amazing cutting edge things and I hope it catches on. Yeah.

Dr. Heather Sandison ([34:28](#)):

Well, thank you. Thank you for your support. Thank you for helping me share what we're up to and that this is possible. You know, Dr. Bredesen says that Alzheimer's should be a rare disease. This is preventable. It's also treatable if you start early, we have more confidence. So go out there, get the testing, get—he calls it a cognoscopy, right? Just like people get a colonoscopy, we should regularly be checking all of these parameters that influence our cognitive function so we can maintain it.

Dr. Kent Holtorf ([34:59](#)):

Yeah. Just real quick, I know we have to—but do you do genetics? What testing do you do?

Dr. Heather Sandison ([35:06](#)):

So, like I described sort of with all of the elements that I feel influence our cognitive health, right? So we do all of the labs that we talked about for toxicity. So micro toxins, heavy metals, and chemical toxicity. We do a full panel. So we're looking for hormones. I often run a DUTCH panel because I like getting that four point cortisol and then the breakdown of metabolites of estrogens. And then we run—usually I run like a Cyrex or A12, which has an infectious panel. I always do a GI panel, whether or not people are complaining about GI issues, because sometimes we find things there.

Dr. Kent Holtorf ([35:44](#)):

The gut brain access is huge.

Dr. Heather Sandison ([35:46](#)):

Absolutely. What else is on that list? Oh, Walsh, the Walsh work, of course. So I'm looking at zinc and copper ratios, your encryptopyros, whole blood histamine levels and how that affects methylation. So certainly detox capacity mood, there's Alzheimer's, the things that come up with the Walsh ratios and metrics there. So at least that list, and then depending on the patient we may add other things that might be relevant and an APOE4 status, of course.

Dr. Kent Holtorf ([36:19](#)):

Yeah. I think that's something. That's good to know. Yeah. So how do people find you, if they want to find you?

Dr. Heather Sandison ([36:26](#)):

Yeah. So northcountynaturalmedicine.com is the clinic. Marama Experience is the residential care facility for the elderly. And I also host the podcast at Neurohacker Collective Insights.

Dr. Kent Holtorf ([36:41](#)):

How do we find that? Neurohacker Collective Insights?

Dr. Heather Sandison ([36:44](#)):

Yeah. Neurohacker Collective insights is the name of the podcast and it's available where all podcasts are.

Dr. Kent Holtorf ([36:50](#)):

Nice. Do you do that once a week?

Dr. Heather Sandison ([36:52](#)):

You know, I host it. I don't really own it. It's through Neurohacker, they're the makers of Qualia and I love and support the crew there and so show up as the host and dig in deep to the people [inaudible].

Dr. Kent Holtorf ([37:07](#)):

Hey, it's tough. I mean, you have to be prepared and you have to know your stuff. That's great. I'm gonna check that out too. I'm gonna send you some products too. I'd love for you to evaluate and give me your opinion on that.

Dr. Heather Sandison ([37:21](#)):

Yeah. I'm excited, once there's conferences happening again, I know that I'm going to be running into you in person more and more.

Dr. Kent Holtorf ([37:26](#)):

Yeah. [Laughing] Yeah. If we can get through this virtual conference thing, yeah. So, hey, thank you so much for being on. This has been a great conversation and just learnt so much. So, thank you and again, the best of luck to you and you're just doing great things.

Dr. Heather Sandison ([37:48](#)):

Thank you. Thank you for getting the peptides out there. People need them!

Dr. Kent Holtorf ([37:51](#)):

Great. Thanks so much.

Dr. Heather Sandison ([37:53](#)):  
Have a good one.

Dr. Kent Holtorf ([37:54](#)):  
You too. Bye. Bye.