



EPISODE 796

How Obesogens Cause Weight Gain & Detoxing Your Environment

With Guest Dr. Vivian Chen

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SHAWN STEVENSON: It is now confirmed that chemicals in our environment are contributing to our obesity epidemic. A recent study published in environmental health perspectives is covering the science on these compounds known as obesogens. Obesogens according to these researchers can alter human metabolism and predispose people to gaining weight. This is independent of the food that we're eating, independent of the exercise that we're doing or not doing. These compounds, obesogens, are altering human metabolism and we need to know about this. So what are these obesogens? We're going to be covering that today. Where are they found? Because they're found in certain places more than others. And most importantly, what can we do about this? What can we do to help to insulate ourselves against these obesogens and really stack conditions in our favor to be healthy and to thrive in an increasingly toxic world. Now we've got on an incredible guest today, who is an expert in this subject matter to really enlighten us about obesogens and also some of the common products that we have in our homes, that we have in our kitchens that we might be using every day. That can be putting obesogens straight into ourselves. So buckle your seatbelts. This is going to be a good one.

Now, when I have special guests here at The Model Health Show studios, I like to give gifts. All right. Is one of my favorite things to do. I feel like it's Christmas. You know, when you move on from, from being a baby. You know, it really feels good to be a giver. And, you know, it just goes back to that feeling of like Christmas, you know, being able to give gifts to the people that you care about, but little did she know that I had a special gift pack for her that I put together myself. I had this cool little package that I put it all in and I hooked her up because I know she's about that life with making sure that things are.

Non toxic, third party tested, sustainable, all the boxes checked. And so I hooked her up with some incredible treats and products from beekeepers naturals. And one of the things that I gave her, and I was so happily surprised that she had not utilized beekeepers' naturals yet. And one of the things that I gave her was their propolis immune spray. And a study that was published in the journal antiviral chemistry and chemotherapy revealed that propolis has significant antiviral effects specifically in reducing viral lung infections. And it's even well documented to be effective for topical issues as well. Things like cold sores. A recent study published in the journal phytotherapy research found that when Propolis was applied topically three times a day. It accelerated the healing of cold sores. And the researchers found that topical propolis not only reduced the amount of the virus present in the person's body, but also protected them against future Cold sore outbreaks. How many things do you know that have that capability? That's amazing. Propolis is incredibly special.

It dates back to even documentation of being utilized by the father of modern medicine, Hippocrates has been utilized. For thousands of years, incredibly effective. But again, beekeepers naturals propolis immune spray is third party tested for purity and they're dedicated to sustainable beekeeping. Head over there, check them out, go to beekeepersnaturals.com/model and they're going to hook you up with 20 percent off store wide. Definitely check out their superfood honey as well. I gave her a jar of their superfood honey as well and they've got incredible nootropics based on royal jelly. To check out, but just head over there, check them out, beekeepersnaturals.com/model for 20 percent off. That's B E E K E E P E R S [naturals.com/model](https://beekeepersnaturals.com/model) for 20 percent off. And now let's get to the Apple podcast review of the week.

ITUNES REVIEW: Another five star review titled "life changing" by nonoAwho. Three months into listening. And I can confidently say this wilderness podcast has transformed my nutrition habits. Each episode offers insightful tips. Backed by credible research, making complex health topics easy to grasp. Sean's engaging style keeps me hooked and the diverse range of guests brings fresh perspectives from nutrition to mental wellness. It's a holistic approach to health. That's both informative and inspiring. Highly recommended for anyone seeking to elevate their wellbeing journey.

SHAWN STEVENSON: Thank you so much for leaving that view over on Apple podcasts. I truly do appreciate that. And listen, if you get to do so, please pop over to Apple podcasts and leave a review for the model health show. And without further ado, let's get to our special guest and topic of the day.

Dr. Vivian Chen is a medical doctor with 15 years of clinical experience. She's board certified in the UK in both internal medicine and family practice and she now lives in California. Dr. Viv's journey to root cause medicine began when her world turned upside down after the birth of her baby girl. Her newborn daughter was hospitalized with symptoms. No doctor could figure out. Through her own research and dedication,, dr. Viv was able to help her daughter to fully recover. She also realized that many years of chronic fatigue, acne, brain fog that she was experiencing was due to Environmental toxicity. And this opened up her focus to study root causes of conditions. Something that she had never considered being trained in conventional medicine. And now she's here to share her insights on the model health show with all of us. Let's dive in this conversation with the amazing dr. Vivian Chen.

All right. We have a very special guest here. Dr. Vivian Chen. Thank you for coming to hang out with us.

DR. VIVIAN CHEN: Thank you so much for having me.

SHAWN STEVENSON: We're gonna talk about all the things today. All right. I've got so many questions for you, and I want to start by talking about obesogens, all right? This might be a new term for people But we need to know about obesogens. We need to know what they are. We need to know what they do in our bodies and what the sources are. But can you start off by sharing what are obesogens?

DR. VIVIAN CHEN: Yeah, definitely and thank you so much for shining a light on this. Obesogens are a group of chemicals which have actually now been recognized by the NIH. So if you go to the NIH website, kind of their division on environmental health. There's actually a publication by them on obesogens. So it's science fact now. When I first started talking about this, seven years ago, a group of MDs clubbed together online and called me. I can't remember, a misinformation spreader.

But, what I was talking about back then were this group of chemicals that have been shown in studies to disrupt our metabolic health and therefore increase the propensity to gain weight. So that's why they're called obesogens. And they can interrupt our metabolic health in a number of ways by damaging the mitochondria, which is kind of the powerhouses inside of ourselves. And if you're, if your mitochondria is not working optimally, then you can't take the food that you eat and translate that into energy. And therefore the food that you're eating is being deposited and stored as fat. So that's one of the ways. The other major way is endocrine disruption.

So a lot of these common ones are BPA. Found in thermal receipts, plastic bottles, phthalates. Again, found in plastic packaging, food packaging, personal care products, and PFAS, this group of forever, forever chemicals that we hear endlessly about, it seems in the news now, which are commonly known to kind of come from nonstick cookware, but it's actually found in a lot more than that. So, these chemicals have actually been monitored by CDC in Americans and they're found in 90 plus of Americans. So it's ubiquitous. We're all exposed to these chemicals and they've been shown in studies to increase our susceptibility to weight gain.

SHAWN STEVENSON: This is already, you know, again, like you just said it's so much data is coming out now, you know, it's being found in sex cells, in urine, in Umbilical cords. The list goes on and on. There's really in a strange way no safe place to hide here on planet Earth. We're kind of like this glorified snow globe. And the best that we can do and that's where another reason we Gonna get to, and why I have you here today, is really support our body's detoxification systems because we're going to be exposed to this stuff because it's just so pervasive in our society. Thank you for mentioning about the NIH again Acknowledging that this is a thing and this is something for us to be aware of. But you know how it is like a lot of

these entities are so late to the game and just even the veil that happens in the degrees of honesty and obesogens Like carcinogens, right?

These are cancer causing agents. These are obesity causing agents outside of this normal realm of this kind of Caloric management equation that I was taught in my university of like this is how you get fat. This is like an epigenetic influence. An epi Epicaloric controller in a way because it alters the way that our bodies interact with these compounds.

DR. VIVIAN CHEN: Yes So the segway into that, and the reason why I kind of first started looking at that, was I found a study published in 2016. A big study done by the Canadian Institute of Health Research. They took data from NHANES, so that's the kind of CDC monitoring data of Americans nutrition and health status. They took data from 40, 000 Americans. And they looked at how much they ate, what they ate, their weight, and how much they exercised. And they found that in 2006, if you ate the same amount of food, the same types of food, in terms of macronutrients and exercise the same amount, you are 2. 3 BMI points heavier than if you were in 1988.

So what's causing that? So, you know, in other words, if you ate the same diet and you exercise the same amount. You would weigh 10 percent more today than you did in 1988. What's making that happen? Right, I'm not saying obesogens are the only thing. There's more stress for sure. Our food is not the same as what they were. There's a lot more inflammation causing foods. But to not talk about obesogens is missing a big elephant in the room

SHAWN STEVENSON: Thank you for saying this. This is really, again, so this is adjusting for diet and exercise, which again, we usually attribute weight gain and weight loss to those things. Adjusting for those things. Something happened over that time span where suddenly people were heavier.

DR. VIVIAN CHEN: Exactly.

SHAWN STEVENSON: And that's Crazy, but what is there any other? Is it just us as humans? Is there any wild animals and ..

DR. VIVIAN CHEN: No. Animals in the wild too. They're getting heavier, too.

SHAWN STEVENSON: That's bananas. So yogi the bear is just accidently getting thicker.

DR. VIVIAN CHEN: Right and pets too.

SHAWN STEVENSON: Oh, yeah.

DR. VIVIAN CHEN: Yeah, so in it's there's something in our environment for sure and we need to Kind of wake up to it. I know this conversation is very uncomfortable. And trust me, I don't want to be having this conversation most of the time. It can be depressing, but I think it's important to be aware.

SHAWN STEVENSON: Yeah.

DR. VIVIAN CHEN: So that you can start doing something to protect yourself.

SHAWN STEVENSON: Yeah. Listen, I, I've seen this and I know you've seen this as well. You know, people like it's just a, there's another thing to be worried about the world. Just everything is bad for us. Yeah! Like our world is very different right now and this is about Being aware. We don't have to be inundated. But if you can do small things because what is happening is an accumulation of small things that's causing our poor health and oftentimes influencing our metabolism and looking at, you know, what is our goal, right?

So if we're wanting to lose body fat or if we're wanting to avoid having cardiovascular disease. We've got to be mindful of our environment and just make small changes along the way. And I want to start in the kitchen. All right. I want to start in the kitchen because this is a place where health is really cultivated potentially or poor health is cultivated. But the kitchen is a cornerstone. It's really a centerpiece of our universe as people, you know? And so I want to talk about some of the common kitchen favorites that we might need to make some adjustments on. And one of these.. It's so deeply ingrained in our culture is aluminum foil. All right. So this is a common kitchen favorite. Let's talk about aluminum foil.

DR. VIVIAN CHEN: Yeah. So studies have shown that if you use aluminum in your kitchen. For example, utensils, cookware, aluminum foil, you are walking around with double the amount of aluminum in your blood compared to someone who doesn't. And when they look at white blood cells in the same sample where they kind of tested for aluminum, the white blood cells are showing oxidative damage, DNA damage. We don't really know what that translates to in terms of heart outcomes yet, in terms of diseases. But for me as a doctor, I don't think that's a good thing right? Oxidative stress or oxidative damage, it's kind of like rust, right? It's the creation of these free radicals, these chemicals that now can damage our cells and cause DNA damage. That's not a good thing.

SHAWN STEVENSON: Yeah, we don't really think about I know that. I didn't. I didn't think about aluminum foil Of course, I know a ton about cookware and all that stuff, but aluminum

foil seems so harmless and just like, you know, non-threatening, you know, it's just like this sheet of thing. It doesn't seem like it can be damaged or like end up in my food or in the environment but with that being said, we know that aluminum has significantly tons of studies with neurodegenerative conditions.

DR. VIVIAN CHEN: Yes.

SHAWN STEVENSON: Right? So this isn't just something to just ignore but with that being said if aluminum foil, if we're using that for cooking purposes, is there something better that we can be using?

DR. VIVIAN CHEN: I think it depends on what you're using your aluminum foil for, right? So studies show that if it's wrapped around meat, or anything acidic, or anything with salt, or if you're combining your foil with another metal, so for example, you have your steak sitting on a stainless steel tray, and then you cover it with aluminum foil, that all of that increases the leaching of aluminum into your food. And they have shown that the content of aluminum in food, cooked, wrapped in aluminum foil can be up to 40 times higher than food not wrapped in aluminum. So ask yourself, do you really need to use aluminum? First of all, what are you trying to, what does that actually achieve? Is it, are you trying to wrap in moisture or is it you just don't want to clean up?

If it's because you don't want to clean up, maybe rethink that because the impact on your health could be long term, it's accumulative. Now, if that's your only exposure and you're not exposed to aluminum anywhere else, it's probably not a big deal. But, I think the WHO limit, safe limit for aluminum per day, is 2 milligrams per kilogram per day. And, CDC estimates that Americans are exposed to about 10 milligrams per kilogram per day. So we're exceeding what we should be exposed to every day. And over the long term if when that's not coming out of our bodies. That could then lead to downstream condition, you know issues we don't know about yet.

SHAWN STEVENSON: All right So what are some other options that we can use? For example, if somebody's aluminum foil makes stuff easy, like if somebody's trying to slap some bacon, you know, into the air fryer or into the oven or something like that. And, you know, putting on a dish, uh, you know, a tray, what could they use instead?

DR. VIVIAN CHEN: I would say bleached parchment paper is probably a better choice. So there's no heavy metal there. It is, there is a layer of silicone on those usually. But as long as the contact is not for a long time or you're not putting it at extremely high heat above 400, you're usually okay.

SHAWN STEVENSON: Got it. Okay. So parchment paper, but again, being mindful of the type of parchment paper that you're using as well.

DR. VIVIAN CHEN: Exactly. But you could just also just put it straight on a stainless steel tray. Right, and then I know the cleanup. Spray it with some Good non toxic all purpose and let it soak and you know should all come out.

SHAWN STEVENSON: Yeah, that's the convenience factor You just said it too is like that's one of the things that really gets us a lot of times.

DR. VIVIAN CHEN: Yes.

SHAWN STEVENSON: You know what this reminds me to my wife was actually upset because Somebody broke. She's got this little somebody gifted it to us a little wooden cutting board. And so, you know, she was putting the dishes away You And saw that it was broken, and she was like, who broke me? Who broke my cutting board? But then we also had this plastic cutting board that was theirs. Kind of the alternative because we didn't get rid of it yet. And, of course, after having this conversation, I'm going to send it to her. Let's talk about plastic cutting boards, another kitchen favorite.

DR. VIVIAN CHEN: Yeah. Most people. I think that plastic cutting boards are better because they're advertised as antimicrobial and you can put it in the dishwasher. But that's probably one of the worst things you can do because when it's advertised as antimicrobial, it's often coated with something called microban. So that's a solution of antimicrobials that can contain endocrine disruptors like benzalkonium, quaternium products. And then secondly, studies have shown if you put plastic into a dishwasher, you're increasing the likelihood of leaching of microplastic into your food. So you're increasing the ingestion of microplastic when you're putting the food on that plastic cutting board and cutting it. And thirdly, A study just published last year showed that if you are using a plastic cutting board, you can be ingesting anywhere up to 50 grams of microplastic per year. So that's about 12 credit cards worth of plastic up to that. So it depends on what type of cutting boards, what you're doing with your boards, what you're cutting, that all kind of contributes to how much ingestion, but you know, that's a pretty crazy amount.

SHAWN STEVENSON: Holy moly. All right. So the alternative for the plastic cutting boards, which again, it's very just kind of integrated into our culture. What should we be using?

DR. VIVIAN CHEN: So studies have shown that wooden cutting board is actually more antimicrobial just naturally compared to plastic. So you don't need to be coating it with

microban or anything. Just wood, straightforward wood, is naturally antimicrobial. And what I suggest people do, because the first question people ask me is, well, I cut meat on my cutting board, like how do I disinfect it? Keep a board for meat and one for your veggies and fruits. And I would suggest wooden for both, but if you really don't like the idea of wood and you must use a plastic, then don't put it in the dishwasher.

Hand wash it. And don't cut so hard. So in this study, they showed that if you're cutting carrots on the plastic board, you're generating more microplastic and that makes sense because if you're cutting something really hard You're making deeper cuts, right? Like if you hold up a plastic cutting board, you see all the scratch marks. That's all the microplastic that's now In you.

SHAWN STEVENSON: Yeah, we think if we're not seeing like a bunch of shredded pieces of plastic, it's not there. But in reality when we're cutting into that plastic cutting board, that plastic cutting board is absolutely getting into our face.

DR. VIVIAN CHEN: Yeah, so it's the nano Plastics that you can't even see that's a thousand 1, 000th of a millimeter you can't see that you can maybe see the micro plastics. That's you know less than five millimeters. But most of it you're just not seeing

SHAWN STEVENSON: So again, you know, this is about being informed and next time you buy a cutting board get yourself a wooden cutting board You know just phase i'm a big fan of phasing out because we still have a larger plastic cutting board and a small one, but we also have multiple wood ones, too. Minus the her favorite one that got broke because it was like a little one that she cuts like fruit on.

DR. VIVIAN CHEN: I'm very attached to my cutting board. So I know how she feels.

SHAWN STEVENSON: Yeah, All right, let's talk about another very common kitchen favorite And just leaning more into these plastics is plastic storage ware. So I saw recently there's some data that came out about microwaving our food in these plastic containers and how much microplastics was getting into our food.

DR. VIVIAN CHEN: Yeah. Pretty mind blowing how much is released during microwaving. Because you'll see on the bottom of these plastic balls or boxes, it says microwave safe. But what it means that it just won't melt in a microwave. But in that particular study you're referring to, they showed that per cubic centimeter, the box is releasing millions of microplastic and billions of nanoplastics per cubic centimeter. So how big is your box usually? Much bigger than that. So, and that's for microwaving three minutes only.

SHAWN STEVENSON: Right.

DR. VIVIAN CHEN: It's not even that long. So whatever you do, if you have to store your food in plastic, then transfer it out onto a plate before you microwave it.

SHAWN STEVENSON: And also this study found too, even storing it in plastic at extreme, even at cold temperatures, like putting it in the freezer, for example, there's going to be leaching of that plastic into your food over time. But again, we, and this is the thing too, plastics are just, they're everywhere, right? So integrated into our culture. And there are smarter ways to interact with plastics and I want to ask you about the different types of plastics in just a moment, but just being mindful, especially of heating them, you know, especially heating up food, putting hot food in directly into plastics. You want to avoid that.

DR. VIVIAN CHEN: Yes.

SHAWN STEVENSON: But there are also so many cool alternatives now. We've just been phasing out over time. We still got some plastic containers.

DR. VIVIAN CHEN: Yeah.

SHAWN STEVENSON: But we've got I'm a big fan of these stainless steel containers that we use a lot and they've got like silicone lids. So I'm a big fan of those.

DR. VIVIAN CHEN: Yeah, I love those. I love glass as well. It's heavy. I know. Plastic is convenient, I know, but that convenience is costing us. I think last year they published a study that showed the chemicals that a release from plastic is costing us in healthcare cost to the tune of 250 billion dollars in one year.

SHAWN STEVENSON: Wait, say that again. Sorry, this is just for me. Say that again.

DR. VIVIAN CHEN: So the chemicals that can leach from plastic is costing us in health cost 250 billion dollars a year in one year.

SHAWN STEVENSON: This is ridiculous.

DR. VIVIAN CHEN: This is and it's, it goes obesogens we're talking about. So we have we're seeing increase in obesity rate Diabetes, insulin resistance, fertility issues, people are brain fogged, they're fatigued. The list goes on and on. Increased risk of cancer, autoimmune

diseases, all of these added together is what we're experiencing. But nobody's putting the pieces back together.

SHAWN STEVENSON: Yeah. Wow. And that's such a great analogy with putting the pieces back together because, you know, plastics and Legos and things like that. But it's so interesting. This is a newly invented substance really, you know looking at the evolution from fossil fuels. But just like the plasticizer chemicals that are used to form it into all these different things that we can make. But what is not being fully appreciated is that Human cells, there's a really funky interaction when associating with these plastics. And they tend to permeate our cells and like they're, we're plasticizing ourselves.

DR. VIVIAN CHEN: Exactly. Yeah, and I think the problem is that the plastic industry doesn't have to disclose what they use to make plastic. When scientists and chemists have try to kind of figure out what's in plastic. They've reverse engineered in labs what kind of chemicals come out of these plastics. When they analyze it, they estimate that there are about 10,000 different chemicals being used to make plastic, and a quarter of them are of concern. So they're either shown to be harmful to humans or possibly harmful to humans.

SHAWN STEVENSON: Thousands of chemicals. Again, newly invented stuff, huge social experiment.

DR. VIVIAN CHEN: Yes.

SHAWN STEVENSON: Let's talk a little bit about the different types of plastic because there's this recycling number that if people notice maybe just like on the bottom of the container, for example, and I think it's like one through seven, I believe. Can we talk about what is that number?

DR. VIVIAN CHEN: Yeah, so initially they're kind of used to help you know which one to recycle, right? What trash can to put it into. But it can actually tell you what it's made of and what potential harmful chemicals might be in the plastic. And a very helpful way I use to memorize this is because they're just it's overwhelming. There's so many and different names is one, two, four, five, all the rest are bad. So one, two, four, five and all the rest are bad. One, two, four, five the safer ones. They can still leach phthalates though, endocrine disruptors. But at least they don't have things like styrene, which is a known carcinogen, or benzene, known carcinogen, leaching out of them. Seven is usually polycarbonate. So that's what a lot of people are familiar with in terms of BPA. You know, when they look for plastic, they say, Oh, no worries. I found a bottle. It says BPA free on it. So I'm good. But what they don't realize is

that the industry actually just swapped BPA for another very similar bisphenol from a family of, you know, over a hundred different bisphenols with very similar properties.

SHAWN STEVENSON: Like bisphenol s for example, you know, just yeah.

DR. VIVIAN CHEN: And BPF those are the kind of common substitutes and you know the amount of BPA America allows Americans to encounter. I'm talking about the regulatory agencies, allow Americans to encounter is hundreds of times more than Europe, where I kind of trained and came from.

So in Europe, the daily allowance, or it's kind of the daily safe limit, but set by EFSA, European food and safety authority. They set the limit at four micrograms per kilogram of body weight per day. That's the old limit. Last year they lowered that to 0.2 nanograms per kilogram per day. That's based on all the science and the data coming out showing just how harmful this chemical can be for us. And yet in the U. S. they allow 50 micrograms. So that's 250,000 times more than what they allow in Europe. So either the regulatory bodies in America don't read scientific research, or there's something else going on that's making them turn a blind eye and they're not protecting our health.

SHAWN STEVENSON: This is one of the cool things about you and why I'm excited to talk to you is that you have that perspective. We were talking about this before the show of coming from the UK health system and seeing the differences here in the US. Can you share a little bit? About some of the big differences that you saw in particular like with universal health care.

DR. VIVIAN CHEN: Yes, So many differences. Number one is in Europe or definitely in the U.K. Where I come from we take the precautionary principle towards new things and new chemicals being used. So over there, Manufacturers or companies have to show that a chemical they intend to put into a product has been shown to be safe in humans. But here it's, you know, everything goes.

SHAWN STEVENSON: We have to prove that it's bad.

DR. VIVIAN CHEN: You have, that's correct.

SHAWN STEVENSON: It's on us. Essentially to prove that it's bad.

DR. VIVIAN CHEN: You have to prove that it's bad before they'll remove it. So they will just experiment with you. Like we're literally living in the biggest chemical experiment right now

as humans. And, when I talk about this, I get pushback from my conventional colleagues, MDs, who say there's no human trials or clinical trials. And yet we're seeing study after study of population studies, right? They say correlation is not causation, it's correlation, association. But if you see association, after association, after association in study after study that's replicated and repeatable, that starts to build a really strong, compelling story.

And we should be waking up to that rather than saying, I'm happy to play Russian roulette with my life, with my health. But that seems to be the approach here in America, unfortunately. And I feel more strongly since I've moved here that I need to speak up. First of all, to advocate for my family and also for the public. And I'm seeing a trend right now where, you know, there's this grassroots movement, right, of consumers like us when we vote with our dollars. That's how we get companies to change that practice. We're seeing green beauty, clean beauty in Target now. And that's because we're voting with our dollars. That's not coming from policymakers. We do absolutely need policymakers to make better policies for us based on science and not turn a blind eye, but we as consumers can also do our part.

SHAWN STEVENSON: Yeah, absolutely. Can you talk about the universal health care like when you came here and seeing that again, this is out of pocket for the citizens and just the difference that you see with that.

DR. VIVIAN CHEN: Yeah, it's honestly heartbreaking. When I first moved here, so I practiced in the UK firstly as an internal medicine physician. Then I went to dermatology and then I ended up doing family practice. I'm paid one salary by the NHS, which is the national health service and that care provides free care for all. So for most people, medications are free. To see me, it's free. To, you know, have operations, everything is free at the point of care. And this is kind of born out of the need that health shouldn't be for the wealthy, right? And I, I very, very strongly believe that. And then when I move here, I see that people who are in lower income do not get the same access to care as wealthier counterparts. In fact, there is a huge disparity in terms of toxin exposure between socioeconomic groups, right? People in a lower socioeconomic groups are exposed to a lot more. There's these superfund sites where toxins are basically being dumped and they're all near lower income areas.

That's not okay. And on top of that, they also don't have access to healthcare. So I mean, for me, I used to go on runs when I first moved to this country and I would, I would cry because it's so, it's so sad for me to see, made me so angry. I still get very emotional thinking about it because I, you know, I have people reach out to me online saying they can't afford to see the doctor. They can't afford chemo, cancer treatments, life saving treatments. I don't know what the solution is here, right, because we seem to be spending so much money on healthcare and yet we rank almost near the bottom of all Western societies.

Something is not working here and I'm just so grateful for your work because you kind of really bring the truth out and all these important root causes. And the education to people who don't have access and I feel like that is absolutely key. When you have education and you're aware of what you can do. Now you have the power to change that.

SHAWN STEVENSON: Yeah. You just said it, you know, that's really the catalyst for this work is I, I lived in Ferguson, Missouri, you know, I didn't know about any of this stuff. And, you know, the thing is, it's just having access even to the information. I could start to make different decisions because of course we need top down change. Absolutely. But also bottom up change and me just being able to make new decisions. Yeah, and I appreciate that because you know again your perspective is so valuable and you know, you mentioned this before the show and it's just like it hit me again when you said that healthcare costs is the number one cause of bankruptcy in the United States for, for our citizens is because of healthcare expenses.

DR. VIVIAN CHEN: I don't see that in the UK or in the European countries at all. And we spend way less, way less. I think it's magnitudes of orders. Less than what we spend here and we rank higher in terms of health. So I don't know what's happening here, but whatever we're spending our dollar on, we're not spending in the right places.

SHAWN STEVENSON: All right, just let me let that breathe for a moment. Oh my God. All right, just one more aspect of getting of your experience working in the UK and then coming, you know, coming to America. Shout out to Eddie Murphy and Arsenio Hall. But coming here and seeing the differences and you mentioned you had a salary, right? Whereas our system here. There's a lot of incentives for physicians, you know, incentivizing more surgeries, incentivizing certain prescriptions, incentivizing certain treatments, and getting paid based on the stuff that you're doing, right? What is your perspective on that? Do you think that that might influence decisions that might not be in the best interest of the patient?

DR. VIVIAN CHEN: Yeah, I'll tell you from my experience as a patient. So when UK, I trust everything my doctor says. My doctor says to me is in my best interest because they are paid one salary and that salary is not determined by what they prescribe me or what procedure they send me to. So I know whatever they're telling me is evidence based, best treatment that they know. But when I moved here, I went to see my doctor and they told me I needed all these million different scans, different treatments and procedures. I question why, because, I mean, the protocol here is also seems very different, right? It's, I feel like there's a lot more investigations here, whereas in the UK, we rely on our clinical skills to examine a patient, spend time with the patient, come to a diagnostic kind of criteria of what's the most likely, what we call differential diagnosis. Then we base our investigations and kind of, you know,

scans, bloods, and lab works on that. Whereas here, there's just a lot more investigations involved. So when I moved here I found a lump in my breast.

In the first year, I think, you know, the stress of moving. I was astonished at what I had to go through to get that lump investigated. Right, first of all, I went to my doctor. Then they sent me to an ultrasound. I tried to find out how much that ultrasound would cost me, and they said they couldn't tell me. That was the first shocker. I said, what do you mean you cannot tell me? So if I go to into a store, I've never been told, I don't know how much this thing costs. I know how much it costs and I can decide, can I afford this? Do I want to buy this? No. We don't know how much it will cost. Depends on your insurance. I can give you an estimate and estimate something like between 50 to 500. That's a big range. And then there were all these other investigations that normally I wouldn't be getting if I was in the UK. Anyway, I went through it because it was, you know, a big deal for me. But in retrospect, I thought that's probably not what would have happened in the UK.

So I think that's kind of a really big difference is, and I understand why too, right? I went to medical school. I didn't pay a penny for my tuition. Zero. So I graduated from medical school, no debt. I worked to support myself. So I had zero debt. Most doctors in this country come out with hundreds of thousands in debt. You know, I think the average is something like 250,000, maybe even 300,000. That's a, that's a, that's a mortgage right there. You have to make payment on that. You have to pay back that money. So, if you're working in a system that incentivizes these codes, and that's how you get paid, and there's no code for giving nutrition advice, there's no code for getting to the root cause. What are you doing? You're treating the Band Aids, right? That's what you're getting paid for. So, I'm not criticizing MDs here. Like, they're all doing the best they can, in the system that educated them, and they believe they're doing the best. But it's not until you kind of look outside and the picture of the mainstream Medical training that you realize gosh, there's a lot more out there.

SHAWN STEVENSON: Yeah Yeah, and I'm just again a big proponent and for everybody to just look at the results. Just look at the results Of the way that our system is constructed. You mentioned this we have it's getting close to five trillion dollars now, from last year, that goes into the US healthcare system and we rank at the bottom of developed nations for our health outcomes, right? So you just mentioned all the testing and investigation is not leading to better outcomes. That's just what the data shows. We had world renowned gastroenterologist, Dr. Emeryn Mayer here, and he works out at UCLA and he was sharing a recent analysis that was done. And he was like, My colleagues are going to be mad at me because they make a lot of income and doing colonoscopies.

He was just like, it's really an archaic thing, you know, at this point, because we have far better methods that are non invasive or minimally invasive by just doing stool samples. Stool tests can find far better data as far as, you know, potentials for cancers or some other forms of diseases. He's like, this is just not necessary unless we check some other boxes. There are some instances and he was like, again, My colleagues are gonna be mad at me because I'm saying that this is now obsolete really to do this procedure that it becomes okay at this and they're trying to lower the age on when you're supposed to go get a colonoscopy done. He's just like it's just not... It's an obsolete procedure, but it's so built into the system and there are billions of dollars made from this treatment.

Do you think that the physician, again, they're training and they've, you know, built their career doing this particular procedure and they might've seen, you know, we caught something, right? We caught this thing early, whatever the case might be, but are there better ways to go about it that are noninvasive that probably are less expensive? And that's where we get into this place of, let's be honest about the current state of things, how we're doing things and the outcomes. Just.. I don't want to Diminish any form of treatment right if colonoscopies were like Activating superpowers. I, you know, I'd be all for it, you know, unlocking your mutant X gene or something. I don't know. It's fine, but that's not what the data shows. There are better methods that are less expensive and less invasive as well.

DR. VIVIAN CHEN: Well, I think they're lowering the age for colonoscopy because cancer is occurring in younger and younger people, unfortunately. And that kind of comes back to this root cause of the conversation we're having right now about the environment that's making people. Have cancer early on because it cannot be genetic right genetic doesn't mutate that fast.

SHAWN STEVENSON: Right.

DR. VIVIAN CHEN: Something in our environment.

SHAWN STEVENSON: Because they're just gonna be like we just need better testing, right? We just need sooner testing. Catch it early, catch it early right instead of asking why is it happening?

DR. VIVIAN CHEN: Exactly and talking about testing? We're so good at testing. But when you get the result How you interpret that result can really affect the trajectory of that person's health. I'll give you an example. My sister-in-Law, she goes to her doctor, gets her annual labs done. Part of that is HBO one C, fasting glucose, right? Monitoring her for pre-diabetes, diabetes. Fasting glucose 105, that's pre-diabetes. What does the doctor say? Don't worry

about it. You don't have diabetes yet. We'll just keep testing you once a year. And if, when you're diabetic, I'll give you a prescription.

Not the conversation that should be happening, which is, let me look into why you developed prediabetes at this point in time. This may still be reversible. Let's talk about how we can do that and prevent me having to prescribe you a medication a few years time. So the testing, It's almost a waste of time because the testing is just so a doctor can prescribe. It's not so we can act and help, you know prevent diseases.

SHAWN STEVENSON: But that's going to require change in the system.

DR. VIVIAN CHEN: And medical education.

SHAWN STEVENSON: Policy and education. And again, the cool thing is even as we're sitting here having this conversation. Many of these changes are happening at least in micro ways in different institutions. Yeah, you know, the education is changing. There's a lot more focus for example, just on Students learning about the microbiome, right? So there are significant changes being made from these conversations that reach sometimes millions of people and a lot of times like, you know, over the years, just finding out people that might be listening to the show that work at Harvard's microbiology or immunology department or something like that. And being able to affect the education, the coursework, you know, at least again, just having this awareness that there's more to this. Now, I want to circle back because in this conversation about health and, you know, even cancer, you know, like looking at some of these plasticizer chemicals being influential in that. Another thing that is a common, not just kitchen favorite, but something that we go out here in the streets with, which is our water bottles. So let's talk about plastic water bottles.

DR. VIVIAN CHEN: Yeah. So most people think that bottled water is cleaner than tap water but, a study has shown that bottled water contains more microplastic than tap water. So a liter of plastic bottled water can contain up to 250, 000 microplastic particles according to a study. So that's magnitudes of water more than tap water. So if you are drinking bottled water, you're better off going to buy a water filter. It's going to be cheaper in the long run, and it's actually better for you. You might as well just be drinking tap water, honestly. If you're buying bottled water.

SHAWN STEVENSON: And also when you came to our studio, as soon as I saw you and I went over and you was like, Oh, nice water, you know, cause it had a glass for you.

DR. VIVIAN CHEN: I was super impressed. I snapped a picture and I was going to share it on my Instagram and say, guess who's studio I'm in.

SHAWN STEVENSON: We treat you nice here. Yes. Now with that being said, you've treated me nice. Before I even met you, you sent me this red light therapy device, which I've been using. And the science is amazing. Like this is one of those things that, you know, I've got a friend, he's probably listened to this episode actually right now. He's got a great gym here in LA and he's got a red light bed and it's like one of these highlights is very, very expensive. All right. And I just been kind of just put in the back of my mind, like, let me, of course I know some of the basic science on it, but you know me. I mean, I'm pretty neurotic about stuff and I'm going to like, when I get into it, I'm going to dig, dig, dig.

And this really prompted me to start to look into some of this data. And I've just been like, this is amazing. This is amazing. All the potential benefits here with something again. Well, let's, let's just, let's talk about it. Why is red light in particular? What is it about red light that is so impactful? On our cells in particular our mitochondria.

DR. VIVIAN CHEN: Yeah, so the red light think of it as a basically a charger for your mitochondria. So the things we talked about earlier in this podcast, they damage the mitochondria, right? Stress damages our mitochondria, ultra processed foods damage our mitochondria, lack of sleep damage our mitochondria. And we're we're every day carrying a mitochondria debt. Where things are eroding our mitochondria health and they need to be, you know, the debt needs to be paid at some point.

Otherwise, you end up with sluggish mitochondria. What happens then? You feel tired. You're brain fogged. You're more likely to have high blood sugar, insulin resistance, gain weight, fertility issues, the list goes on and on. Mitochondria is inside every single cell in your body apart from red blood cell. That's how important it is, right? It takes the food that we eat and turn it into energy so that the cell can function. So in the brain, it's, you know, that cell helps you think. Without that energy in the form of ATP, you cannot think. You can't memorize anything. So mitochondria function, in my opinion, underlies most chronic diseases.

And that's kind of like the root, root, root when we're talking about why does ultra process food make us tired, or, you know, make us sick? It's damaging the mitochondria. Why do environmental toxins affect our fertility? It's damaging our mitochondria. Why do environmental toxins affect children's behavior, attention, mitochondria. And so if you have a modality that can address that and kind of charge up the mitochondria to mitigate some of these damages, that's kind of why it, you know, it seems like snake oil at first because it can

do so much, but it's because it's tackling the very root of so many different conditions. And I'm no stranger to light.

So I did a stint in dermatology, as I told you earlier. So that was at St. John's, one of the top institutes of dermatology in the world, where I used PUVA to treat psoriasis. We used lasers to treat skin conditions. So I knew light can be therapeutic, but I didn't really see the, I didn't really know the benefit of red light until my dad had this really painful muscular condition where he was bed bound. And, I gave him this red light device I was using on my skin to help me with wrinkles, and he used it after a week he got up and walked and his pain was gone.

SHAWN STEVENSON: Amazing.

DR. VIVIAN CHEN: Yeah, so that's when I really took it seriously and dug into research. And realized, you know, there's 2, 000, over 2, 000 published studies now on red light therapy on anything from wrinkles, boosting your collagen, acne, hair growth, to wound healing, recovery, athletic gains. There's so many different things that it can impact.

SHAWN STEVENSON: When I was opening up the box, my wife was right there. She was like, Ooh, what is that? And, you know, when I share with, of course I opened it up and I told her what it was, she was like, Oh, I use this at, my wife has the best skin ever. She, shout out to her, my mother in law too, by the way, who's listening, I'm sure she's listening, but you know, they're from Kenya and just having you know, just the good genetics, of course, but.

DR. VIVIAN CHEN: And your food.

SHAWN STEVENSON: And the good food too. But she does occasionally get like this really fancy facial done, you know, and she was like, oh, yeah They use this when I have the facial done Yes, and I'm just like really like I didn't I had no idea you'd never you know, she never told me about that Yes, and it's just like again these kind of pricey things are now more accessible You For folks every day to utilize for a plethora of different reasons. And that's really why I was using my friend's Red light therapy bed was recovering from an injury about a year ago. And again, just the thing that I noticed it wasn't necessarily just with the recovery. But I just felt more of like a and this was my experience like a meditative state. Having that red light...

DR. VIVIAN CHEN: Yes

SHAWN STEVENSON: ...treatment. I don't know if you've heard anything like that.

DR. VIVIAN CHEN: Yeah, so there's a study showing that it can help with Endorphin production and so mood it can help with mood as well So maybe that's what kind of you're.

SHAWN STEVENSON: Definitely felt lighter and just a better mood.

DR. VIVIAN CHEN: Yeah, it definitely puts me in a good mood. And you know, those beds are great. They're hundred thousand dollars. Yeah but if you're treating let's say a.. One localized injury getting into the bed is almost kind of overkill, and you might get too much light. Like you're trying to treat one area for 20 minutes, for example, and you're in that all over body bed for 20 minutes. You're putting too much red light into your body. And red light therapy is kind of like exercise, right? You want to exercise the right amount because that Right amount is a stimulants for your body to produce beneficial compounds, right? Like antioxidants. So you want just the right amount of light too. You don't want too much Because that can actually cause, you know, oxidative dandruff. I'm talking about with full body. So, you know, you'll see those full body ones. They tell you don't go in it for too long, you know, five, six minutes at a time.

SHAWN STEVENSON: And that's the great thing too, with the LumeBox, it has like the timers, different settings, and also it's not just, The red light therapy. It also has the infrared.

DR. VIVIAN CHEN: Right. Exactly.

SHAWN STEVENSON: So you get like this double impact.

DR. VIVIAN CHEN: Yeah. So red is great for surface conditions. So for your skin, for example, hair. But if you want that light to penetrate into your deeper dishes, like joints, muscles, you need really need infrared light because that penetrates so much better. So that's why I wanted a device where each bulb can emit both red and infrared at the same time.

SHAWN STEVENSON: Now with this being said, this isn't just something that you share with me. This is something that you actually helped to develop.

DR. VIVIAN CHEN: Right.

SHAWN STEVENSON: You know, you are a big part of this and it just makes sense. Again Just with your knowledge base and like the little things that are added and it's so easy to use too. And you guys sent me a great this little stand. So if like if I wanted to you know Do a treatment for example, maybe a sore muscle or maybe you know, if there is an injury like You could just set it up or you can also there's like a handheld thing you could actually use as well

to just Or if you're doing the skin, right? So just doing the red light therapy for you know for your face for as you mentioned um really helping to reduce the incidence of what we put this category of signs of aging, you know, it's really really remarkable. So can you talk about the lume box in particular?

DR. VIVIAN CHEN: Yeah, definitely. Yeah talking about skin. There's some really great clinical studies done now on skin using red light therapy and led based devices like lume box, not lasers anymore. So traditionally used to be lasers, which is, you know, you can only get it in a doctor's office, but now it's done with led based devices and they do these split phase studies. Those kind of like the best study, right? Cause it's fully controlled. It's on the same person, but they only do red light therapy to one side of the face and they compare it to the other side and then you can see dramatic difference in appearances after six to eight weeks. And they even have proven with skin biopsies, there's increased collagen production on the side that's treated.

So it's not just visible, it's, you know, you can show it histologically as well. But the reason why I founded Lumebox is because this device that I had my dad use was so weak. I was reading the research around how much light energy you actually need for different types of injuries or different benefits. It's much more than what this device gave. So I was telling him to use it on himself for an hour, up to two hours a day. Now he has time, he's retired and he was bed bound. So he didn't mind that. But most people are not going to do that, right? Who has time to sit there for an hour? So I wanted to look for a device that had more power and I couldn't find one. I wanted one that was portable. So you definitely can get your friends. you know, fancy full body that's very powerful, but that's not accessible. I wanted something accessible and easy to use in the form of a portable device that you can use when you're sitting down watching TV or you're reading or you're in your car, right?

I take it with my kids to their tennis tournaments in the car. They use it on, you know, during matches as well. So I had to make one myself. And so I spec'd the kind of irradiance I wanted based on all the studies I've read of what kind of is the optimal for most people. Now, everybody's different. So there's a bell shaped curve, right? So we're talking about the middle, right? Some people need less, some people still need more. So that's why I give this guide and education around how to use it. So you want to adjust it for yourself. But it's much more powerful and I third party tested it in a lab to show the irradiance.

So most devices on the market, they use a handheld light meter to show the irradiance, and that's not accurate. I also care about EMF, because if you're talking about infrared light, EMF is, you know, can be a concern.

So I third party tested for that too, and it's low for that. And I wanted something slightly bigger than if I, you know, put it a distance away. It can kind of cover my entire face and neck as well. So I made something a little bit bigger with a much bigger battery life, much more power irradiance. And I put a timer in for kind of the optimal dose for most people for ease of use.

SHAWN STEVENSON: And if people go to the website you can see all of these great stories these before and afters. And people love the Lume Box is really really remarkable.

DR. VIVIAN CHEN: Thank you.

SHAWN STEVENSON: And you didn't I didn't know you were gonna do this. Like you told me that you were gonna hook us up with something special and I, I didn't know what it was gonna be. But can you share that?

DR. VIVIAN CHEN: Yeah. So as you were mentioning it, I mean, I didn't even know you loved it until you told me you did. And then I was like, well, why don't we offer something special for your audience because you're having me on your podcast as a thank you. Let's make your link drop down to \$349. So the usual price for Lumebox is \$629. So let's make it \$349 for your audience for, let's say two weeks from when this podcast airs. So if you go to www.thelumebox.com/model, you can get \$280 off Lume Box right now for the next two weeks. So usually Lume Boxes are \$629.

SHAWN STEVENSON: So usually, of course, the You give certain people a little discount. All right, but not 280 off. All right, so that is exceptional for us. It's for a limited time.

DR. VIVIAN CHEN: Yeah.

SHAWN STEVENSON: By the way again, but we'll still have a discount long term. I'm sure that I could you know finesse with you, but for a limited time 280 off this super cool. Thank you for doing that for us. Again, go to the Lume Box. That's TheLumeBox.com/model. \$280 off for a limited time. Take advantage. This is one of those things that we're just going to keep seeing more and more science coming out about red light therapy. And of course you get the infrared all in one. Super valuable asset to have. I saw a lot of people using it actually pre workout.

DR. VIVIAN CHEN: Mm hmm.

SHAWN STEVENSON: As well.

DR. VIVIAN CHEN: Yeah Yeah, so studies have shown that when you use relay therapy before working out it increases endurance in athletes. So you can actually have more reps as well. If you're working out trying to do resistance training and there's less soreness afterwards. And I, you know, if I know I'm working on a group of muscles and I'm increasing my weight and I'm going to be sore, I would use it after I've gone to the gym.

SHAWN STEVENSON: And we've had so many incredible experts here on specifically the science around building muscle and, you know, even the opposite of sarcopenia. Soreness, unfortunately, because of our programming, we think that's the indicator of muscular change, it's not about the soreness. Like we can actually damage ourselves and make it harder to recover and not get as much benefit because we can't train because we're so sore. It's really about efficiency and getting in high quality reps, high quality volume that's at the right amount.

And so being able to utilize different, you know, right now, again, is so cool because we have access to simple technology that are that's portable, that supports efficient training and recovery. That's what we get with Lumebox and also but for me right now It's really about the skin health and that's really what I've been studying.

DR. VIVIAN CHEN: You have great skin too.

SHAWN STEVENSON: Stop it. Stop it. Thank you. Well again, everybody make sure to check that out and just check you out in general. What's a good place for people to follow you?

DR. VIVIAN CHEN: Oh, thank you so much. So on Instagram. My handle is @plateful.health. So that's p l a t e f u l dot h e a l t h. I also have a website. So that's www.platefulhealth.com.

SHAWN STEVENSON: Awesome. Well, this has been awesome and so insightful. I want to talk to you more. I've got more questions. So, you know, I know, you know, You took a trip to come to get here today and so hopefully the next time you know if we can line this up to Hang out and have you back.

DR. VIVIAN CHEN: I'd love to.

SHAWN STEVENSON: Your experience, your Insights, your dedication to education and sharing what you know with everybody is really special and I immediately connected with you and.. It's just you're one of the One of my favorite people to follow on social media.

DR. VIVIAN CHEN: Oh, thank you. That's so kind.

SHAWN STEVENSON: As well. Yeah, I just appreciate you.

DR. VIVIAN CHEN: You're one of my favorite people too. You have a great podcast that is changing lives So thank you for your work.

SHAWN STEVENSON: Awesome. I received that from everybody. Make sure to check out. Dr. Vivian Chen. I appreciate you for hanging out with us.

I appreciate you so much for tuning into today's episode. Make sure to check out Dr. Vivian Chen's work, make sure to follow her on social media, and of course, definitely check out Lu e Box. We've got some epic masterclasses and world class guests coming your way very, very soon. So make sure to stay tuned. Take care. Have an amazing day. And I'll talk with you soon. And for more after the show, make sure to head over to themodelhealthshow.com. That's where you can find all of the show notes. You can find transcriptions, videos for each episode. And if you've got a comment, you can leave me a comment there as well. And please make sure to head over to iTunes and leave us a rating to let everybody know that the show is awesome. And I appreciate that so much and take care. I promise to keep giving you more powerful, empowering, great content to help you transform your life. Thanks for tuning in.