Introduction to EMF Toxicity

I'm very excited to share with you information on the toxicity of Emfs. This is, one of those subjects that the more you dig into the medical literature, the more you can't believe the massive amount of literature and data that's showing that emfs at supposedly safe levels are very toxic.

And clearly showing that. So, I'm going to, hopefully give you a little, taste of, of the literature. And there are just massive amounts. I, I'm just scraping the surface here for you guys.

You know, if emfs were a drug, they would never get approved. They would be immediately recalled. And, you know, speak on a wide range of topics. And I often hear, oh, there's so much, you know, basically medical literature.

Why haven't I heard of this before? And the answer is usually money and and or politics are usually both. So but I'll, I'll present, a little bit and give you a taste of some of the data when looking through it.

I'm just blown away at, the, basically massive amounts of literature that are showing how emfs are affecting our lives. So, we'll get started here. So counteracting EMF toxicity with peptides, really?

The EMF, the silent killer. Disclosures, honor, the medical group, chief medical officer of the nonprofit National Academy of Hypothyroidism. And chief medical officer of integrative peptides.

And in, false disclosure, the, legal team is making me say this. So, I am chief medical officer of integrative Peptides. The opinions expressed are mine and not ness and do not necessarily reflect those of integrative peptides.

And none of the information and claims contained within this presentation pertain to a specific product, and are not endorsed by integrative peptides, and have not been reviewed by the FDA and no statements in this presentation have been evaluated by the FDA.

Products from integrative peptides are not intended to diagnose, treat, cure, or prevent any disease. And you had the legalese on the right there. So, right.

Goals and objectives that we'll talk about what what are emfs and how do they work. We'll talk about manmade versus natural, which is a big difference.

Types of exposure, the controversies, the effects of EMF, sun on health, of course, and how it relates to really multi-system dysfunction that we see with other chronic illnesses and other toxic exposures, cellular effects, neurologic immunologic behavior, psychological effects, cardiovascular, thyroid and hormonal effects.

We'll go through basically a little intro to peptides and the basic major class of peptides, including really the core of all this will come down. And I hope I can convey is that immune modulating and with all the common denominator of all these illnesses is immune dysfunction.

And mitochondria dysfunction. But with the peptides you can get much more specific. And with brain, mitochondrial, boosting, anti-aging, anti-inflammatory.

We'll talk about the importance of the gut brain axis. And, you know, the more we learn about the gut brain axis is, the more we learn it's important.

And emfs really affect that a lot. And which then goes along to everything's a vicious cycle. And really the synergy

between multiple peptide therapies and other therapies as well.

So what are EMF. So there's a typical cell tower hidden in a thick palm tree. But so going back to physics and don't get too hung up with this, but there's basically emfs electro magnetic fields are, there's the electrical field or the magnetic field and they're perpendicular to each other.

So there's basically a wave. And you can see here like Schofield goes one way and then 90 degrees there's the magnetic field. And where do these come from.

What EMFs Are and Why Polarization Matters

So the extremely low electromagnetic fields are basically from here that's like cell towers. And which or the high tension wires where really you'll find that the magnetic part of that is the biggest problem rather than the electric field.

And those were more associated with leukemias and cancer. Then you start getting into where this is where we're really talking about is the, emfs here in the, range here where you get cell phones and the, the routers and the WiFi guys, those are the our by far the biggest problems.

And then you get also electromagnetic fields from wiring in your house, and things like that, which they all cause problems. But really, I think with, Wi-Fi and the cell phones, and I'll, we'll show you studies where just the, cell phone can cause basically brain damage and, you know, showing with, with rats, learning disabilities and actual, brain damage, actually.

So and we're being bombarded with this and, and how they actually all these, EMF is coming from multiple sources in nature. They cancel each other out, but with artificial.

So they actually combined to be stronger. So that's that's a major problem. And this is the basis, cell tower here. And this is the electrical field. But there's also a magnetic field associated with that.

And just another depiction here. The magnetic field, when you have, current going through a wire, there's electrical field and then a magnetic field around it again, perpendicular.

But and but the key is polarization. So in nature, basically the emfs are created from, natural sources where basically electrons are changing from, basically, different states and they're putting off in random directions and they end up canceling each other out.

So really, all you get is when you get exposed. So let's say it's the sun or the Earth is you can get thermal, basically error, excitation of molecules.

But they don't change. They don't cause an electric charge in the body like the basic artificial ones is the man made here. You look at the the waves here.

And when they're basically in sync, they combine to cause a bigger wave. And they can also cancel each other out. So all types of manmade emfs are polarized, so they only have one direction or.

Yeah, naturally they're non polarizer in all directions. And so when you have multiple sources they cancel each other out. But when basically they're typically sent out in the vertical like or with antennas that you get these basically spots that are additive and you'll get low spots.

So you can get these and also coming from multiple sources, you can have spots randomly and also moving where there are huge levels of electromagnetic radiation.

Again from the sun light bulbs are non polarized. So infinite number of of planes. So they cancel each other out. And where as you can see here you go.

Basically going from all around it equals zero. But when you have them all in one direction you're going to get additive parts and you're going to get parts that cancel each other out.

So in nature there's no force on a charged polar molecule other than if there's just general increase in molecular, Brownian motion. Basically, it heats up the tissue.

But very different with manmade emfs. Again, they're polarized. And the problem is when they look at safety, they're looking at just what basically it can happen with the amount of thermal increase, like how much heat.

But that's not the problem. It's that when it's polarized is it also it's AC curve which goes back and forth. It causes all these cells in your body to line up, charge molecules to line up and go back and forth and and oscillate with the current.

And we have not basically billions of years of not been exposed to this. So basically you get, huge amounts of EMF energies at points that are unpredictable.

They vary in location and strength depending upon the location and source. The frequency. You get hotspots where all of a sudden they all come together and where you get huge, huge levels and just some more here about where the how the waves will basically combine.

But if they're non polarized, they cancel each other out. And what we're finding is that the biggest problem is the cell membrane sensors for the gated ion channels, especially the calcium ion channel, will open.

And this is the same thing that is happening with the cell danger response that allows calcium channels to be open and cause mitochondrial dysfunction, which then becomes a huge, vicious cycle, vicious cycle with immune dysfunction.

Hypothalamic pituitary dysfunction. And it just goes around and around, and where natural emfs won't do that. So, you know, throughout an evolution or time on Earth, we've been exposed to non polarized.

Emfs. But we've never been exposed to, the polarized emfs. And, so basically just a millionth of a non polarized, the EMF, a polarized can have a biologic effect.

And when you look at the studies, you'll find that if you look at industry studies, about 70% show that MPs are totally safe. Don't worry about it. About 30% show they're harmful.

But if you look at non industry funded, studies, 70% show their harmful and 30% show no effect. So you'll see that a lot. Unfortunately in medicine, and unfortunately and this is also within the range of so-called accepted safe ranges, significant toxicity.

So again, if this were a drug, it would never even be considered. And also when when you look at how MPs are put out artificially, they're put in pulses.

And as you can see here and the pulses are what get you. It's not the average because these high levels of EMF will now cause alignment of these all the polar molecules in your body where they're again, we'll talk more about the, the gated voltage channels and other things.

And they have a huge effect on the body where but the average is very low because they're, it's, it's basically their pulse. So a lot of times you won't have anything, but all of a sudden a big hit of EMF, even just one watt emitted from a mobile phone can cause DNA damage.

The, the safety data standards, estimates of thermal damage, again using non, polarized and but that's not the problem. It's the problem is is this how it causes your, body these molecules to line up and, and, oscillates so that actually the emails call with the peak pulse is not the average, which is this is how Wi-Fi is, work your cell towers, your cell phone.

It's always sending out pulses. So they're much more, potent, able to elicit a biologic response that tiny doses that would never, you know, thermally heat up your body.

So they assume that they're safe, but it's a totally wrong assumption. So thousands of studies have shown and support the fact that very low intensity, polarized, pulsed, non thermally acting emfs can result in abnormal activation of the voltage gated calcium channels at that are 7 million times lower than what is considered safe.

So they again, they just look at what is going to heat up the body. Let's look at electric cars. For a second here. Now, the metal body, even of a car, is a conductor of medical electricity.

It's like a Faraday cage. And I don't know if you know what that is, but if you remember the pictures of Tesla in a cage were all electric. Lightning bolts are all around.

But he's he's totally fine, so that insulates the person inside from the electromagnetic field. But it's the electromagnetic field coming from inside the Faraday cage.

It is amplified tremendously. So anything that's going on inside the car, whether it's if you have a cell phone, the Bluetooth with, all the electronics in the car, they're hugely magnified because they don't escape the car.

I mean, it's not a perfect Faraday cage, but it it is pretty good. And modern cars have so many different, computer parts that are sending out, you know, air mouths and, and connecting to one another and Bluetooth, that it's a problem.

But then when you look at electric cars now we go to even bigger, level here. They pose a significantly larger as they have, you know, huge electrical currents and batteries.

The tested magnetic fields exceed 30 times the levels that are seen in very close proximity to the high tension wire. So the high tension wires, you get about point 2 to 5, micro Tesla.

Magnetic field units. But you can see here on the left that in like the BMW, if you sit in the back seat, it gets about two 100 in the Nissan. About 100 in the front seat with the Tesla, about 50 in the back seat.

The Volkswagen about, you know, 86 in the front seat. So huge. And the Australian, Radiation Protection Nuclear Safety Agency states that areas having, oscillating magnetic fields between 2 and 100, micro Tesla must have an appropriate warning sign.

Cell Towers, Wiu2011Fi, and Pulsed Radiation

Okay. And these are right there in the hundreds. And fields above 100 must be controlled by a permit. So it's like it's like toxic. You got to warn people.

I've never seen a warning label on a electric car. And just looking at a pulled announced a nine. Studies reported a two fold increase risk of childhood leukemia in children.

Exposed 2.4 micro Tesla or higher. And again we're talking about a hundred here. Where they're, you know, average in here getting average. Not there's not the big problem, but, you know, like five, six, seven but, you know, getting up to 150 to 100.

So at point for a higher increase leukemia. Meta analysis 15 studies showed a 1.7 increase in childhood leukemia among children with exposures of 0.3 units.

Micro Tesla higher again, the electric cars are way above that hundred, you know, hundreds of times higher. And, basically another, studies show a 1.4 increase that again, 0.3 or higher of leukemia.

So people, you know, with the electric cars, hey, want to, you know, decrease my carbon footprint and, that's all all

great. But, you're, you're getting into a basically huge electromagnet like field.

And, you know, what's the biggest way you can reduce your carbon footprint is not have children. And you may not be able to have children driving an electric car.

And I didn't I took out the studies on on fertility, but just because we had, too many things to go through. But, it's it's a major problem. And then, you know, put children in electric car that are much more susceptible to electromagnetic fields.

I, you know, I, I won't get an electric car, but, I'll probably get, you know, Tesla send a hit man off after me, but, well, what are the effects of EMF?

So let's talk about that. So, we see in the studies, anxiety, depression, ADHD, OCD, stress, more emotional, you know, lack of sleep, I think is is the biggest thing you don't if you have, like, Wi-Fi and electromagnetic fields when you're sleeping, you don't go into deep sleep.

And hugely associated with Alzheimer's, neurodegenerative diseases, ALS, huge association, cognitive dysfunction, learning and memory. And we'll look at a lot of studies with that.

Hypothalamic pituitary, tons of hormonal deficiencies. Pineal gland dysfunction. So, and we'll talk about which is kind of a key to aging. So it's really an accelerated aging.

These emfs are amazing, making us age so much faster. And we're getting all these diseases of aging when we're younger. And, you know, and I look back, you know, 20 years ago, I don't remember everyone being sick, but it seems like everyone's sick and everyone has these kind of diseases of aging.

And they're young, again, sleep disorders, insomnia, brain tumors, tinnitus, the, but the basically a, brain blood barrier and even just almost instantaneously, your blood brain barrier will open up in electromagnetic field.

It's it's crazy and goes along with the gut. So all these you have leaky gut, which means leaky brain. Emfs are certainly contributing, and a lot of things contribute.

So it's another thing that is causing huge problems. It's also, you know, shown to, basically stimulate the growth of toxic molds and make them, stimulate them to secrete mycotoxins at a million fold times higher.

And in the presence of electromagnetic fields. So it's it's getting us multiple ways. And, you know, we're finding all these, you know, mold problems, which, you know, no one's talking about mold problems.

20 years ago, MPs are making mold just grow everywhere and much more toxic, much more toxic. And it's making the bacteria also become, resistant to antibiotics.

So it's it's bad stuff. Inflammation has lots of inflammation. IL six, interleukin six. And we'll talk about that. And a quick thing. And again, we've kind of turned into an immune modulating clinic because all these things have a very underlying common pathophysiology of this immune dysfunction.

The T1T rag to 2 to 17 chip. So t one basically think about get stuff inside the cell, teach you the stuff outside the cell, use their balanced but with chronic illness with emfs basically toxins aging, inflammation.

Your T one goes down, you can fight intercellular infections, but the T two goes up. The oldest inflammation autoimmunity and all these problems. And then also G17 goes along with that though don't want to make it too complicated there. Mast cell activation.

Huge problem that we didn't see 20 years ago, against too much pathogens I was talking about other toxins are synergistic with it, showing, you know, heavy metals that you be fine with heavy metals until you get into an inner EMF field or immunity, it's causing, diabetes and insulin resistance, mitochondrial dysfunction.

And, it's very interesting when you look at those calcium, those voltage gated, calcium channels and all the work by amazing work by, Navajo and looking at the cell danger response where the mitochondria, where we think of them as just creating energy, but they direct so many things in the cell.

And what happens is they get leaky. And so it just they can't produce energy. Instead they produce inflammation. And this is what happens when you basically get in, in, an EMF field, you mitochondria get leaky and calcium floods in, and you don't make ATP, but you make in inflammatory reactive oxygen species, and you just become totally inflamed, cardiovascular dysfunction.

And I can't tell you how many people, you know, with palpitations and, sensitive is that if they get out of the Wi-Fi and, go, but basically shut off their Wi-Fi at night and, you know, in a basement protect so that also in their palpitations and heart problems go away.

And again with that because of that calcium channel, that is causing, basically the heart to flutter, and palpitations, hypertension and from inflammation, fatigue, weakness, pain, increased cancer.

We'll talk about DNA damage. And you know it's basically called non ionizing radiation. It's not powerful enough to to basically directly damage your DNA, but it's certainly indirectly damaged your damaged your DNA and also epigenetics, meaning that it will turn on certain genes and turn off certain genes.

And it turns on all these inflammatory genes and genes that are not healthy. So you get leaky gut, leaky brain, infertility, EMF sensitivity syndrome, which, more and more people, it's occurring a kind of multiple chemical sensitivity where, where they're treated like they're just making it up.

But I see some studies where they're not making it up that they, are blinded to the fact that they're in the field or not. And they have total, genes or physiology.

So really, over the last 20 years, a robust, robust body of independent science has emerged showing significant negative biologic, impacts of exposure from emfs.

And there's clear evidence that you showing a developmental delay, neurological and cognitive dysfunction, neurodegenerative diseases, heart abnormalities, thyroid and hormone deficiencies, reproductive effects.

And also with a mother just holding a cell phone, you know, basically on a stomach, not only affects the baby, but it's affects because it's it's basically affecting the gonads of the baby.

So it's the babies baby as well. So it's multi-generational, increased lots of inflammation. Again immune dysfunction. The mitochondrial epigenetic is is huge, abnormal activation of the voltage gated ion, which again, we'll talk about leaky gut.

Just some serious health problems. And, this was in the 70s. Doctor Robert, Becker twice nominated Nobel Prize, said, I have no doubt in my mind that at the present time, the greatest, polluting element of the Earth's environment is the proliferation of electromagnetic fields.

So he understood it. Then, and it's gotten much, much worse. So here's looking at a study, looking at people's symptoms, in relation to their distance from a cell tower.

And you can see how there's a direct, you know, basically decline, you know, increase the closer they get, especially with fatigue, sleep disturbances, headaches, just uncomfortable, like when they jump out of your skin.

And what you hear that a lot for concentration depression memory loss. And you can see this direct correlation with the distance from a cell tower. And like does this you look at these symptoms, they sound very much like chronic fatigue syndrome by major, Sears Lyme diseases of aging.

And they all share the same logical phenotype that shift in immunity that wanted to shift mitochondrial dysfunction

and that vicious cycle that occurs.

Electric Cars and Magnetic Field Exposure

So these calcium gated channels that, again, are the core of the cell danger response, cause abnormal cell signaling. Poor mitochondrial function. So the body can't make any energy and you get cell toxicity and death, and it's really occurring in everyone.

It's just a matter of the degree that it's happening and who's sensitive. And for instance, if you just have just emfs, you're probably okay. But if you add in a chronic infection, you add in stress, you add in more mycotoxins, hormone deficiencies.

Everything is a vicious cycle. So, again, here's another study looking at people, living within 300m of a cell tower. All the symptoms that they basically had.

And again, it's broad based, which makes it, you know, easy to discount. Here's a they looked at interleukin six levels and technicians with long term low level EMF, occupational exposure compared to their counterparts working in the office.

So the workers chronically exposed to long term, safe, so-called safe levels of emfs, were found to have increased levels of IL six. And that's where IL six has been in the news because of Covid.

As the major issue with who's going, to basically go on to potentially have forbidding mortality where the Covid infection is. You can't turn off that IL six, you can't turn off that inflammatory cycle.

So expose work was shown also to increase the interleukin one B white blood count or RBCs means a volume. So a number of different things. And you can see here when you look at the non exposed people here like they're basically at zero.

Right. And as you get more exposed these levels just get much much higher. And you can see just such a huge difference especially in these people that have higher magnetic fields.

And they're talking about magnetic fields here, or we'll talk about both electrical and magnetic fields. So, yeah, basically they're they're causing emfs developmental delay, chronic illness.

And it's really very similar to rapid aging. And so prenatal exposure to 900MHz, which is like the cell phones result in dysfunctional thymus and spleen.

And we'll talk about refinement. So the thymus basically in volutes, it's in your breastbone. And when that happens as you age it you basically causes all the increases your, your risk and all these diseases that we see with aging, diabetes, autoimmunity, cancer, all those things.

So the emfs just speed that up tremendously. Then you also get mitochondrial, dysfunction. So your body can't make the energy, which also it's a vicious cycle because the immune dysfunction, I think causes more mitochondria dysfunction, increase in inflammation.

So the decreased clarify own and, decrease the back side. Just, just be taste so your body can't get rid of these, inflammatory byproducts, reduce natural killer cell function, which we see so much of.

You'll see that in, you know, Lyme patients, chronically ill patients where they can't fight interstellar infections and all this is additive to it, whether it's stress, insomnia, diabetes, autoimmunity.

You don't have the intercellular immunity. And that's where the same thing monitor your body for cancer. So you get cancer, you get reactivating infections. You.

But you get lots of inflammation. Your body's trying to fight it, but it doesn't have the right part of the immune system. Gut dysbiosis, which then causes, you know, basically a vicious cycle, increased permeability of the gut in the brain, cardiac dysfunction.

Read Mia's chest pain, hypertension, fatigue, depression, anxiety, heart dysfunction, headaches, A. D. D., OCD, infertility. Tonight is osteoporosis, neurodegenerative diseases.

We'll talk about all this. And everything is a vicious cycle. Now this is like, oh my gosh. And you really should be thinking, oh my gosh. But the good news is, there are things you can do to mitigate and prevent the safe amount of EMF toxicity.

One is, don't you know, stay as you can. You can't get rid of it because it's everywhere. But you can do certain things to minimize your exposure. And when you ask, like how much?

Since 1917, they looked at the difference in EMF exposure, polarized EMF exposure since 1917. And as people, they oh, maybe a thousand times more. Nope. Nope. Million times no.

Basically 1,000,000,000 billion. So ten to the 18. So ten with also one with 18 zeros. That's how much more emfs we're exposed to just since 1917. So very short period of time.

This is just a quick one of, patients, that had 37 year old, female long history of chronic fatigue syndrome, severe fatigue, insomnia, anxiety, cognitive function, night sweats.

She had pot. So, you know, when you sit up, basically low blood pressure, palpitations, interstitial cystitis, which is, inflammation of the bladder, which is a mast cell activation, swollen legs.

And so they get leaky vessels, and they also get the kind of the skin, if you see where you get kind of a lace pattern in the skin, with kind of purplish.

Really think of Bartonella. Urinary incontinence, hair loss, irregular periods, multiple food and other allergies and other multi-system symptoms. She was mostly house and bedbound.

She's been sick for over nine years. She said she had seen too many doctors to count. She had been diagnosed chronic fatigue syndrome. Five major mass activation syndrome, part pre lupus.

Premium turnout. Right. As you go to, rheumatologist, you're going to get some autoimmune, diagnosis. And you do find that, you know, basically, you know, the chronic fatigue syndrome patients, the Lyme patients.

Health Effects of EMFs Across Body Systems

And now we're looking at EMF patients or post-Covid patients that you'll have autoimmunity to, to a number of different things. Oftentimes it doesn't fit into a little box.

But whether it's anti phospholipid syndrome you'll get multiple autoimmunity. But when you fix underlying immune dysfunction those go away. She again she had anti phospholipid syndrome.

Her Lyme test set was negative. But when we actually test her with a decent test, she ended up positive for Lyme, Bartonella, toxic mold. Here's, I mean, activation of coagulation, which I love to go into, but, that's for another day.

Sphere immune dysfunction. So she had, very low natural killer cell function, but lots of, low one, but very high 2 to 8, 17 applying for two charges function.

So a lot of hormone deficiency. But the standard tests of normal, especially thyroid, the TSH looks normal because the hypothalamus pituitary is not secreting TSH.

So doctors look at the czar if it's low, like the thyroid is high. But in this case, which is so many people, the low TSH is actually associated with low thyroid.

Again hypothyroid. She had normal thyroid function tests. But when we did our tests where we look at their basal metabolic rate was terribly low. She was burning like, maybe, 60% of the calories that should be, should be burning.

Throughout the day. And her thigh reflex, which measures the relaxation phase of, muscle reflex by a computer, and shown to be more accurate than blood test for thyroid, was extremely low.

She's hyper metabolic, showing her mitochondrial dysfunction. So, long story short, with that, patient feeling much better, with, time-released T3, she was on biased progesterone, between 6 to 8 peptides, ozone exosomes.

She had short course of antibiotics. We tend to use a lot less antibiotics now, because we don't need them. And we find that just, you know, I did on myself when I had terrible time and just bedbound and heart failure, you know, three and a half years of the highest dose of antibiotics I would never give a patient didn't do anything.

You know, until I fix my immune system poorly. Amber's positive. Colleen. So to had she had a dramatic improvement, all her symptoms. But she suffered from, the things the insomnia, and her natural killer cell.

We it was we couldn't get it above five. It should be above 30. And so ask her about her potential EMF sources. Is that no major power lines? She didn't know about any cell towers.

Or she did have a Wi-Fi router in her bedroom, and she sleeps with her iPhone and TV in her house. Alarm and smart thermostat and TV. So we told her to, basically turn off her Wi-Fi and if she could hit the breaker and, you know, basically put her phone on airplane mode and just take it out of the bedroom.

She returned several months later, to signal improvements and insomnia. She feels that she's getting deep sleep, which she never felt that she got before.

Her anxiety was better and felt much healthier overall. And I just kind of just happy to ask, you know, what she does in a typical day. And she mentioned that she goes out with her husband in his Tesla.

And I told her, well, don't do that. You know, drive your like a BMW gas powered. But she said she wasn't ready to drive. But she said she'll try not to go with her husband in the Tesla.

So we also adjusted a few things and, do some new labs, but, she came back three months later, said her anxiety was dramatically better. Since not being in the electric car.

And she's actually able to drive now. Her anxiety was down, and she just was able to drive. Wasn't, overwhelmed with it. So, again, with the electric cars, it's it's a big problem, but.

And this is from, when I was a chief medical officer, the fiber optic center. So with 22 centers. But in 2003. And this, this still holds true. And it's this vicious cycle.

And you look at all these things that just basically go in a circle and doesn't matter where you start normally, like with chronic fatigue syndrome, or a Lyme disease.

So it usually stress has an issue with it, which unfortunately makes doctors think like, oh, it's not real because of this stress. But I'll show you how stress really doesn't lower the immune system.

It modulates it in a negative way. But and then you get to Jeffrey Epstein dysfunction and then mitochondria dysfunction and then reactivating infections.

And it goes around and around. Now with Emfs it's you basically down here with the environmental toxins causing

the mitochondria dysfunction and immune dysfunction.

And you can just get in this whole chronic vicious cycle and kind of doesn't matter what the initial cause is, it just sets everything off. And so all these patients look, look the same on blood test.

You look at a kind of fatigue syndrome patient, a Lyme patient, an autistic patient. And they have their immune system and their mitochondria are shocked.

And you fix that, they get much better. And so IL six, again, very common denominator in this vicious cycle, where you get that immune dysfunction. So all these things here associated with that one to, to shift even diabetes, obesity, cancer, infertility, hypothyroidism, and that these, two figures took me about two hours to do so you can sit here for a second and marvel at the wonder of them.

But. And so, so basically. Yeah. So you won the T regs or to lower the T to T 17 or to high. So when you look at stress, we always think of stress as lowering the immune system.

But what it really does is cause the cycle with the T one with natural killer cell function to go down, but causes increased t H2 with mast cell activation, increase inflammation.

So it's a immunomodulatory and then again becomes a vicious cycle. So stress plays a huge part in all these things. And they all basically combine together in a vicious cycle.

So you hear a lot about mast cells now. And it's a major concern for Lyme patient kind of syndrome. You know, spheres of course. Mast cell activation syndrome.

Patient with parts, it's basically out of balance immune system and direct mast cell inhibitors are kind of the mainstay of treatment. But look upstream and fix the immune system.

And then that mast cell activation gets better and emfs causing huge problem with mast cells. Let's let's finally talk about peptides here. So what are peptides.

So peptides are naturally occurring or analogs of short chains of amino acids. Arbitrarily if they're less than 40 or 50 or considered a peptide if they're longer they're considered a protein.

Peptides, work different than hormones. Peptides are generally cell surface, signaling molecules that will, basically cause a cascade of effects were hormones go into the cell, go into the nucleus, change protein synthesis.

Basically, have the body, epigenetic change. So slow on slow off where peptide aids are generally fast on, fast on, and so they tend to be much safer.

So hormones work on specific receptors, the nucleus again affecting protein synthesis, where peptides are trophic, much more like vitamins, where they have multiple effects and where actually you think, well, multiple effects.

So that's that's a problem. But they tend to be much safer, like a vitamin where when you give a drug that has like one specific effect, it tends to throw everything off.

And that's where you have issues. But peptides in general are exceedingly safe. A number of them, you can't they can't find a toxic level a thousand times a typical dose that it's nontoxic.

Try that with anything. Try that with Tylenol, or try that with water especially. So it's safe for water. But they're very synergistic. They regularly regulate most every known process in the body, which is think, you know, hormones were the master regulator.

And but we're finding that the peptides are the much more precise modulators that that work with the hormones, but more of a, a another layer that is, more tissue specific.

Again, trying to be extremely safe at 100 or 1000 full time. And you don't see any drug or anything like that. And increasing number of peptides becoming clinically available.

So look at the different categories. So immune modulating peptides. So the ones that where we want the peptides to essentially convert that where the abnormal balance of the immune system that low to H1, high to back to normal.

And peptides tend to be homeostatic, meaning that they bring the body back into balance. For instance PPC body should come compound. 157 you have high blood pressure.

It brings it down. If you have low blood pressure, brings it up. If you're hyper coagulant, it brings down. If you can't coagulate, it brings it up. So they tend to bring it everything back into balance.

So again modulating like thymus and alpha one think mostly of increasing to one where the BPC think of mostly lowering TH2 and then thymus in beta four and tb4 fragment, which we'll talk about, think of more as modulating both of them.

And there's different thymic peptides come from the thymus timing lean and time again, the timeline tends to be more, basically anti-inflammatory works great for people with herkimers.

And then you have also what works for immune monitoring are the, pineal hormones, app Italian. And finally, on and these will, basically modulate the thymus, also increase melatonin.

But they do a lot more their, they work very synergistically with the thymus, in terms of immune modulatory effects, sleep peptides, appetite and pineal gland, they will again raise melatonin levels.

And for people that can't sleep there's delta sleep inducing peptide. And which sounds like oh it's a peptide. You take it, you go to sleep. But no it doesn't it, it's not like a sedating peptide.

It basically reduces inflammation in the hypothalamus which calms down the sleep center. So if you don't have a problem sleeping it won't do anything for you.

But if you have a problem sleeping that you combine a battalion the delta sleep a peptide we're finding with a growth hormone secreted agogo. I'm not going to talk a lot about those, but that's a whole nother area.

But all of a sudden people are like, oh my gosh, I'm getting deep sleep. Especially if you're out of EMF fields. And the, being in electromagnetic fields going to cause inflammation of the hypothalamus, which keeps from going deep sleep, causes insulin resistance, leptin resistance, weight gain, anxiety, and then, add into obesity, a drug.

Is a fragment of growth hormone. But it's other effects. Brain peptides for memory depression, traumatic brain injury. There are C max c length. And we'll talk about those cerebral and which has been for i.v.

And I am injection. But they made it a biologic now. So you can't get that in the US. But it is available orally. De Hexa is a, it's a synthetic, angiotensin one seven analog, which the.

But it helps memory, coordinate. All these are very synergistic, by the way. Secreted dogs, again, most are natural, but, some of those synthetic antimicrobial peptides I won't get, too much into L 37 is natural boost in the body, but also thymus and alpha one is approved in 30 or so countries for hepatitis, HIV for cancer.

The tb4 to be for active frag. Greater microbial BPC 157 shown to be more potent anti-viral, for instance, against the herpes virus than a cycle avere at 1/100 of the dose.

But people tend to not think of it as that because it has so many other effects of healing. But it has it. They're very antimicrobial, just kind of general rejuvenation.

But objection, compound. What will go to that? It tends to heal so many different, systems in the body. When you take it orally, it works systemically.

As well as tb4. They work together.

Immune Dysfunction, Mitochondria, and Chronic Illness

That's more of again, that thymic peptide or TB for fragment is the part of TB for that's immune modulator. And it's actually orally active and takes out a part that stimulates mast cells.

Italian and pinyin. Again, the pineal, hormones that sleep inducing peptides, growth hormone releasing mitochondrial peptides. So I'm not going to go into much detail but not see 5,000,001 in Q human.

SS 31 tons of studies are actually being conducted now on reducing neurodegenerative diseases and so many different issues by boosting mitochondria. BBC 157 actually, prevents they, calcium, voltage gated channels from being over activated.

So, very potent actually mitochondrial protecting peptide two before anti before frag. And then the one two tropic peptides. So alpha monocyte signaling hormone and there's B'Elanna ten one and two which are analogs of alpha one.

As I said many hormone which stimulate your body, the melanocytes to get tan in response to sun. Although the lantern will do the same thing. It's the analog of that, but it also will reduce inflammation, increase libido.

Decreased body fat. So you get tan, increase libido and you get skinny is what's called the Barbie doll peptides. But you the tanning part tends to be an issue if you're older because it will bring out kind of age spots and things like that.

Now KB is just a three amino acid part of alpha monocyte stimulating hormone, and it has all the actually even more anti-inflammatory effects that alpha.

But as I said, many hormone does, but it doesn't stimulate the monocytes, which is great. And it's actually orally bioavailable and hugely, basically anti-inflammatory.

So mast cell issues and we'd, just, copy these now available and, we're having great success with that. And patients are loving it and doctors are loving it.

Side effects is some nausea. Really. That's what kind of the 141 so that's actually approved as a drug for female libido? But, does it definitely works for male rectal dysfunction.

But you tend to get nausea with them. The other one's not so much. So, so emfs really, they accelerate aging. And now even when you look at aging, according to the CDC.

Okay, approximately 80% of age individuals are afflicted with at least one chronic disease as a result of the decline in the thymic related immune function.

So, so 80% of aged individuals basically suffer from a, from a, you know, basically, illness because of their thymus is no longer working. So many things have negative effects of the thymus.

And pineal gland function as well. Age, genetics, inflammation, emfs just speed that process up again. They speed up the aging, diet, you know, bad diet, lifestyle, stress, toxins, low thyroid, low growth hormone, zinc deficiency, all these things can speed up this, this thymic involution, which causes, basically the immune dysfunction.

So you basically end up aging faster and getting a lot more of these multi-system, degenerative diseases that you tend to see in older individuals. But you're still young.

So thymus evolution, basically starts around age 15 and, around 445, it hits, it hits a low. And so you get again where you get that immune shift. So increase ability to infection and you more autoimmune disease, more cancer, cardiovascular disease, more inflammation.

And you can see here the famous as you age, it just starts dropping right around to age ten, 15. And then by 40 and usually right, between 40 and 50, that's where you start getting the red line here that I drew.

And you can tell it's not, actually done, but, you get the point that where this is the increase in, basic diseases of aging, you'll get childhood diseases, you'll get a bump and disease here.

And then diseases of aging just rapidly increase here because of the famous. So let's fix the thymus, and, with stress. So I think I went through this, where the stress is a major immune modulator.

So the famous ones, they again modulate the body to be more, immune balanced, repair restorative and healing properties, maintain normal anti-microbial activity, boost mitochondrial function.

Again, you'll see all these things connected. Thymus works by activating secondary messengers, stimulates wound healing, stem cells to my stem cells. Increases antioxidants and good at home production.

Needed to maintain a healthy, GI mucosa. So really a combination of BPC 157 is kind of the go to for gut inflammation, but also inflammation throughout the body, but is known for that.

But the the tb4 fragment you can take orally works from the tight junction. And we're finding CVS. And one very anti-inflammatory really heals the gut very quickly.

And a big problem we're finding with Lyme, all these, you know, is this inflammation is basically brain on fire. So micro glia activation. And so you'll find with BBC 157 the time some beta four times a beta for frag TV, they'll lower the micro glial activation of the cerebral Eisen.

So the brain inflammation goes away. And you'll be amazed at how many symptoms go away when you reduce brain inflammation and brain inflammation, particularly the hypothalamus.

Is what causes, insulin resistance and diabetes, by machines. And also BBC blocks the effects of neurotoxins, endotoxins, mycotoxins, they boost natural killer cell function.

And so thymus and beta for is a long molecule. And so 4 to 3 amino acids as different parts that do different things. So what they found is that the fragment one four possesses all the immune, modulatory and antigenic and healing and anti-inflammatory and cellular protective.

But it takes out the part that stimulates mast cells, and it also now becomes orally active because it's very short a long peptides not going to absorb even short peptides can be difficult to absorb, but this one absorbs whole and is clearly totally bioavailable.

And you get all the benefits, famous and beta for what you'd normally have to do with the shot. But you can take it orally and it's about ten times as potent as well.

So, it's more potent anti fibrotic. So it will prevent like diabetic cardiomyopathy, diabetic nephropathy you know, or kidney damage from diabetes. Again it's ten times as potent per weight.

It doesn't stimulate mast cells as orally active. It crosses in the blood brain barrier is much smaller where t before is too big to cross, gets into biofilms or breaks up biofilms.

It inhibits trapping a growth factor, beta induced plasminogen activator inhibitor. So it prevents that hyper clog ability, which also BPC 157. And we actually if you check the violation status of chronic Lyme patients kind of syndrome, patients about 80% plus have immune activation of coagulation.

So what's happening is they're laying down or not causing job, laying down fiber and trying to wall up that infection, which is good in the short term but long term.

Now the body can't get at it. And also nutrients can't get in and waste product can't get out. An action that usually takes two seconds to get into the cells can only get the two minutes.

So the cells are also starving for oxygen. So, cleaning up that fibrin actually with either, really low dose heparin, it's safer than aspirin or also, you know, with the immune modulating, also, some of the vascular enzymes will help, but, it's another again, in this vicious cycle that we see, a lot of times when nothing's working, the patient will say, hey, I got good news, bad news, good bad news is you got, I mean, activated by.

The good news is you got a mean activation of regulation, and we can trade all of a sudden treatments that weren't working, because whether it's a hormone or a drug or a nutrient wasn't getting in the cells.

Also, you clean it up, now it gets into the cells, and starts working. So here are just, basically these are amino acids, famous and before and then tb4 active frag is the first four amino acids.

They're BBC 157. And these two are kind of the go to and kind of the core treatment, and available as, a supplement, it's a 50 amino acid which normally would not absorb, but it is basically, secreted in the gut.

So normally we also most peptides things are broken down with the enzymes, and with the acidic gastric, juice. But this is very stable. That's where it's, that's where it's made.

So it's resistant to hydrolysis and enzyme digestion. It's shown to have a wide range of healing mechanism. It's almost embarrassing showing the studies because it sounds like snake oil.

Like name it, it kind of. But to help seal it, but it really changes epigenetics the body into a healing, basically turns on all the genes for, for healing, lowering inflammation and, you know, improving the immune system, gets increased blood flow, to, to areas that are needed.

Yeah. It, modulates the, neurotransmitters. Great for leaky gut. And again, the gut brain access. And it's great for the microbiome. Oral systemic, administration, shown to improve cardiovascular issues, blocking many of the toxic effects of emfs, including the immune dysfunction, mitochondrial dysfunction, excessive reactive oxygen species.

Clinical Case Example and Vicious Cycle of Illness

And again, by inhibiting that abnormal activation voltage gain of calcium channels. And I'm telling you, for I know there's a lot of you out there that are suffering from whether it be Sears and chronic muscle kind of fatigue syndrome, chronic Lyme and just have palpitations all the time.

Get out of the MF, fields and take VPC to block those calcium channels, which are also up to mitochondria. And you can just get again, that's the start of this whole multi-system treatment.

So works for heart failure, hypertension, hypertension or hypertension. You know, I went to heart failure with chronic Lyme and the cardiology said I may be able to get 10% better in ten years.

I couldn't stand up, straight. I couldn't like walking up stairs. Forget it. Taking it, like, an hour. I can't live like this. And that's when I went basically around the world looking for treatments.

And that's where I found peptides. But, and I went back a year later and my heart was normal. And the criticism. Oh, my gosh, I've never seen that. Of course, he's even asked for what I did.

But he said he's never seen, it actually prevents arrhythmias, shortens that to t interval. Which again, with Covid, you may be hearing about, you know, the cute interval, with, Citra max and hydroxychloroquine.

We look at that. But actually BPC 157 will shorten that says thyroid. But BBC 137 also, well, is great for arrhythmias. We had one of our employees has been, it was an affair and gave him a big shot of BPC 157 and broke his AFib, went back into normal sinus.

So works for central peripheral nervous system, treating neuropathies. And all they, you know, with EMF associated with them, we'll look at, you know, brain injury, Alzheimer's, Parkinson's, neuropathies, peripheral nerve damage, mood disorders, and shown to be a better antidepressant than anti-depressants, blocks an exaggerated stress response for constant fight or flight.

Let's see. So I think that seems like. So, yeah, just even a brief period here, seven days after just a brief exposure. From a mobile phone, they found the blood brain barrier opened up.

So again, we have the brain is protected by a, network called the blood brain barrier, which makes it difficult for certain things to get into the brain.

It protects the brain from toxic substances. But if you're an EMF field, it opens it up. And also, you know, leaky gut ends up being leaky brain and vice versa.

So and some of these studies, just to our exposure to a low level cell phone level, in rats found immediate disruption of this blood brain barrier, protection increased permeability lines, big molecules, even albumin, which is a big protein to be able to get in and out.

And it's crazy. And the just a brief exposure for a couple hours, the increased probability for two weeks. And they also found significant brain damage was found in 20 and 50 days after, the exposure in the rats, and if, if they were to give anti glutamate antioxidant therapies to help prevent some of that permanent brain damage, but not all of it.

And anyone who was already sick, it actually it was much worse for them. And that's what you see. And so with the in terms of the microbiome, we heard a lot about the blood brain, access.

So the microbiome affects the neurologic system and really most every system in the body and also but the brain can determine what the microbiome is. So again, it's a two way street.

So if you have leaky gut, you have leaky brain, almost instantaneously. Now radio frequency, radio frequencies similar to those are emitted by mobile devices or Wi-Fi, typically cause pathogenic bacteria.

That's E coli. Listeria. They grow faster, become more is the antibiotics I mentioned that causes toxic moles to grow faster and secrete millions more of, mycotoxins?

It's it's crazy. And so here's, basically look at the blood brain barrier. So numerous studies show an importance, and looking at PPC, 157 k pv, TB for Active Defrag, those combination works on all the different parts of the, dysfunctional, the leaky gut and thus leaky brain.

Studies there. And then we get into the microbiome. So the viruses that are in there that, they're called phages that feed on the bacteria when it's exponentially more complicated.

But we haven't heard about that yet. But you will, So you'll see, that is, we already talked about that. So BP c 157, stabilize the gut nervous system.

Which we talked about so much of the safety attention is really the looked at, again, ionizing radiation, which powerful enough, to break up DNA. Where.

So it's found that anything less powerful does not cause DNA or or damage. But that's not the case. So even short term, low level exposure to non-ionizing radiation, well, within the safety limits has been shown to cause DNA damage, increase in what's called senescent cells.

The cells just basically they're sitting there, they're dysfunctional. They're a mitochondria dysfunction. They can't do their job, but they're secreting all this inflammatory, byproducts and causing a lot of problems.

Those are ones that turn to cancer. And, and basically what, they don't have enough energy to even go under apoptosis or really die and get rid of those.

So, they get basically, we get the mitochondria go and they can actually go under what's called apoptosis and get rid of those old cells that are causing all these problems.

So free radicals, especially interaction with transitional metals like, iron and heavy metals, play a big role with EMF toxicity on DNA. So if you have these metals that, you know, Fenton reaction, or with heavy metals that you can get DNA damage.

Certainly. So here's basically just looking at the incidence of glioma. So, brain tumor and the amount of cell phone use. And here's looking at, the famous ends, and the pineal peptides, battalion and pineal and, and cancer reduction.

So, with five minutes you get so you have an increase in lifespan and, also boost which correlates with the boosted immunity and the pineal gland. Same thing.

So increased lifespan, increased immunity. They go together. So demonstrated the high efficiency of a battalion, therapy for prophylaxis of age related pathology, including cancer, showing a new physiologic way to slow down the pedagogical process and to extend human lifespans.

Quote there, from the studies below. And this was they just basically injected, priming protein into my serving at age 3.5 months. They found that increased lifespan by 20%.

And decreased rate of cancer by 2.8 fold. In terms of they had, cancer, a few female mice where they had their bred to have the breast cancer gene so generally prone to breast cancer, they received a battalion five times for week from the second month of life.

And the percent of mice to develop breast cancer was 3.7 fold higher in the control. So a 73% reduction in cancer in the treatment group, it decelerated the rate of aging of the reproductive system as well.

But only eight of the mice having a regular menstrual cycles versus 52% of age controls. So, it's actually very good for, people with infertility. This is looking at, age related insulin resistance.

Also neurotransmitter levels. So, a battalion, improved insulin resistance. This is in rhesus monkeys. The melatonin levels also, basically went up to, that of young animals.

So the older animals looked like younger animals. And the area under the curve of the glucose challenge was, on average, 2.94 in the young monkeys versus 479 year old monkeys.

So they had a lot of a lot of insulin and glucose. When they get to a battalion, normalize that glucose area under the curve. So significant improvement in insulin resistance or improvement, insulin sensitivity, I should say.

The authors conclude that battalion obviously shows promise as a remedy to restore age related endocrine dysfunction in primates. Very safe. Don't see any side effects from it.

Stimulates the synthesis of serotonin and melatonin. Restores telomere length. So the cells ordered the by the need. The telomeres keep shrinking every time it divides.

And when those are too short, it can't divide into actual length. And those and so your cells are actually younger.

Peptides as a Therapeutic Strategy

So so the reproductive system actually increases T4, T3 conversion and also increases thyroid production. And preschool. The tolerance we said slows aging, increase longevity, protects against senescent cells and cancer activates gene expression.

So it basically makes them makes the body younger. It's probably the best anti-aging. Substance that we know of. So the repeated effects of, thymic, peptide thymine and pineal peptide appetite were investigated over a 6 to 8 year period, 266 elderly patients, after being treated for the first 2 to 3 years of the study.

They basically found a 2 to 2.4 decrease in acute respiratory disease. So they had improved immunity, reduced incidence of clinical administration of quick heart disease, a less cardiovascular disease, less hypertension, less, degenerative diseases, osteoarthritis, osteoporosis compared to controls.

So such a significant improvement the whole state of the peptide treated patients currently with decreased mortality rate. During the observation basically, two fold decrease in mortality.

In the final untreated group, 1.6 to 1.8 fold in the up Italian treated group. And when there she with both a 2.5 reduction. Now a separate group that was treated with peptides for six years for target was decreased was one fourth compared to controls when used put those together.

So EMF effects on the brain significantly impacts on memory, learning anxiety. Even at these so-called safe levels, with structural and physiologic changes in various parts of the brain.

Again, observe the blood brain barrier, the hippocampus, which is very responsible for memory and learning, is very susceptible to oxidative stress and EMF toxicity.

The cerebellum, the amygdala, which is kind of that, like kind of basic drive, and also cerebral cortex. So, higher functioning and activation of the glial cells.

So again, again, the brain on fire, with brain inflammation, also neurotransmitter levels, so possible causes for dribbling with the EMF. But what does it do?

It increases reactive oxygen species and can increase the permeability if the gut and the brain, activation of a pumped, empathetic pathways. So causes cell death effects on the DNA.

You get direct damage. And also epigenetics, meaning that it turns on and off genes that cause damage, that calcium influx across the membranes. So it's like a combination of all these things causing significant problems.

So, a study here, they exposed pregnant mice in utero to a mobile phone, just on active call mode. Throughout gestation, the offspring were shown to have memory impairments, hyperactive behavior compared to unexposed mice.

Another one here exposed 28 days. And just the mobile phone altered neurobehavioral performance, impaired spatial memory, damaged blood brain barrier, impaired.

Learning and reference memory. They also found brain damage in the hippocampus. So all these things from so-called just cell phone exposure, neuronal, you know, degeneration, all these things from so-called safe levels of just cell phone.

So here's, basic groups, in terms of time it takes them to complete a task. And the more exposed, the longer it took them to, to learn a task. And looking at Alzheimer's, neurodegenerative diseases.

There's just so many studies here, looking at the ratio here, you know, five times a risk for people that have high EMF exposure. Numerous studies all showing, nerve diseases, suicide and depressive symptoms at MPs, ALS strong data showing EMS causing ALS.

But the nice thing is CB4 is shown to reverse that. So TB for TB for active frag, whether it's, neurodegenerative diseases, peripheral neuropathy, diabetes, traumatic brain injury, talk about basically nootropic peptides, a cerebral license.

So it's a, mixture of neuropeptides. It's been around for 40 years or so, tons of studies on it. It's approved in 44 countries for treatment of dementia and stroke.

Very neuroprotective. Very nerve reparative penetrates the blood brain barrier, because they're small molecular weight, peptides, they stimulate central, peripheral nerve growth factors.

They improve cognitive function. Lots of studies on traumatic brain injury, Alzheimer's stroke shown to be effective in, Alzheimer. A student with autism and Asperger's and the spectrum disorders, historically given intravenously, but, no longer available.

But it is bioavailable orally. It's just a study on Alzheimer's showing the improvement. Here's in terms of reducing micro glial activation so that brain inflammation, the identification of new compounds with neurotrophic properties is becoming a new strategy for the prevention and treatment of degenerative disorders.

In this study, we described use of two different models to demonstrate the ability to reduce microbial activation. The results of these in vitro and in vivo studies indicate that circulation might exert, neuro and, you know, trophic activity, reduce the extent of inflammation and accelerate or, accelerate neuronal death.

And their pathologic conditions, such as those observed and neurodegenerative diseases. Another study here showing that oral circulation, basically a single dose, significantly improved the cognitive performance of elderly individuals.

See, link and Cmax are very similar. Cmax will help with memory as we'll see you see links more calming will also help deal with stress. So we like to give that when people are anxious it also reduces brain inflammation as well.

They stimulate nerve growth factors. Shields the body from neurotoxins as well. Protect, protective against stress and depression. Improves memory and attention even in healthy adults.

Beneficial learning and memory increases actually dopamine and serotonin levels, which decline with age improve recovery from stroke. You get neurologic regeneration increase dendritic basically all the connections.

Have you never seen side effects from these? And looking at the cardiovascular system, I, mentioned how so many patients have those palpitations if they can get out of the, EMR field, especially with PBC, often those palpitations go away.

And they kind of get out of that sympathetic fight or flight, response. This is just showing that how the emfs add to that immune activation of coagulation where just exposing the blood, just the person's blood to EMF fields, they start clumping, after ten minutes and 70 minutes.

So significant effects. So this is a, person who basically was, EMF sensitive. They have the person sit in a room and then turn on and off the wifi. So basically, pulse at 68, and then all of a sudden turn on the cell phone, go to 122.

They are turning on the cell phone, goes back to 66, turned back on the cell phone. 129 and then also so they found that really you get that again, that sympathetic parasympathetic lower all these illnesses are causing just that sympathetic overdrive or just fight or flight.

Instead of that calmness and again, not getting deep sleep, the brain on fire, in this person would actually go into arrhythmias. With the emfs. So uptown with cardiovascular disease.

So this is trial 79, patients aged 60 to 69 with severe cardiovascular disease have them receiving the six courses of

Ed Battalion. And they all the patients continue their standard basic therapy over the phone for 13 years.

The cardiovascular functional age was 16 years older compared to seven years in the uptime group. So it really kind of slowed that aging. And the, mortality rate was about half that of the control group.

So cut mortality in half. They, actually increased their endurance while the control group declined on their endurance. And they also had normalization of their circadian rhythm.

So it increased melatonin. They, slept better, more, standard sleep cycle, you know, people. So as you get older, you kind of lose that sleep cycle. So from back to that younger, nice awake sleep cycle, improved carbohydrate, lipid metabolism.

This is, showing that TV for frag and BPC prevents EMF induced cardiovascular dysfunction. So they, the Tbe for active fire cardio protective effects and diabetic subjects reduce both ventricular, interstitial and perivascular fibrosis.

Thymic and Pineal Peptides for Aging and Immunity

Oral and systemic chemistry. The BBC 157 CV improves a wide range of cardiovascular risk by blocking and many of the toxic effects of emfs, including that when the conduit is functioning, excessive reactive oxygen species and inhibiting that abnormal calcium voltage gated calcium channel, so helps with heart failure, hypertension, hypertension, post MRI damage, arrhythmias, vascular repair.

We talked about acute interval. So also we're finding you know is that really with Emfs everyone everyone's exposed to is that everyone really low thyroid actually multiple hormone deficiencies.

So you look at that CV do Hampshire divided into three groups a control group. And then group two was exposed to cell phone EMF for ten days. Group D was exposed to cell phone EMF for 50 days.

They tested T4 and T3 and cortisol levels. The cortisol level and 50 day exposure went up. So they had that increase in the in the cortisol. The stress response.

But they found T3 levels, were higher in the control group. So the T3 levels in the exposed group dropped. Now the T4 levels went up. And so doctors think well Well higher T4 means that there.

And especially when the TSH is lower they just in this study. But I can pretty much guarantee the TSH drop. But we'll see in the next study. So low TSH high T4 doc score high thyroid.

It's actually low thyroid because they have hypothalamic pituitary dysfunction. The body is not producing TSH. Then on top of that with the mitochondrial dysfunction you need active transport for the T4 to get into the cell.

So the high T4 shows that it's not getting into the cell. And you can see that by the the T3 and the T4. Thyroid transporters are different. The T4 is more energy dependent.

So with low mitochondrial function it doesn't transport T4. It much more affected. Now reverse T3 is the same farmworker dynamic same pharmacokinetics as the T4.

So with high reverse T3 it's not. It shows us not getting into the cells with the high reverse T3. You know T4 is not getting into the cell. So that's why all these patients do so much better with straight T3 because although it is somewhat affected, not nearly as much as T4.

So. But doctors look at their TSH being low normal and their T4 being high normally go oh well you're kind of high thyroid. No no no they're low. So it's it's the opposite.

So here are they said the authors stated that the high cortisol resulted in decreased T4 to T3 conversion, which is

true, but that's not the main problem.

You do get less T4, T3 conversion, but the big problem, the cause of the high T4 is it's not getting into the cell. And again, emfs causes mitochondrial dysfunction along with other things, chronic infections and then causes immune dysfunction.

Low thyroid. Then you basically get all that vicious cycle. And then so a different study here. So the major trigger of 84 is a lack of T4 transport. So we assume that they had low TSH.

But, so everyone really exposed. If you want to learn more about this, go to our nonprofit, National Academy of Hypothyroidism. And they hypothyroid is.org or a couple review articles on this.

I'm just kind of throwing it out there. But another study, where they exposed, to cell phone for 30 minutes a day for five days a week, for four weeks.

One group basically has control. Another group as the sham so falsely exposed genes, they see, two, three and four levels of measure. As expected, the TSH and T3, for the lower in the EMF groups, so the T4 can either be a high, normal, normal or low depending on where they are in the chronicity of the illness.

But so the, T4 is not the proper treatment for these patients. So TSH was lower. Their T3 was lower. And in this one their T4. But T4 can be their high.

Because they have you actually have less T4 because it tsh is the thyroid producing less T4. So you're competing with not getting in the cell. What's going to win out in terms of serum levels.

So serum level does not tell you what's inside the inside the cell, which is what matters. Another study showed male volunteers exposed to cell phone fields for two hours a day, five days a week for one month at a 21% reduction in TSH levels, showing central hypothyroidism, which would again be missed by the majority of physicians, showing here that giving up Italian brought melatonin levels back to normal.

And I know I'm going long here the one accord dopamine side stimulating hormone. Milan one and two. We talked about k pv. So a fragment of that very potent immune modeling anti-inflammatory inhibits mast cells.

It actually reduced this the hypothalamic inflammation. So you get reduced insulin, leptin resistance. Delta sleep inducing peptide does the same type of thing.

So like when you take it it doesn't put you to sleep. But over a couple of weeks will lower that inflammation of the hypothalamus. And where you can actually get deep sleep.

And also the delta sigma super high says the highest levels of the gut. So it lowers inflammation there as well. And just I'll mention GHQ, you'll see that a lot in cosmetic.

It helps heal skin and produce collagen anti-inflammatory also helps with hair restoration. I'll just mention that we like the mitochondrial peptides, which include, well, PPC 157 protects the mitochondria five minute one and two.

Some great results with like, bipolar and OCD.

Summary and Practical Takeaways

Mozzie is another one. Again. TB for free. I guess it's 31. Increase metabolism. Neuroprotective, increased stem cell function increases nad. So really, you know, peptides, very synergistic, with each other.

Here again, with 5 million and a battalion. And I think we looked at that study here. And so to summarize, and I know I went way over and I apologize for that, but, I hope I gave you a little taste of the problem with Emfs and hopefully, you know, one way to counteract that and a lot of things is using peptides, but also, you know, try to

minimize your exposure to emfs.

They contribute to a wide range of illnesses and immune dysfunction, and are key component of vicious cycle of multi-system illness. The key is is healthy balanced immune system known by the gut brain access to core contributor and, improper function, deficiency of, certain peptides.

Again, they're natural in your body, which they decline as we age, can can heal and protect you from toxic exposures. And, works well in a multi system treatment.

So in terms of dosing, those get asked that, I want to just quickly show those again is one get twice a day. But it's you can't basically overdose on those, if they have Gerd over the capsules.

But so usually do ABC 147 and then add in TB for frag and then add in whatever in particular if they have, if they need trouble for memory. When I like the cerebral I said or have lots of inflammation and the KB or the, you know, a battalion or piney on whatever it may be, or maybe that's how my Kirby, which I didn't talk much about, mitochondrial peptides again, you the nice thing with peptides, you can't go wrong in terms of the different orders that you're not going to screw it up, that it kind of, and ends up working out. But, that's it.

Again, I sorry for going, I think way over my time, but, hopefully that, we got a little taste of all the literature that showing the issues with Emfs and how to hopefully, prevent, the toxicity if you're having any issues.

I hope it, help. So, wish you all the best health. And, hopefully you're enjoying the summit. And thank you for letting me be a part of it. All right. Thank you. I might.