

Dr. Joseph Mercola:

I don't think Amazon's censoring as badly as Google. We talked about this before.

Dave Asprey:

Oh, I don't know. They took a bunch of the documentaries off and a lot of the books and things.

Dr. Joseph Mercola:

But that's not surreptitiously suppressing information and getting people to believe that it just doesn't exist. I mean, they're just deleting this stuff. I mean most, I mean at my site for sure and hundreds of others including yours, had been impacted by this censorship that really limits our ability to share truthful information to the general public.

Announcer:

Bulletproof Radio, a state of high performance.

Dave:

You're listening to Bulletproof Radio with Dave Asprey.

Dave:

Today's cool fact of the day is that you're probably being exposed to even more BPA than we thought and we already know, and if you've been awake and reading any blog about health or any of my books and things like that, you know that BPA or bisphenol A, which is found in a lot of plastics can interfere with your hormones. And new research that was published in the Lancet, which is pretty important, shows that previous studies underestimated the actual level of BPA in humans by, get this, 44 times.

Dave:

So it turns out that these guys developed more accurate technique for recording real BPA levels in humans. And this is a group of researchers from universities in three states and they found that all the regulators were relying on flawed measurements. I mean, imagine that. And it turns out that enzymes affect accurate measurements and they use an indirect approach before which involved an enzyme solution. And the new method, which is a direct measurement that doesn't use enzymes, found 44 times more.

Dave:

And the US FDA found that BPA levels in humans are low and therefore safe after looking at studies that were based on enzymes. So this new study says maybe we should reconsider this and stop putting this crap in our bodies, in our environment, and in things like our receipts and other cheap plastic things. So it's time that we also look at what these research teams are doing because they're looking at parabens, triclosan, which is still found in cosmetics and soaps, and destroys your microbial environment and our microbial environment, the one around us and inside of us.

Dave:

So let's do real science here. And then what if we did regulations based on science instead of some sort of weird financial based or religious system? I don't even know. But anyway, this is really interesting. 44 times lower or higher than thought. And this is what's driving our regulations. So it's our regulators' job

to use hard science when this stuff comes out. And the good news is that we are seeing shifts in regulations. As the regulators start seeing the real science, it's just taking too long for them to take action on it. But we don't want regulations that change every five minutes either. But we want ones that continues to improve, so I am cautiously optimistic that this will actually enter our legislation and plastic manufacturers will have to stop doing BPA.

Dave:

Now, you're asking yourself, "Is today's show going to be about BPA?" And the answer is no. It's about an F word, the F word being EMF. And it is with my good friend, a fellow bio-hacker and this world-changing guy, Dr. Joseph Mercola. He started his career as an osteopathic physician in conventional medicine about 30 years ago. And then starting in the '90s when I was out there helping to build early cloud computing things, he started out saying, "Hey, I'm going to blog and I'm going to start sharing all this information," and runs one of the largest trafficked health information resources on the internet.

Dave:

And if you've not ever seen it, you go to mercola.com. It's a very famous website full of all kinds of useful information and you've probably seen him in LA Times, CNN and Dr. Oz Show and all sorts of other things. Dr. Mercola, as always, welcome back to the show.

Dr. Joseph Mercola:

Well, thank you. It's great to be here and thank you for that kind intro. My tech background is I think why we share such an affinity because I was first online, I think, mid '70s with us when we had acoustic couplers and the modems were like 25K. It was crazy. And then we did actually and I took my first computer class in the late '60s and we had Fortran and COBOL. We had the computer punch cards for one line of code.

Dr. Joseph Mercola:

So I am not a technical by any stretch of the imagination. And that is not why I wrote this book because I think we should be afraid of technology. I think we need to embrace it. We just need to embrace it wisely the way we did last century. And as a tech guy, you know that virtually no one connected to the internet, probably the most valuable innovation in the history of mankind, through a wireless signal. They did it through a wire in the 20th century. But now, it's like the rare instance where you're connecting through a wire so it's almost always wireless. And that really spurred my investigation of this.

Dr. Joseph Mercola:

Initially, you have to get over this hump, this reluctance to accept that there could be some harm that you may have to change your behavior if you want to remain healthy and not suffer serious derangement to your precious mitochondria by excessive exposure to these frequencies. So I put together this book. Took me three years to write it and it's actually the last book I'm going to write for a long, long time. I'm going to switch to writing review articles instead. It's just this is my new phase of life, I think.

Dave:

Your book is called EMF*D. And one of the reasons I wanted to have you on, there's a lot of alarmists who say, "We live in a blue-lit microwaved world and we're all going to die." And I mean, I hate to say it, but-

Dr. Joseph Mercola:

Well, that's true. Both of those statements are true.

Dave:

We are all going to die and we do live in a blue-lit microwave world. However, it's a really convenient, awesome world with all sorts of ability to do things you could never dream of before. And so, I look at technology as a double-edged sword. And this idea that oh, we have to unplug everything in our lives always is not well founded. But the idea also that, oh, in that case, let's just marinate ourselves in WIFI all willy nilly.

Dave:

It's not born out by science either. And we have this weird polarizing environment where you have to be 100% in on whatever your cause is or you're the devil. And almost everything in life is not that binary. Right? It's a sliding switch. And so I use a cell phone, I'm grateful for my cell phone. It's completely changed my life and I put it on airplane mode when I'm not using it and I turn off my WIFI actually most of the time. And if I really need it, I turn it on and when I'm done with it, I turn it off. It's not that hard. You just have to know.

Dave:

So you wrote a great book about this, and I wanted to go in today. I mean, you've been on the podcast three or four times on different topics because you're a broad spectrum expert here. So I did there broad spectrum.

Dr. Joseph Mercola:

We're trained in all the disciplines, which I'm biased and prejudiced, but I think that's one of the best specialties because you get a little bit of everything when you're a generalist.

Dave:

I love it. It's one of those things where you have to be able to do those things in order to really show up in the world and actually hack health versus just do this one thing or one other thing. So I'm pretty darn impressed with the way you've been able to switch from chemical contamination and glyphosate and then say, "All right, let's talk about your voltage-gated calcium channels in our cells."

Dave:

And something new that's come about that I think we ought to focus on for our listeners is what is going on with 5G. Because 5G is a new innovation in tech and can you walk people through what you found when you're doing the research in your new book? What's the difference between this and your old 900-megahertz mobile phones and the stuff we're using with radar or radio or TV or all the other things? Just why does it matter more now?

Dr. Joseph Mercola:

Great questions. There's a lot of confusion in 5G and even people who claim to be experts are confused on it because the actual danger and damage from this specific frequency, which are shorter wavelengths and they carry more information in a radically decreased latency. So 4G LTE is like maybe 100 milliseconds latency and perhaps 10 megabytes per second. Whereas 5G, when it's implemented

properly, probably 70 times faster, maybe even up to a gigabyte per second with like a millisecond latency. So you're going to get amazing connection speeds, but it doesn't...

Dr. Joseph Mercola:

So that's one of the benefits. The downside is, because of the shorter wavelength, its ability to penetrate physical structures is limited. So as a result of that, you need more of these antennas and transmitters. Literally an order of one or two magnitudes more antennas. So the primary concern is that it's not the actual frequency because the frequency is actually less dangerous than your 900-megahertz cell phone, which is probably the most dangerous frequency because of the resonance effect and its ability to actually resonate with your body's tissue. 900 is like very, very dangerous. So, if you had a choice of running your WIFI router at 2.5 gigahertz or five, you definitely want to run it at five because a higher frequency is actually safer biologically.

Dave:

Did you say 5G is better than?

Dr. Joseph Mercola:

Five gigahertz.

Dave:

Oh, five gigahertz, okay.

Dr. Joseph Mercola:

Yeah, but I said 5G is a safer frequency than 4G or 3G and it's much safer than your old cordless portable phone, which you probably don't have anymore, hopefully. If you don't, you need to either reflect seriously on a neighbor or relative you don't care for and give that to them, so you know.

Dave:

So why you should give your old mobile phone to someone you don't like.

Dr. Joseph Mercola:

Well, portable phone, portable.

Dave:

Portable phone. Fair point, yeah.

Dr. Joseph Mercola:

Let me expand on that. So because it doesn't penetrate physical structures as much, you need more of these antennas, so as a result you have a collectively more exposure to the radiation. So that's the danger. There's more of them. And then this is... All based on this ever-increasing penetration and blanketing of the Earth with these frequencies, which didn't exist 150 years ago. We didn't have electricity until 1890. I mean, at least transferred commercially. I mean it did exist as static electricity in the 1700s and stuff, but it really didn't start till 1890 and then we had telegraphs and stuff and the radio was in the early 20th century.

Dr. Joseph Mercola:

Our exposures radically increased with these radio frequencies and mobile services about the 21st century. So that is the challenge when you have this cumulative exposure. There's some compelling evidence I review in the book that cell phones are indeed, without any question, at least in my mind, are the cigarettes of the 21st century. And they will be conclusively proven to be such within a few decades. The problem, and this is the big problem, is that most people hear that do not believe it and there's a good reason. It's not that they're foolish or stupid or ignorant. They have been very carefully deceived and manipulated by the incredibly powerful wireless industry, which is ever as powerful as big pharma and tobacco and deploy the same surreptitious and sophisticated strategies to obfuscate the truth and deceive the public about this so that they can increase their profits is what it boils down to.

Dr. Joseph Mercola:

And I go into a few chapters just to walk people through this because if you don't learn from history, you're going to suffer needlessly. It's crazy not to learn what they've done and it's all well documented. I'm sure you can remember just as most everyone listening to this, in the late '90s when you had four or five CEOs of the biggest tobacco companies in the country all testifying before Congress and all lying through their teeth that tobacco was not addictive and it did not cause lung cancer. And then literally, a few months later they've settled for tens of billions of dollars because the proof was conclusive.

Dr. Joseph Mercola:

We're going to have that same epiphany. It's going to be too long. It's going to be 30, 40, 50 years from now but it's going to be the same thing. I don't think they're going to be testifying before Congress, but they may be. Maybe repeat the same scenario.

Dave:

It's a really interesting time because with the tobacco situation, I mean I'll be the first to argue that nicotine itself has some medical benefits apart from smoking. Smoking is terrible for you.

Dr. Joseph Mercola:

That's not disputing. That's not an issue.

Dave:

Totally. Right? So it's not like we can't do something good even in that environment. And we have this history of people saying, "Oh, I don't unconsciously want to believe this to be true because it creates huge cognitive dissonance. So I am going to sort of unconsciously believe what I want to be true until I'm just overwhelmed by pressure to change my thinking." And so, I don't think there's people sitting there going, "I know it causes lung cancer but I'm going to sell it anyway because I'm like Mr. Smithers."

Dr. Joseph Mercola:

No, no.

Dave:

It's not like that.

Dr. Joseph Mercola:

They're a delusional denial.

Dave:

That's what it is. And on the EMF front, I actually had a chance to ask four CTOs of some of the largest tech companies in the world on stage. This is at a Peter Diamandis event a while ago. "Hey, whose job is it to validate just safety on this stuff for light exposure, what this stuff does to our brains and all that?" And these guys looked at each other. These are CTOs and they looked at each other, goes, "It's not our job." Like it wasn't in their job description. It wasn't in their corporate purvey. In fact, it's probably dangerous in their job description.

Dave:

So, what I did though here afterwards was curiosity from a couple of them and we had a few follow-ups and it was like, "Hey, here's information we know." But the world's biggest market opportunity right now is what if we had a wireless signal that transmitted data that was biologically compatible with us. We'd have to rip out trillions of dollars of infrastructure and buy new stuff and the company who makes that is going to be one of the wealthiest companies on the planet. So it's not like we're going to just stop using wireless. We're just going to have to fix it. Do you believe that?

Dr. Joseph Mercola:

I haven't seen the evidence of that. I'm not suggesting it doesn't exist or will exist, but these frequencies seem to be causing biological damage by generating excessive oxidative stress. So I don't know if you can modulate the signal in some way so it doesn't do that. It's probably theoretically possible. I have not seen any research to suggest that, but I don't believe it's not impossible. Just that research hasn't been done. In the meantime, the best and wisest strategy is to minimize your exposure to it.

Dave:

Of course.

Dr. Joseph Mercola:

And that just involves using a wired connection, which is probably 98% of my connection. Except now, I travel. I live in the East Coast of Florida and once every six weeks or so I travel down to the West Coast around a four-hour drive. I have someone drive me down and I need to have internet connection so what Brian Hoyer, who is going to be on stage at Bullet Proof at our speaker panel.

Dave:

March 27th, the new Bulletproof or the new Biohacking conference. Yeah, the seventh one, right?

Dr. Joseph Mercola:

Yeah, I love it. It's my absolute unequivocally favorite event of the year. The one I most anticipate.

Dave:

Thank you, Joe.

Dr. Joseph Mercola:

Yeah, I mean I say it because it's true. So anyway, he was a primary consultant in my book and really helped develop and refine and provide a lot of simple strategies, but I just interviewed him just last week and he gave me another great strategy. It's like when you're traveling in a car, what you can do is you can connect your phone, and iPhone does this real well, through a wire to your notebook and have a wired connection. So you can put your notebook in the airplane mode and then you can put shielding fabric over the phone and tape the outside of the phone to the window. It's one-sided shielding. I mean some still are going to leak back, but you probably cut it down by 90% and still have an internet connection.

Dave:

That's interesting. So you're just getting less exposure. Now people might be saying, "Oh my God, Dave, you and Dr. Mercola here are a little bit paranoid." But let me tell you a little story, Joe and I've talked about this.

Dr. Joseph Mercola:

Oh, I know. This is about your hip, right, left hip.

Dave:

Yeah, or my femur.

Dr. Joseph Mercola:

Femur, okay.

Dave:

Yeah. A lot of people maybe haven't heard this. I haven't talked about it in a couple of years, but I know because I wrote a book on fertility in 2011 that okay, don't put your cell phone near your reproductive organs because the evidence is overwhelming about that. So I've been keeping my cell phone in a, basically, hip pocket where pants they have a pocket there most of the time. And I do it on my right hip because I'm right handed or my right femur, kind of middle of my upper leg. And lo and behold, I did a high-resolution bone density, scanned my entire body and my right femur was 10% less dense where the phone is versus my left femur. And my right leg is my dominant leg. That should be a little bit more dense.

Dave:

So what's going on there? Well, what's going on there is exactly what you've talked about on stage at the Biohacking conference at what you've written about and what I've written about, which is voltage-gated calcium channels. So I was literally harming the mitochondria of my bone. And bone density is driven by mitochondria. So this is real stuff. And you're saying, "Okay, if you're going to drive all the time, maybe it does make sense to stick your cell phone to the window so you have a wired internet connection."

Dr. Joseph Mercola:

Yeah. Well, just reduce your exposure. It's simple strategy.

Dave:

It is.

Dr. Joseph Mercola:

But with respect to the voltage-gated calcium channels, that may be true. But in writing the book, and I interviewed a lot of the experts, the top experts in the world, and there's some controversy on whether or not Paul's hypothesis is correct so I think it-

Dave:

Interesting.

Dr. Joseph Mercola:

Yeah, I mean may be correct but maybe some additional variables. But I think what's more fundamental is that you damage the mitochondria most likely through increased oxidative stress and voltage-gated calcium channels could be one way. And thankfully, there's some really good ways to block those channels with really important nutrients like magnesium and then reduce the oxidative stress with molecular hydrogen, which is good for so many other things. One of my absolute favorite supplements to activate two pathway, which stimulates your body's ability to produce endogenous antioxidants like glutathione, catalase, SOD, that really address these reactive oxygen species and reactive nitrogen species like peroxyxynitrite.

Dr. Joseph Mercola:

So, and that's really what caused the damage. Damage the mitochondria, not only mitochondria but your stem cells, your cell membranes, your proteins. Proteostasis gets screwed up, your telomeres. I mean everything that we know is so crucial for longevity. Increases senescent cells. I mean it's just bad news. You and I are both passionate longevity freaks and sadly, most people in this space do not get the damage that EMF causes. I diligently review the literature and I rarely ever see anyone commenting on this.

Dave:

So, okay. People listening going... Half of their brain is right now kind of rolling their eyes going, "Uh, come on. Like I have a WIFI router. WIFI makes it easier." I have one of these ring doorbell things that makes me safer and creates a surveillance state and we allow perverts to talk to my children, which has now happened. Not just call ring but any kind of surveillance system in your home that others can access is a stupid idea. If I could say that as a computer security guy in my other life.

Dave:

I just don't get it when people are saying, okay, half of them, like, "This is so convenient. It makes everything easy. And I have an internet of things. My toaster can talk to my whatever." And then I know they're saying, "I want to live a long time." So now there's this kind of background discomfort. What are the easy things aside from, okay, plug in an ethernet cable, what are the easy things you can do?

Dr. Joseph Mercola:

Well, there's three primary ones. Most people's largest exposure are going to be through their WIFI, their personal mobile device or cell phone. And they need to create a sanctuary where they're sleeping at night. So that means no radiofrequency fields, no magnetic fields, which are pretty easy to test for.

Maybe not as easy to mitigate for it, but at least if you find them, you know they're there and sometimes they don't really travel very far. So you just move your bed around. And then dirty electricity. And then electrical fields, which are hard. Most residential areas, the wire behind the walls is not a conduit. It isn't commercial buildings or hotels so then you don't have to worry. Actually, a hotel is typically a safer place to sleep from the electrical fields perspective, assuming you unplug all the cords that are in the wall, then there's virtually no electrical fields in the room.

Dr. Joseph Mercola:

I just spent a large sum of money to tear up the floor in my bedroom and actually put shielding fabric on the floor and install a new floor on top of that. So I created a complete Faraday cage and my sleep has improved pretty dramatically as a result because I was pretty low, but it's like zero now based on a very sensitive body voltage measurement from Geovital. So I actually had zero microvolts on the electrical fields, which is pretty good. Can't get better than that. And so that's the thing. You want to go to that area and do that.

Dave:

So most of us are not going to create a Faraday cage. And I do have to say, guys, I did create a Faraday cage, geez, going back more than 10 years ago. It's not as hard as you think. I made a little office in my garage when I didn't have any more space in the house and I used aluminized foam for the walls. So there's a thin layer of aluminum foil on all of them and I grounded all of it with copper wires. And you go in there and you get no cell phone signal and I'll tell you, you go meditate in a Faraday cage, you get a different result. You're getting more of your own signal and less of the garbage around you. And it's all very subtle stuff. I used to even do my ozone therapy in a Faraday cage, believe it or not.

Dr. Joseph Mercola:

Yeah, it's a good strategy.

Dave:

I don't know if that was helpful or not.

Dr. Joseph Mercola:

I don't know that I would do aluminum and Brian agrees with that because it reflects more than absorbs. But you can use things like carbon, biochar would do it or graphene type paint. So it absorbs it and doesn't reflect it and scatter it around the room.

Dave:

You can buy EMF blocking paint now that's even low VOC. So it's possible to paint your whole room in this stuff, including the floor if you wanted to. My new house, actually, it's not a new house, but I'm remodeling a house that I bought, new to me. And before we put on the siding, we're putting on a very fine metal mesh underneath the siding for the entire house and we'll be connecting all of it to each other and then grounding it. So it'll be grounded off a metal roof that's also connected to those, but I don't think we're going to do the force and we should be okay because we're on 100-

Dr. Joseph Mercola:

No, no, that was the mistake. Brian showed me this video was unbelievable where the person had a concrete slab and had full Faraday cage except for the floor. And then you could easily pick up the frequency signals until you completed a cage by putting a base to it. You have to do the floor. In fact-

Dave:

Even if we're on 100 feet of granite?

Dr. Joseph Mercola:

Yes, because it's transparent.

Dave:

Interesting.

Dr. Joseph Mercola:

Well, 100 feet of granite, that might be another deal. It may not go through the granite because... I'd have to ask Brian about that because usually, it's not 100 feet of granite. But I do know for 6 or 12 inches of concrete, it'll go right through that.

Dave:

Yeah, that's not going to do anything.

Dr. Joseph Mercola:

But you know what, the way they built their homes in Japan, they use biochar, which is activated charcoal. They put it at the base of their floors.

Dave:

That's smart.

Dr. Joseph Mercola:

Yeah. And they've been doing this for centuries and they just intuitively knew that this was going to be a good strategy. It works against molds and odors and EMF.

Dave:

Can you just mix it in with cement?

Dr. Joseph Mercola:

You can. I'm actually working with a consultant, one of the primary advisors for Dr. B. His name is Barry Dillard, who's in, I forget exactly what he does, but he's creating these skyscrapers in Austin and...

Dave:

Bobby Dillard.

Dr. Joseph Mercola:

Yeah.

Dave:

Dr. B. is Dr. Barry Morguelan. Everyone knows Dr. B. He's been on the show, good friend of both of ours. And then, yeah, Bobby's a great friend as well, okay. So yeah, I've been talking with Bobby about safe building standards.

Dr. Joseph Mercola:

So I'm working with him on creating some integration of biochar within the concrete. So it's seeking to be a prototype for environmentally friendly and EMF-reduced building, because concrete is a really bad material for contributing to the carbon footprint. So, but you can integrate the biochar into it, and it turns the whole process around and it's safe. It makes it safer and stronger.

Dave:

That is cool. All right. So now people listening to this going, "Okay, I live in a condo, I'm in a big city. What can I do?" So the things on my list would be, okay, you can do this EMF blocking paint if you own the place. But if you're renting, it really comes down to, and I've said this before on the air, look, if I lived in a big city in a high rise, I would have a tent around my bed that's EMF-blocking fabric.

Dr. Joseph Mercola:

That's called canopy.

Dave:

Yeah, a canopy.

Dr. Joseph Mercola:

But you got to put a base to it.

Dave:

A wonder bed. Yeah, yeah.

Dr. Joseph Mercola:

Yeah and so that needs to be a complete Faraday cage. You just can't do like a box without a bottom.

Dave:

Okay. So if you do this, now you've got basically metalized fabric. Usually, it's got silver or copper in it. You can see through it, you can breathe through it and all that sort of stuff. It probably looks more like a fairy princess bed than you'd like. And then, or maybe an African safari bed if you want to be more tough about it. What are you connected to? Like there's this grounded electrical system? Does it need to be grounded? How does this work?

Dr. Joseph Mercola:

Well, with respect to radiofrequency fields, it doesn't need to be grounded. But if for electrical fields, it would be a good idea. And we actually created a tent. It's taken us four or five years to do this. A traveling tent for a fraction, typically about a fourth of the cost of creating a canopy and it collapses into about a two-pound size that you can easily travel with. So, and the key was working with the zipper

because the zipper creates a leak and if you have the tiniest leak, the radiofrequency are going to come in. So we had to make some adjustments and actually have fabric on either side of the zipper held together with magnets to completely shield and create the Faraday effect. So it works pretty darn good and radically probably attenuates the signals by 98, 99%.

Dave:

So have you measured in yourself or other people changes in sleep quality, deep sleep or things like that when they're sleeping in a Faraday cage?

Dr. Joseph Mercola:

Yeah, we're in early stages, so we're just compiling the data now because it's taken us like three or four years. I mean just to get a tent that works because there were these leaks and then we just couldn't get down to the level where it was acceptable when we finally got it. So we've only had it for a few weeks and we're still compiling the data.

Dave:

I'm excited to try one out. I did travel for a while with like EMF blocking kind of sleeping bag thing made out of sheets, but it was a little too short for my 6'4" body and it wasn't that useful because it wasn't a tent. It was kind of in your face literally. And I just found I didn't sleep well in it. So I'm interested in this because I travel 150 days of the year.

Dr. Joseph Mercola:

Yeah, it's good for you. I've got one coming for you so, it'll be good.

Dave:

Thank you. But if you're listening to the show and you're like, "Look, I travel twice a year." Look, don't worry about it. You don't need to take something with you. But if you travel for business all the time, you probably do want to consider this.

Dr. Joseph Mercola:

Another tip, and it's not intuitive, is to take the lowest floor and you say, "Why?" Well, typically, there's other buildings around as opposed to the 15th floor, the 20th floor, the top floor in a skyscraper. The higher up you are, the more exposure you're going to have. So it could be theoretically possible that you're on the first floor, second floor, that these other buildings are blocking the radiofrequency signals and you'll have a relatively low signal from the outside, assuming there's not much from the inside contaminating your room.

Dave:

Okay.

Dr. Joseph Mercola:

So I will always seek to get the lowest floor and it's also a good strategy in case there's a fire.

Dave:

That's a fair point. Yeah. You can always jump out the second floor window, but the 20th floor.

Dr. Joseph Mercola:

Or walk down one flight of stairs in the dark.

Dave:

Now, this is a tough question, but I have to ask it. What is the relative risk of being freaked out and worried about EMFs all the time if you get the top floor versus the harm from the EMFs? Like there are people who are really frightened by this. They're sympathetic active and they're walking around feeling under threat all the time.

Dr. Joseph Mercola:

Yeah, well that's going to be dangerous. And I don't know if anyone's studied that, but theoretically, it could be worse. It depends on the exposures, how active the person's sympathetic nervous system is, how damaged it is, what their state of health, how much stress they have overall in addition to that, and what the radiofrequency signals are.

Dave:

And how much toxic metal they have.

Dr. Joseph Mercola:

You can go either way. Sorry.

Dave:

If you're full of mercury, you're going to be more sensitive to this stuff, right?

Dr. Joseph Mercola:

Oh sure. Yeah. As Doris Rapp is so fond of saying, she's one of my early mentors. She's an environmental allergist. Really beautiful woman. It's how big your barrel is or how full your barrel is. If your barrel is pretty empty, you could get tolerate a lot of stressors. If you're full to the brim then just any little bit's going to overflow.

Dave:

It's one of those things. So, for an individual person listening to this, you could say, "Hold on. Which is it?" Well, the bottom line is that for you, the fear of EMF may be worse the EMF and if you're highly toxic and your system is already unstable, you've had toxic mold or Lyme disease or whatever else and you're already on the brink, the EMFs may be really, really bad for you. So it's a question of body burden, but bottom line is you've got to take a pragmatic approach that says it is preferable to minimize EMFs and I'm not going to die if I get some EMFs because the evidence is you're still alive and you're probably roasting in it right now. So that mindset of basic safety is really inherent.

Dr. Joseph Mercola:

And some of us have symptoms. There are hundreds of millions of people who have symptoms and they don't even know it's due to EMFs. And one of the most common ones is tinnitus or tinnitus, ringing in the ears. 80 million people in the US have it and almost every one it's related to EMF exposure.

Dave:

Interesting.

Dr. Joseph Mercola:

So it's just crazy. Arrhythmia, heart arrhythmias, atrial fibrillation, atrial flutter, PACs, PVCs, that's a massive contributor is exposure to EMFs. Neurodegenerative diseases, autism, ADHD, these are all many times symptoms, neuropsychiatric illnesses, as a result of exposure, chronic exposure at high levels that really can decimate biological health.

Dave:

If someone's going to carry a cell phone that is not in airplane mode. How should they do it?

Dr. Joseph Mercola:

Well, it shouldn't be on their body.

Dave:

If someone's going to carry a cell phone that's not in airplane mode, how should they do it?

Dr. Joseph Mercola:

Well, it shouldn't be on their body unless... I mean, you could probably make an argument to do it rarely if you have some type of emergency or you just forget. But I pair it with a Faraday bag that costs about \$5 on Amazon. So I always, if the phone's on my body and it rarely is, it's usually in my backpack, I put it in airplane mode and I put it in this bag. Now, occasionally for some reason I had to hail an Uber or a Lyft, I had to get a text to someone and I forget to turn in airplane mode. So if I put it in the bag, it almost doesn't matter. I mean, a little will leak through, but it almost mitigates that risk. So it's a double protection.

Dr. Joseph Mercola:

But even if it's in airplane mode, there's still some signals that leak out. Your phone is not radio-silent and that's why you need to, for surveillance issues, you need to really put it in a Faraday bag. Otherwise, they're going to track you. This is not paranoia. This is reality and truth. I would strongly, I know this is tangent, but it's an important one. I just interviewed, I did like a Joe Rogan. I did like two-and-a-half hour interview with Dr. Robert Epstein. He's a Harvard psychologist, former chief editor of Psychology Today, and really the premier investigative researcher on uncovering the surveillance state that Google has created.

Dr. Joseph Mercola:

And so I interviewed him for two-and-a-half hours. He also was in a movie called The Creepy Line, which is a direct quote from Eric Schmidt, which is available for free on Amazon Prime. Must watch for both of those.

Dave:

Hold on. It's available for free on the other big company surveilling us. That one?

Dr. Joseph Mercola:

Yeah, yeah, yeah. I know. I don't think Amazon's censoring as badly as Google. We talked about this before.

Dave:

Oh, I don't know. They took a bunch of the documentaries off and a lot of the books and things.

Dr. Joseph Mercola:

But that's not surreptitiously suppressing information and getting people to believe that it just doesn't exist. I mean, they're just deleting this stuff. I mean, in my site for sure and hundreds of others, including yours, had been impacted by this censorship that really limits our ability to share truthful information to the general public.

Dave:

A lot of people don't know what we're talking about there, but Google made a big algorithmic change that took most of the highly useful health sites. So the ones that gave me the knowledge to help hack my own health in the early days and just erase their appearance in most search results to the point that most of the most trusted people that I know in health have switched search engines because every time I do a search, I get very, very mainstream things that are actually not accurate when I do a search. Whereas a year ago, I would get...

Dave:

What's funny, most people are talking about this, so you can't trust the search engine to tell you what's actually common on the internet. They're trying to do their thinking for you. So I really have found-

Dr. Joseph Mercola:

Well, their agenda, implemented their agenda for you essentially.

Dave:

Well, we can't know what's going on.

Dr. Joseph Mercola:

You can get some pretty good projections.

Dave:

You can certainly see what someone's doing but it's very hard to know what someone's intent is. And when you're dealing with algorithmic stuff, what you end up with is emergent behaviors, right? And unfortunately, when you say my goal of the system I've built is to maximize profits, it will inevitably go to censorship and monopoly behaviors because that's how you maximize profits. And it's not because one person's at the top going, "We're going to take care of those bad people." It's because that's how systems work. And life works the same way.

Dr. Joseph Mercola:

Sergei and Larry, when they both started Google actually wrote a paper like in the '90s warning of this trend and tendency and who to know? Two decades later, they followed the same path right down. It's sort of an inevitable progression. So sad but true. So the bottom line is do not use Google. Do not use

Chrome, do not use Google Search. It's just every character that you ever type in there is saved for the rest of your life. It is never deleted. Never. And they will use it to surveil you.

Dr. Joseph Mercola:

I was talking to my girlfriend the other day, I was going down to South Florida to visit a hotel and my phone, I had a VPN. So it wasn't me, it was her phone. Then the hotel literally seconds later an ad for it came up in her Facebook.

Dave:

Wow.

Dr. Joseph Mercola:

Yeah. So I mean that is just common nowadays and it's because they're surveilling you. So no Google Search, no Google Chrome, no Android. That's why I use an iPhone. I threw away my Android phone because it's a Google system. So there are other alternatives. Some people recommend Startpage, but that's just been bought. So we don't recommend that one. Swisscows is what Epstein recommends. Swisscows, plural C-O-W-S.

Dave:

Never heard of that.

Dr. Joseph Mercola:

And then the best browser is Brave, B-R-A-V-E, based on the software Chromium, which is what Chrome is based on also. And so the benefit of that is you can transfer all your extensions, all your bookmarks seamlessly. It's so easy and you can download an extension for Swisscows and you can make it your default search engine, so you'll get a reasonable thing. The problem with all these and Qwant, Q-W-A-N-T, is another good one, but they're good now.

Dr. Joseph Mercola:

As they grow and people started to visit them, there's this inevitable tendency for larger corporations to become corrupted. So that's why I'm working with a few big natural health sites and people who are aligned with this mission. So hopefully within the next year, year and a half, have an alternative search engines and it tells you the truth. That has this incredible board that keeps people committed that is absolutely on focus to give people the best results possible in natural health space. Not alternative search engine. That'd be too massive, but at least for health.

Dave:

Now, a lot of the time with these search engines, there's a cognitive bias in there and algorithms are meant to overcome a cognitive bias, which means that if there's a group of people who dearly believes that we should all take antibiotic, like industrially raised feedlot animals. So there are people who probably believed that in the '70s and still believe it today, they should have a voice and be able to make the case for that. And likewise, there could be people like you and me who say, "Antibiotics should be saved for when you're dying and we should never give them to animals because it's destructive of the environment."

Dave:

Now one of those two sides is probably right and the truth may be somewhere in the middle. However, if your search engine provider decides which one is right for you, using a stupid website like Snopes, which is one of the most horrible websites out there, what they've done is they've removed dialogue, they've removed your ability to think and they said they'll think for you. And if I wanted a search engine to think for me, I would pay them to do it. But I would like to do my own thinking. And so that's why search engines are meant to actually search, not to filter out things that the owners of the search engine don't like.

Dave:

So when it comes to things like EMF, I'm sort of talking about here, look, there is an argument that EMF might be safe. I want to hear it. There's an argument that EMF might be dangerous. In fact, I think it's the most likely truthful argument and I would like to continue assessing that. But once my search engine provider removes my ability to see both sides of a debate, they have lost their utility as a search engine provider and now they're a marketing provider. And this is the problem that we're dealing with.

Dr. Joseph Mercola:

Which is interestingly, the natural health sites have been censored. Now what comes up instead of these sites like mine and yours would be sites like WebMD, Healthline.

Dave:

That's all I ever get anymore is those two. And it's really sad because most of the stuff that's written there is written at a Reader's Digest level of knowledge. So it's very simplistic and it's wrong, a lot of it.

Dr. Joseph Mercola:

Well, but those sites, which you may not realize, those sites are all owned by advertising agencies. Advertising agencies and it's totally illegal for you or me to write content article and then have an ad for a supplement to support that, but they do it all the time. They have these articles and studies and they have the drugs for it right there. That's what they do. And so all these sites are coming up pushing big pharma's agenda, which is sad. But that's the reality.

Dr. Joseph Mercola:

And interestingly, with respect to aggregating personal responsibility, the CTOs you talked about earlier and whose responsibility it is. "Well, it's not my responsibility," but it really is. They put that responsibility on the government, as does the wireless industry. And interestingly, there was a good movie about a DuPont corporation called Dark Waters with Mark Ruffalo. I don't know if you've seen it. And it goes into the whole history of how DuPont literally contaminated this local community in West Virginia for decades and killed thousands of people and animals and everything. And literally took them nearly 20 years to get justice and \$30 million settlement because they were so powerful.

Dr. Joseph Mercola:

And their strategy is the same strategy. Why am I going this tangent? Because it's the same strategy that the wireless industry is using. DuPont said the EPA had responsibility and they never classified their CA or their precursor Teflon as a hazardous waste so they didn't have to report it and they said, "Well, the government says we don't have to." So they essentially used the government as a surrogate for safety

and they manipulate the game so they don't even understand that it's an issue and they hide the data from them. And the wireless industry is doing the same strategy and you're going to see other films like Dark Waters that come up 20, 30 years from now. And you say, "Oh, I cannot believe it." It is definitely worth a watch just to know the strategies that these corporations are using. DuPont really is not a good company in any way. I mean, they're a nefarious, devious company that's really had no honor for human life.

Dave:

And those are the ones who, what? No, it was Bayer who bought Monsanto, not DuPont. But yeah, these are the companies who are actively destroying the soil on the planet and telling themselves they're not doing it.

Dr. Joseph Mercola:

But Google may be worse than all of them and they're worse because people don't perceive them as bad. They've got this good guy image because they don't do any evil. They've abandoned that model like five years ago but people still think that's their motto. It sure isn't.

Dave:

It's really funny, Joe, I run this deep neuroscience personal development company, 40 Years of Zen, and I will tell you straight up your nervous system, your unconscious doesn't understand negatives. Only your rational brain does that. So when you tell yourselves don't be evil in your daily meditation, all your brain hears is be evil.

Dr. Joseph Mercola:

Be evil, evil.

Dave:

That's actually what happens. So what you do is you say be good. And then amazingly, your nervous system will believe that. You always phrase things in the positive. And I think this is a fundamental mistake that Google made. You built that into your culture from the beginning. Don't be evil and all people hear is be evil, be evil. And that's not what their conscious brain hears. It's what their gut hears.

Dr. Joseph Mercola:

It's my understanding and I don't know if it was conscious. I think someone came up with it in a meeting in the late '90s and that's they just adopted it. It wasn't like thought out and that no one ever really carefully studied.

Dave:

Since the very early days. I was at a company that held Google for servers and it was two guys in a server. Yeah. And in fact, I was a cofounder of the consulting part of that company. My buddy JP was like the first guy in that account. And it's shifted a lot but their intent was we don't want to go down that path.

Dr. Joseph Mercola:

No, they were well-intentioned. No doubt in my mind.

Dave:

Do you think it's fixable? I mean, we run the risk of just being negative Nellies and sort of saying...

Dr. Joseph Mercola:

I don't know. I'm really skeptical. I saw another movie, The Terminator series and Skynet. I mean Skynet is Google on steroids is what it is. I mean you get this because artificial intelligence and AGI, artificial general intelligence, which was projected to happen in the next 20, 30 years by some experts, the biggest employer of the leading AI scientists in the world is Google through DeepMind and they're the people who developed that software system that beat the Go champions, which is just an extraordinary exponential development in AI.

Dr. Joseph Mercola:

So I mean, Google's got this technology so they've got this and these nefarious strategies, it's not a good combination. It doesn't really fare well for the future, which is why it's so important to watch it. My interview with Epstein and The Creepy Line video on Amazon Prime because they expose it and Jordan Peterson is also in The Creepy Line video, another really good, powerful speaker of the truth, that really outlines the extent of the issue.

Dave:

It's a scary thing. I may be more hopeful than you, Joe. Because along with all this stuff, we have more data than ever before. We have the ability to see what systems are doing. It's not like Mother Nature hasn't been playing really mean tricks on us forever. This thing called aging and these behaviors like war and greed and ego and all the seven deadly sins sort of things are emerging from biological systems, which are reflecting themselves in mechanical systems that we build.

Dave:

So I feel like as we advance our consciousness of the species, we will rapidly change our environment because at the end of the day, if there's really only six really wealthy people controlling all AI in the world and keeping everyone else's peasants, you know what, you don't have any cool friends to hang with and you hate your life. We're not going to go down that path. People would hate it. Not just the people subjected to it.

Dr. Joseph Mercola:

I don't know. I'm not as hopeful.

Dave:

You're not? Well.

Dr. Joseph Mercola:

Because the companies that have all that data is not you and I. It's the big companies like Google and China too. They're silent. China has a surveillance state. They have the social credit system that they literally have tens of millions of cameras. And if someone jaywalks, I mean his name is on these billboards, these LED billboards in their main cities and their name and phone number and pictures just broadcast and they're vilified. They cannot fly anymore. The only way they can travel is in the backseat

of a train and they can't buy nice houses or cars. I mean it's just a real... It's tyrannical control of the population is what it is and we're losing our personal freedoms and autonomy.

Dr. Joseph Mercola:

I'm a passionate appreciator of the founders of this country who sacrificed so much to gain these freedoms and we're losing it. We're losing it. And people just don't get how easy it is. It's hard to win and it's easy to lose, and I think that's where we're at and we're losing parts of it almost every day.

Dave:

There's-

Dr. Joseph Mercola:

Now, I'm sorry, I'm so pessimistic. I see the writing on the wall. I'm concerned. It doesn't have to be that way, but it's going to take some aggressive action to prevent this snowball coming at us or this like the temple of doom where you've got this giant rock coming at you.

Dave:

You've got to be willing to talk about the problems. You got to be willing to acknowledge that we have an issue so you can fix it. And I think you're doing a good job on that. And I think we will fix it because throughout all of history, people are in this okay, boomer thing and look at what the boomers inherited. They just had two world wars when they were born. They just had atomic bombs going off and just saying, "Oh, it's all your fault. So let's go back and you go back and you go back." But overall, a lot of good stuff has happened. There's less war, there's less famine and yeah, there's some new evil tech out there. But over the course of decades, I feel like it'll go through cycles.

Dr. Joseph Mercola:

Well, I think you've been unfairly influenced by Peter Diamandis. I mean he shares that hopeful view. And I'm glad that he's out there sharing that message because there's some truth to it, but I don't think he counters it with the reality of this surveillance state, which is inevitable and it's this very serious threat to our personal autonomy.

Dave:

It is a very serious threat.

Dr. Joseph Mercola:

And we can lose basic freedoms. I mean get to the point. I mean, and they stage these potential fake epidemics like the coronavirus and they use that as an excuse to implement mandatory vaccines for everyone. And when you have tens of millions of surveillance cameras, they could easily categorize you and find you if you didn't get it and then force you to get immunized. So it's just an absolute risk of your losing your personal freedoms and almost strict violation of Nuremberg Codes.

Dave:

Yeah, that one is particularly nefarious. If you can force people to get whatever implants you think they should get.

Dr. Joseph Mercola:

Yeah.

Dave:

Or frankly, if you can force them to buy health insurance, they don't want. Those are very similar-

Dr. Joseph Mercola:

Yes, well, that's another strategy.

Dave:

Those are very similar things. And so it's like, "Okay, what's the world going to look like 50 years from now?" It depends on what country you live in, right? It depends on what resources are available. And I just believe maybe in the basic human goodness over time that we will overcome. And you look at the times when things have been really crappy throughout all of history, that's usually at a peak or a trough of a cycle. And we do have a cyclical thing, so.

Dr. Joseph Mercola:

Well, I hope you're right.

Dave:

I hope so too.

Dr. Joseph Mercola:

We're going to be around for a while so we'll be able to see the path and see who's right.

Dave:

See the path and also forge the path, right, just by talking about it right now.

Dr. Joseph Mercola:

Yeah, absolutely. I mean, that's one of my missions. I mean, the last thing I want to do is be on my death bed and say I didn't try hard enough. That's the absolute thing I want to avoid and I'm pretty sure I will. That is just an unfulfilled life.

Dave:

You've done a lot to go up against some really big corporations who have done bad things. Whether they knew they were doing it or not is less relevant. And the companies who build a culture that says, "Oh, we were wrong, we're going to correct it." That's a powerful thing to do. The difficulty is that if you're in a company like that and you write down in your email system, we were wrong, then suddenly you can be sued later for having been wrong, even though at the time all data said it was okay. So we're also sort of blocking these companies from changing their behaviors because by admitting, "Oh, well, before it wasn't as good." There's liability. And part of that is the US has 70% of the world's attorneys in it. And that's driving a lot of these bad behaviors.

Dr. Joseph Mercola:

The classic example of this, one of our health activism roles is in removing mercury from dentistry. And mercury's been around since the civil war and the liability for the ADA admitting that it wasn't a good strategy is literally hundreds of billions of dollars. So we've taken some very clever strategy approaches and literally probably a few years away from banning it in the use of dentistry worldwide.

Dave:

And you've been a leading voice in that for decades just fighting that fight.

Dr. Joseph Mercola:

Yeah. So mercury is a toxic poison and it shouldn't be the case where almost every adult has to deal with mercury detox. All the kids should never have a mercury filling ever put in their mouth. There's just no excuse for it. Yeah. You got to stop the problem at the source, not treat it later.

Dave:

Yeah. I feel like that knowledge and just in the last 10 years has become way more mainstream and that people are really saying, "I don't want to do it, it's ugly and it's unsafe." And there's still some people doing it but man, it's a lot better than it was. This is an example, Joe.

Dr. Joseph Mercola:

Yeah. When Charlie Brown first started, it was like 2% of the dentists were mercury-free. Now it's 60%.

Dave:

Yeah. In about 10 or 15 years, right?

Dr. Joseph Mercola:

Yeah. Yeah. About that time frame. He's working through the World Health Organization and passing international treaties all over the world, internationally, so.

Dave:

Well, perhaps that's how long it'll take for us to be surveillance-free.

Dr. Joseph Mercola:

Yeah. But it does show that the longer something's been around, the harder it is. Vaccines would be another example. It's almost as long as mercury, which the longer something is around, the harder it is. Fluoride, not as long, but still really hard. It's been six decades it's been used. So the longer these lies and myths get perpetuated, the more difficult it is to remove them from our practices or changing.

Dave:

Yeah. Or who knows. Maybe there's some safe use of fluoride out there. I haven't found one. I don't know of one. But I'm going to be open minded about this stuff. Like show me the evidence is what all of us should be saying there. Because I think fluoride is just downright a horrible thing to put in water and it's a violation of basic human biology.

Dr. Joseph Mercola:

No, you're not. You're not. What just saddens me. I actually interviewed an endodontist who has some really good strategies if he did have a root canal. But I realized in my interview with her that if we were eating the way that you and I advocate and our kids were eating that from day one, they would not ever get a cavity. They wouldn't get a cavity ever. So they wouldn't have ever a need for a root canal or a mercury or any type of filling, let alone mercury amalgam. So you've got to treat the cause, eat the right foods. Avoid processed foods like the plague and sugar.

Dave:

Yeah, you do. Well, Mark Hyman was just on the show. He's working on changing the food system right now with his book Food Fix. And in fact, we mentioned, I mentioned that you're coming on the show in the episode with him and I really think that we can make some fundamental changes in human behaviors that will quickly make the big food companies, the big tech companies, all of them change.

Dr. Joseph Mercola:

The caveat is if our ability to communicate with the public isn't handcuffed, which is what they're seeking to do and they have done. There's workarounds and if we can create these alternative health search engines that people know exist, just like everyone knows that Wikipedia exist and then they'll soon find out that Wikipedia is a fraud for the most part, especially when it relates to health. Then when they want to learn truth about health, they'll go to this site and they'll find it and they can't take that down.

Dr. Joseph Mercola:

I mean, there are some tools that you may know about that Google can use. They can say there's malicious spyware and essentially prevents all the ISPs from sending anyone going to that strategy. But that's probably a last ditch effort that they would pull out.

Dave:

There's probably some antitrust lawsuits over that as well.

Dr. Joseph Mercola:

Oh yeah. That would be Supreme Court stuff for sure.

Dave:

Wow. It's fascinating to have a view in how the internet is wired underneath it and all the good things and the bad things you can do. One thing I used to do, Joe, that you'll laugh about, I quit doing it 10 years ago because I actually was worried about the environmental footprint of it, but I used to have a little thing running in my browser and it would at a random number of seconds between every one second and every 30 seconds it would make a random query to Google from my account. So my Google Search results were completely full of crap. And there's no way for Google to know exactly which of those things I actually searched for. So essentially you can hide your tracks with dirty data. And this is the big Achilles' heel of all these people.

Dr. Joseph Mercola:

But why give them any data? Just use a VPN. They won't get anything.

Dave:

Oh, well, that's a great idea if they really don't get anything. Well, we actually know that the number one VPN company out there a few years ago was actually operated by the NSA and that was well established and it was still one of those things where the worst criminals were using it and the NSA was just laughing. But also, if your Google is saying, "Oh, this is one of those people who doesn't use Google, put them on the blacklist. And then, okay, they only get to ride in the back of the train." But the bottom line though is dirty data is really hard for these guys to deal with and they hate it. So that's what you get for being a hacker.

Dr. Joseph Mercola:

I know, I know. I sure hope so. I'm not voting or cheering against you. I'm just pessimistic.

Dave:

Yeah, you're concerned about it. I'm concerned as well. And we're both doing what we can to make it better. Well, I do think that your latest work and probably your last book for a while, EMF*D is worth a read because aside from all the information freedom stuff we were just talking about the end of the interview here, the idea that there are things you can do to reduce your risk and still have the benefits of information at your fingertips. Look, it's just pragmatic. It not a fear-driven thing and no, you don't have to go out and spend \$100,000 rebuilding your house, but if you are putting up new wallpaper, maybe you should do something behind it that's going to make your sleeping environment better. Incremental improvements while still getting benefits. That's that idea of changing the environment around you so that you have control of your biology. Perfection not required. Just move in that direction.

Dr. Joseph Mercola:

Yeah. So chapter seven is the what to do to remediate and was largely influenced by Brian Hoyer who's going to be on the panel at your event. And I'm actually giving most of that chapter away for free. You don't even have to buy the darn book.

Dave:

Cool.

Dr. Joseph Mercola:

You just go to emf.mercola.com and you can download it even before the book is published. So, and you can get all these tips because there's a lot of them simple things. I mean it would take us an hour or two hours just to go over all those 25 pages on what to do. So that's why we're giving it away for free.

Dave:

Well, I would encourage you, if you're listening, go to the Bulletproof conference or the Biohacking conference. It's in upgradelabs.com/conference and I think if you use code Dave, you'll probably get a deal. I'm pretty sure we got one. But what you'll find when you go there is that Dr. Mercola is going to be on stage. We'll be talking about this kind of stuff and a whole bunch of other people who care about this. So there's a big community, much bigger than you'd think, thousands of people in person and millions of people around the globe who are paying attention to EMF or paying attention to BPA and all

the other stuff that you've been paying attention to for 30 years, Joe. Thanks for being on the show. Thanks for your work.

Dr. Joseph Mercola:

Thanks for everything you do, man, and being so optimistic.

Dave:

I'm going to keep doing that because if I'm wrong, then I'll at least die with less stress.

Dr. Joseph Mercola:

Yeah, sure. Absolutely.

Dave:

On that note, pick up Joe's book. It's worth your time. EMF*D as yes, that F*D and read it and use it for your benefit. Have a beautiful day.