How to Create a Safer High-Tech Home for Sensitive Kids Transcript

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I was a software designer in Silicon Valley, and you're probably familiar with some of the companies I've worked. I worked at Netflix, Silicon Graphics.

And so a new device came out, like the Palm Pilot came, out I had it the day it came. All the new stuff that came on, I have it for everybody else. The bad news and the good news is I got sick then before everyone else, didn't know what it was.

Hi, welcome to the MAPS webinar series, Healing Tomorrow's Future. We are thrilled to be bringing you this series packed with valuable information and education within our community.

My name is Honey Rinusella and I'm the Executive Director of MAPPS, the Medical Academy of Pediatrics and Special Needs. Within these webinars, we're able to empower clinicians on the knowledge and tools to support patients facing a variety of health challenges.

For more information on MAPS or to register for a conference, please visit us at www.medmaps.org. Thanks for joining us on this journey towards a brighter, healthier future.

Tell me a little bit more about what you do and what offer. Are we rolling now or no? Yeah, we are rolling. We are on. I was a software designer in Silicon Valley and you're probably familiar with some of the companies I've worked.

Silicon graphics. And so I was in Silicon Valley during the internet bubble for, if you know excite.com, I ran the front page of Excite So I worked my way up to Silicon valley from customer support all the way, up, to an engineer and then a principal software designer and But I was getting sick, and so were my kids.

So my kid's had some developmental delays. And just so you know, I love technology. I have two friends who are cell phone designers. Yeah? I'm one of those guys that had a new device came out, like the Palm Pilot came, out I had it the day it came.

So and I frequently knew the people who designed it and was really a big fan and so everything that came all the new stuff that Came out I had it for everybody else.

Well The good the bad news and the good news is you know, I got sick then before everyone else I didn't know what it was And it took me a while to figure it out.

It actually took about I would say I started to feel in about 2004, I remember sitting down in front of my computer and I had moved offices and had a little screen in the front, a glare screen that was grounded at one point that I put on my 20-inch monitor.

I didn't have it on and sat down and felt it. like sitting in front of an old TV close, have you ever gone close to a TV and you feel that, whatever? Well, I was sitting front a 20-inch TV, an ol' cathode ray tube, shooting, basically an electron gun was shooting me in the head all day long.

And so, my dad was a doctor and was always concerned about radiation exposure, used to keep us away from televisions and that sort of thing, and so when he saw me sitting infront of a twenty- inch monitor all-day with a computer, he was like, dude, you know, what's going on, but I loved it.

And that was the place to be. I really wanted to in Silicon Valley. But I did start feeling effects. It took me a while. At the time, I thought I was having food allergies and fatigue, and I had a lot of things going.

So I probably had yeast allergy, Candida yeast, allergy. Yeah. Fatigue after eating some foods. So I was

investigating a lot of these things. And so I thought at the time that I had, it turned out that, I though I high levels of mercury, which is what we were looking at in the early 2000s.

We were kind of just, that was kind the thing. So, did have high-levels and sorted my kids and removed, and we removed those and ended up chelating. And I thought, OK, I'm going to be fine.

But it turned out it was quite a pile up. And i had an infected root canal. I had TBIs. This took… I have Epstein-Barr virus and a lot of low-grade infections.

It was a bit of a pile up, and it made me more susceptible to environmental stuff. So I would be susceptible mold or chemical exposures. But then it became very clear that if I put a cell phone next to my head, I could feel it.

And it felt like a headache, basically, a dull headache. I don't know if you had that experience at all? I am very interesting about I'm very sensitive.

As you're talking, identifying with that. So we'll find people, especially for women, it usually ends up being they get exposed to mold and then they become chemically and electrically sensitive.

For men, for me, I think it was more the toxic metals, but I the infected root canal was a huge factor as well. It's kind of like think of it as a total load of oxidative stress.

Yes. Total load of oxidative stress and EMF is part of that load and part it incredibly part that. So it took me a while to, I had the experience and I thought, and remember even one point I actually took my phone and reactively threw it to the side.

And I was like, oh my gosh, my body is getting nutty. I just thought my was being over reactive. And then at some point I was like, well, somebody's wrong.

My body thinks this is safe and well tested. I'm sorry, my head thinks, this safe, and while tested, I mean the tech industry and how could they roll this stuff out without tech, right?

And, then my body is like no. And, but I learned to respect my body more. And then I found some of the science. So I had a building biologist invite me to a conference in, in Silicon Valley at the Commonwealth club in silicon valley, a very credible place.

And they started talking about, and I had also been funding and following autism work and hearing about… I really was interested in the environmental factors.

I thought they would be chemical. And I had one scientist, chief scientist in one of the nonprofits say, Peter, take a look at, watch out for the calcium channels because, you know, we've got some of genes are along that pathway.

I think that might be a key pathway, so I'm in the EMF talk with all these scientists and they're talking about ion dysregulation. And they start talking to about the Calcium channels and a huge bulb appeared above my head and I'm like, oh my God, is it possible that this calcium channel dysregulation is part of the autism thing?

And I went home and re-read the science and it started talking about calcium influx and calcium dysregation, mostly influcks, but outflux too. So I sent it to a friend of mine who was an autism scientist at Harvard, Martha Herbert.

And I said, is this plausible? I mean, this seems like she called me back actually swearing. I can't even believe talking about that there was blood brain barrier breaches.

And she ended up writing a paper, 100-page paper with one of the EMF experts, a 100 page paper saying it is plausible, given that the known symptoms of EMT, known symptom of autism, match known of symptoms EMFT, is possible to consider this as a possibility.

And so she published that. The 100 paged paper got broken down into two smaller segments for publishing, and that went out in 2013. And I thought, okay, great.

So now this is all going to go crickets. Nothing happened. Yep. So I heard one other doctor, Martin Paul, came out and started talking about this on video and said, oh, we're talking the calcium channels again.

And he was a biophysicist trained at Caltech. What could be more credible than that? And so I called him up and I said hey, would you be willing to write a paper on this?

He goes, yes, I will. There are other factors. Autism is not the biggest priority here. I think we've got mental health and heart disease. The calcium channels are most dense in the neurons and in heart.

And those are going to be more widespread. Okay, I agree with you. But I said, well, would you at least just do a quick talk, a slide deck at an autism conference?

And he agreed to do that. So he spoke at a couple autism conferences and we got his deck. And that was in 2016, 17. And still, so we got a little bit of word out there and I still waited for the paper.

Well, 2024, he came out with a paper and honestly, it was the most cohesive and inclusive autism paper I've seen that really talked about intracellular calcium being kind of a key common factor in autism, excess intracellular, calcium coming from EMF, manmade EMT that's disrupting the calcium channels and chemical exposures.

that were going through the NMDA receptor, the glutamate receptor like glyphosate. So that made a lot of sense to me. And then when he did the paper, which was he came out in 2024, it was fabulous because he had narrowed down chemicals down to 12 classes of excitatory toxins.

And there were things you know that have you've talked about. Yeah. Tylenol. I mean, and he gets into Tylinol and glyphosate. And so he really he linked some.

You have to look at the paper, but it's if you search for Martin Paul, P-A-L-E Martin, Paul Autism, you'll see the. It's about 37 pages. That's quite complex and deep.

. I've done a mind map of it on my website. and that tries to show you all the different categories. Because I had done that before, but I didn't have a scientific paradigm around it.

We all kind of speculated, hey, what about glyphosate? What about this? And we didn' really narrow the pathway down so much. And there's certainly more.

It's not an entirety of all of the experience of what's going on with autism parents. But it's the most comprehensive thing I've seen. I think it's really interesting.

So I'm excited to have that out there. And now I take the question is, what do you do? I know. I was just going to say, I am thinking as you're talking, because that's my primary case.

My clients are complex autism. Okay. When they see me and they're bringing their iPads and their iPhones, that is a regulation strategy for them. And I agree with you on this.

I read it. And parents are like, look, the alternative is complete and utter dysregulation. So it captivates the kids. There's definitely this addiction captivation thing.

Yes. Victoria Dunkley is a psychiatrist from LA who was on screen time back in 2007. She's been actually getting people off of screen. So the issue is, it's addicting for adults and children.

Of course, yes. But it is addricting, but then it actually, you think it regulating, But its actually dysregulating. I agree. It's really hard to get over the addiction.

As a Silicon Valley person, I was addicted to computers in the 80s. and locked in. And it took a long time to kind of like wean things down and to go down.

Because the excitement, that excitatory factor, it's a lot like MSG with food. So you put MSD in food and that addictive pathway creates addiction. The NMDA receptor in the glutamate creates an excitement that says that something important is happening in your body and you get that boost, right?

So you do need to kind of like wean off of it. And what I tell people to do, I think getting people off like addictions, like food addicitons and screen addicitions are hard.

So what, and we will fight with your own spouse, there'll be fighting in the family between usually the mom, usually stereotypically the Mom is more sensitive and aware of and then the dad is tech pro and it can be vice versa.

There's all kinds of stuff going on. So you can get a lot of conflict in the family. And I had that in my family with food stuff. So I got kind of blocked out.

I have a kid with milk allergies and the mom was still giving the milk. And so it was a little bit challenging. And we both worked for tech companies.

So it hard for us, we had a lot of identity around low situation. What I actually recommend is to focus on the sleep environment first. If you can clean up the sleeping environment, so you turn off the Wi-Fi, but usually right now, people who've got fitness trackers.

We've a fitness tracker with a Bluetooth. You've frequently parents with the cell phone next to the bed. Even you've kids sleeping with phone under the pillow.

And we've got data showing if you give a kid a phone before 13, there's some potentially long-term consequences, hopefully not long term. So what you probably want to do is start having a digital bedtime.

OK. Let's say the kid's bedtime is 9. You may want a bedtime an hour before that for the digital devices. So there's a little bit of a wind down. So we've got multiple factors when we're dealing with screen time.

is also excitatory for the nervous system. So part of the winding down is getting away from the blue light, not just to calm down, but it will… Your melatonin will not…

It will dis… What do you call it? Turn off. It'll suppress. Blue light will suppress melotonin. When I was just learning about all this stuff, I remember getting…

full spectrum lights in my office. And I thought it was the greatest thing. I am so energized, I'm staying up late, and I don't need to sleep as much.

No one tells you this stuff. So what the confusing part is, is you think you're feeling, dysregulation feels exciting and energizing. And so it's like coffee.

You're kind of like, I'm a coffee achiever. And I didn't really understand this whole nervous system balance thing. I don't understand sympathetic, parasympathetic.

and I did understand that when you're in fight or flight mode, your body's gonna release this energy to run and everything. Matter of fact, one of the doctors I talked to who worked on screen time stuff, had this brilliant thing and said, when your bodies in fighter flight, it is not safe.

Your body does not feel safe to have two feet on the ground. So it's a very, and Dr. Dunkley talks about this too, it is a mixed signal for biology. You're having a stimulating experience which feels like you should be running.

Like you're watching Jurassic Park, but you are sitting down. So you've got all this cortisol, all of this energy being

released. And then it needs to move.

It needs just wind down and stop. So I would say start with a digital bedtime. And everything goes in these little boxes. They have these beautiful things on Amazon now.

These little Faraday boxes, and you throw these things in there. What it does is you not only get the screen and the content to go away, but the blue light will go and then also the wireless throwaway.

So a lot of the studies you're seeing now in screen time, there's a confounding factor, which is they're frequently also studying wireless. And wireless, it's not just the blue light causing oxidative stress, It's the wire itself.

Wow. OK. And the content. Yeah. Even a new one I just found is just switching, having a lot of switching scenes. Every time a scene switches, your amygdala rescans for safety.

So it's kind of like amyglala exhaustion. Oh my gosh. We're not designed to have this many screen. It's like living five lifetimes in a day. You know what's interesting on that?

Two things that popped into my mind. The first thing, just before I forget, I was watching a cartoon or, no, it wasn't a cartoony, It was a show from the 80s, right?

Just in the, there's a sitcom. And I was like sitting there and I'm going, this is slow. This is slowly. It's it's cut in it. Yes. Very slowly, it is almost boring.

You go back to things and it like, hey, when do we get on with this? Right. Totally. Except for me, though, that was what was interesting is calming. Right?

And that's what I noticed. I Was like wow, I am not feeling so when you said sitting watching Jurassic Park, just it hit me. Okay, that's I felt the difference between the two, you know when I was watching that Joe I Was like this is actually relaxing Exactly.

Yeah, go so my friend Len did a podcast with me Len who's here? I know one and Len Len said after you did the podcast He says his way a great way of summarizing he says Peter what your base is saying is tech is the great dysregulator and nature is the great regulator.

So nature and sleep, we use nature in sleep to re-regulate ourselves. Minimize your tech and screen time exposure and maximize your nature time. I used to do a thing with our kids and we said, okay, you could do some computer stuff, but then if you do an hour of computer, then you need to an our of nature.

You go out and either play outside before or after, whatever. But just have some sense of balance. Yeah, and we we kind of had that and but in Silicon Valley was really hard stuff to do that to get that So the other question that I had was, you know parents that i see even personally, right?

So i'm wearing an apple watch, but I don't have it connected. It's on it's there's no airplane mode and bluetooth off Fabulous and wi-fi off too. Yeah everything off.

You're fantastic. So I use it for an actual watch and a step tracker. Yes Now, is that like, and then when I have my phone, if anywhere in my, I've airplane mode on all the time, unless I, you know, during the day I need it.

Is that sufficient? Is it helpful? Because I think about the parents where you said like my child sleeps with it, And it's almost a comfort. It's not that they have to have it on all the time.

Just it needs to be there. If I was to go and take it and put it in the kitchen or a box or anything, that would be very, yeah. So is the airplane mode sufficient?

Yes. OK. Yes, I would say the one thing that will be tricky is you probably don't want it, in-the-room charging. Even

though, OK, so airplane modes off, and you could get a meter to measure this.

I've got some meters I'm recommending for parents. The Tri-Field TF2 is a good starter meter for parent, like $189. Yeah. So you can then double check your work and go in and you'll find, I found the other day I bought a hot water heating device that had a Bluetooth signal coming off it.

I was like, what's going on here? So even me, once in a while I'll leave my phone, my Bluetooth will come on without me explicitly doing it or I forget it in my watch.

Like you, have a Garmin watch and I use it as a fitness tracker and it's got some great stuff in it and like getting all my sleep scores and everything.

But I, you know, and then you turn on the Bluetooth to transfer it and I don't even have it on me when I do the transfer, right? So I think unless you're super, super sensitive, I've had times where my body doesn't want anything electronically or anything metal near me, but my bodies more resilient now and i can deal with all this stuff and it doesn' t bother me and actually enjoy that.

Ideally we really want safe technology. We want to have other technology but we want it to be, we wanna make technology safer neurology. That's great.

That the goal. I love that. And I don't, I'm not a, love all my Silicon Valley friends. But I also love people and my kids. Yes, yes. We have to make this work.

Yeah. For sure. Anything else that is important that we didn't talk about that you wanna make sure that people know? You know, the last thing I would say is a lot of times people get focused on external things like the cell tower outside their building, but usually, and they freak out and can't control that and that is concerning.

But frequently the biggest exposure will be the things that are closest to your body and especially in your sleep environment. So it's usually the thing that we can control like a smart watch or the fitness tracker or a cell phone next to the bed and the wifi at night and these sort of things.

Focus from your and just clear space around yourself and your children and family. And spend time in nature. Exactly. Yes. To re-regulate. Fantastic. Thank you so much.

It's great. Thanks so for joining us today. I'm Pani Rinusella and this is MAPS. As we heal tomorrow's future, we appreciate you joining on the journey.

We'll see you next time.