BETRAYAL
THE AUTOIMMUNE DISEASE SOLUTION
THEY'RE NOT TELLING YOU
EPISODE 5
ENVIRONMENTAL TOXINS:
THE HIDDEN DRIVERS
OF DISEASE
Welcome to Episode 5. Get ready for this exciting, jam-packed episode on toxins and autoimmune diseases. You will learn about the unique autoimmune diseases which are being caused due to toxicity, and learn about the cases of the people that have turned their conditions around. In the last episode, you learned the impact of digestive diseases. You learned about the extreme prevalence of this terribly uncomfortable and often painful disease which claims 60 to 70 million Americans.

Sadly, these diseases result in 21 million hospitalizations each year and 245,000 deaths. It devastates families, costing over 141 billion dollars each year in the US alone. You learned about the connection of autoimmune disease with gluten sensitivity. You also found the ways to test and see if your digestive system is healthy or not. You learned the steps for treating the digestive diseases. You also got the privilege of hearing the amazing success studies of patients getting healed from digestive diseases.

You’ve also learned about the critical importance of hydrochloric acid, and how essential it is for good digestion. Finally, the question we all want to know the answer to, what to eat for a healthy gut. You learned it all in that powerful episode. In this episode, you’re about to learn that you and I live in the horrifying reality today, that toxins exist everywhere in our world. You’re going to find out about the specific toxins that are in our food, so you can take simple steps to avoid these autoimmune triggers.

You’re going to see that what’s truly going on with the fire retardant issue. Episode 5 also makes a clear analysis of heavy metals and their impact on the body. Other exciting truths you’re about to uncover are the unexpected mold problem, the problem with plastic, with BPA, the chemical that softens plastics, and the hidden trap, BSA, and the actual data on electromagnetic frequency exposures, everyday household products, such as shampoos, makeup, deodorants, and finally, the problem with air pollution and what you can actually do about it.

Get ready for an episode that will forever change your health and the health of those that are in your circle of influence. In the United States and Canada, chemicals are used in consumer products and released into the environment before they are tested for toxic effects, not like in Europe. In the European union, they require the industry to prove that chemicals are safe, that they’re not toxic, before they enter the market. Here, we have to prove that they’re not safe.

More than 1 billion pounds, yes, that's billion, 1 billion pounds of pesticides are used annually in the United States, three-quarters of which are used in agriculture. Recent biological monitoring studies indicate that pesticide exposures are widespread in the US population, including to pregnant women and children. Is it any wonder why we are experiencing such a dramatic increase of autoimmunity? Newborn infants today, every single newborn infant has, on average, 280 toxic chemicals in their bloodstream at birth.
According to the Lancet, the medical journal Lancet, neuro-developmental disorders caused by industrial chemicals has created a silent pandemic in modern society. Pandemic means it affects everyone, it's bigger than epidemic. The truth is, you are exposed to approximately 250 pounds per person per day of toxic chemicals in the US. That's shocking.

Unfortunately, under the EPA inventory update reporting program, the chemical manufacturing industry estimated that approximately 27 trillion pounds of chemicals were produced in or imported into the US per year in the early part of this decade, which is the equivalent of approximately 74 billion pounds per day, per day. That's 250 pounds per person per day. It does not include fuels, pesticides, pharmaceuticals or food products. Many of these chemicals are in the environment, and some affect the health of our children.

This is very alarming, because according to Dr. Jeffrey Bland, the human cell takes these signals from the environment and turns them into biology. What does that mean? It changes the shape of our cells. This is the reason why the rates of autoimmune diseases have skyrocketed in the last few decades. Our genes have not changed in that time. What has changed? The environment has changed. While the global population is increasing at a rate of less than 1% per year, the use of chemicals in our environment has increased by 3% per year.

From the year 2002 the year 2024, there will be a doubling of the chemicals that we have produced and used on our planet. In the US alone, we're importing and producing 74 billion pounds a day. Think about that for a minute. That means that every day, we're saturating our air, our water, our soil, and our food with tens of thousands of chemicals. We have to breathe the air, we have to drink the water, and we have to eat the food, and every breath, every drink, and every bite, we're bombarding ourselves with chemicals.

This is why your immune system is so active. The immune system is a network of cells that interact with the environment. If our environment is now changed, why are we surprised that our interaction with the environment has changed? What if our autoimmune disease epidemic is really just an adaptation to a new environment?

Dr. Dan Kalish: In my 25 years of practice, I think the most concerning environmental trigger, and the one that I think all of us and our field see on the increase, is exposure to environmental chemicals and heavy metals. I've been at many conferences in the last year, all the doctors are saying the same thing. It was bad 20 years ago, but the levels of environmental toxins in our patients now are just reaching amounts that we couldn't have even comprehended twenty years ago.

It's just becoming more and more and more of a problem. It used to be, in the good old days, there was a reason for it, like, my first toxic patient was Brian. He was a welder for the Navy. Built submarines. It made sense. He was around these metals...
his whole life. I had an older gentleman in his 70's. He's an old-school newspaper man who actually handled lead type, so he was very lead toxic, because he was touching lead for a lot of his younger years in the newspaper industry.

It used to be, in the good old days, 25 years ago, we knew why someone was toxic, it made sense, and there were certain toxic patients. Now, we could see a toxic patient that's 15 years old that's living in a pristine community in Colorado and has never touched a chemical or heavy metal. I think the environment has become more dangerous than we understand.

Dr. Walter Crinnion: It's the amount of chemicals from our bad habits of breathing, and eating, and wanting to drink water that builds up in our bodies. Now, the levels of chemical toxicants in our bodies is so much greater now than it was, and many docs are now coming to me for training in this, because they're finding their methods that previously worked great for patients are no longer working. So many of the, actually, all of the chronic, debilitating illnesses that are in epidemic proportions now are all directly related to the build-up of environmental toxicants and our body.

The Center for Disease Control is now doing an ongoing trial for, it's the national report, they're now the fourth national report, it's on the CDC website, looking at toxicants in the average US resident. They've tested for 246 chemical toxicants and heavy metals. 108 are found in everybody. In everyone, in everyone. 108 toxic chemicals that never were on the planet a thousand years ago, never on the planet, many of them, more than 50 or 70 years ago.

Dr. Tom O'Bryan: Right.

Professor Seralini: I am a researcher, and since all my life, since 30 years, I dedicated my studies to the effects of pollution on health, and especially, in the last 20 years, about the effects of GMOs the agricultural, edible GMOs, so mostly soy and corn, Roundup ready soy and corn filled with Roundup, on human health, and especially, also, on human cells.

Dr. Tom O'Bryan: Soy and corn.

Professor Seralini: Soy and corn, Roundup ready soy and corn. They are known as sponges for Roundup, you know, and also as to the BT corn which is filled with a new insecticide, newly mutated insecticide, that it produced by itself.

Dr. Tom O'Bryan: BT corn, it's a type of corn.

Professor Seralini: It's a GM corn made and transformed genetically to produce its own insecticide inside the cells, inside the grains. I dedicated that, my work to that, in order to study the long-term effects on mental health, and to study the effect of the toxins in human cells. First, we have found that, on embryonic cells, as well as in mammals, Roundup, which is a major pesticide of the world, is a lot more toxic,
1,000 times more toxic than glyphosate alone. There was a fraud in the declaration of the active ingredient.

There are hidden poisons in Roundup which are, in fact, some petroleum distillate residues, burned, oxidized a lot, and that will irritate any kind of membrane in the cells, like the gut membrane, but also the kidney at the epithelium, and that will allow the penetration of the pollutant inside the body.

[00:10:30]

Dr. Tom O’Bryan: Excuse me, you're saying that Roundup, which most people have in their garage, that they spray to kill weeds on the driveway or around the house, that there are chemicals in Roundup more than just the glyphosate that we all ...

Professor Seralini: Of course.

Dr. Tom O’Bryan: Hear about. There are other chemicals that also are toxic to humans?

[00:11:00]

Professor Seralini: It was a fraud for Monsanto to declare that, in fact, glyphosate was the only active ingredient in Roundup. They are hiding. They are considered as inert and confidential. The petroleum distillate residues oxidize a lot, which are corrosive detergents, and they are hidden in any pesticide, but Roundup is a major one in the world. The relationship with GMOs is very simple, because 80% of edible GMOs are designed and modified artificially, in order to be able to keep Roundup inside.

Dr. Tom O’Bryan: So that's the mechanism ...

Professor Seralini: Yes.

Dr. Tom O’Bryan: Of why we're doing GMOs, is that the GMO plants are designed to be able to resist the Roundup chemicals that are sprayed on the fields, so that spraying it on the fields will kill the weeds and allow this plant, this modified plant, to grow.

[00:12:00]

Professor Seralini: The Roundup is a major pesticide in the world, and 80% of edible GMOs have been artificially modified in their heritage patrimony in order to be able to absorb Roundup without dying. This is why I do not, I never say resistance to Roundup, because they do collaborate with the pesticide in order to be filled with it. I say, tolerate Roundup, and Monsanto says the same. It say the Roundup ready tolerant, so, yeah, so that means that they tolerate.

[00:12:30]

Dr. Kara Fitzgerald: You know, mercury is fairly common, believe it or not, even in careful individuals. I had a patient with Hashimoto thyroiditis, was attempting to do right by herself by choosing to eat lots of fish. Of course you can't blame her, right? I mean, that's a smart thing, but she happened to be choosing sea bass, and, as we know, sea bass is loaded with mercury, unfortunately, among other compounds, and so, she had very high levels of blood mercury.

[00:13:00]

In her case, that was definitely a piece of the puzzle. I think that the organotoxins or the plasticizers, pesticides, herbicides, you know, things in our food, I think those
are really bad actors. We just can't underestimate their impact on disease. They might be a little bit more wily for us to really figure out.

**Dr. David Haase:** One of the other toxins that may come around is not something we breathe in or touch or feel. It can come in our diet as well. Aflatoxin is a mold or a compound that comes off of mold, that's often found in grains and legumes. Interesting enough, we do a lot of advanced genetic testing in office, whole genome analysis and some metabolome analysis, and in finding an individual that was missing the genes that attach glutathione onto toxins, so glutathione is our master antioxidant, master detoxifier, right?

**[00:14:00]** This individual was missing several of the genes necessary to attach glutathione onto toxins. Guess what? Aflatoxin's one of the things glutathione removes, so this individual had auto antibodies against Aflatoxin adducts.

**Dr. Tom O’Bryan:** Wow.

**Dr. David Haase:** What that means, right, when this individual would eat foods that had a little bit of mold on them, maybe some peanut or some chick peas that hadn't been washed, they would get sick, they would start getting headaches, and they couldn't figure out why sometimes they ate hummus and they were fine, and other times they weren't, because the Aflatoxin in their body would stimulate an autoimmune response, and the Aflatoxin would build up, because they had a genetic propensity not to be able to remove it, because they couldn't conjugate it to glutathione.

**[00:15:00]** Here we've got this interplay between genetics, detoxification, autoimmune function, and it's a puzzle that can be figured out if you look and you test and you're curious.

**Dr. Tom O’Bryan:** Yes.

**Dr. David Haase:** You know, a lot of these things that we don't know why, just require us to continue to ask why, and every once in a while, we figure something out.

**Joel Salatin:** One lady had a son who was chemically sensitive, and every time he ate meat, he had like a seizure. When she started with ours, he could eat, and he never had a seizure, because it didn't have the toxins in it. Another lady, every time she touched chicken, for example, out of the supermarket, she get a rash. She was chlorine sensitive. Supermarket chicken, including organic, is bathed in chlorine. She was able to eat ours, and she could touch it and handle it, and nothing.

**[00:16:00]** One of the most interesting ones came from one of our chefs, actually, who said, I didn't know this, but in the industry, one of the big issues in the prep room is what's called sore hand syndrome, when you work with chicken. Your skin is permeable. I mean, stuff goes through it. When the prep room would work with, you say, break down chickens, you know, you're breaking down carcasses, in about 2 hours, their hands get sore like arthritis, because of the toxins, everything's wet,
right, we're getting everything wet, and it's coming into your skin, and so they can't work it that much.

She said, when she started with ours, they could work, they could go all day and they literally, they didn't take a break on time because they were used to taking a break when their hands started feeling sore, and they forgot to take a break, because their hands didn't get sore. What's going on? Well, because we don't have the toxins.

One key that I think about with environmental toxicity is that, where we're raising our food, the feedlot beef that we're using with the antibiotics, with the hormones that we're giving them, with the environmental conditions, it's just not a healthy place to raise a food source. The water supply that we're using, we actually do water testing in our community, and we find, shockingly, people with uranium arsenic, high levels of lead in their house supply and in their well supply.

I think the mineral depletions we see in our soils make you vulnerable to the toxicity, whereas, your reserve may have been higher, and I think it's almost a bell-shaped curve where there was toxicity in the past, because we didn't recognize that you couldn't smoke and change your oil and sit in gasoline, that that was dangerous, and spray DDT throughout the neighborhood, and have the kids run behind it.

As our future progresses, in our bigger cities, with the smog, with the pollution, we find that the ability for the resistance to toxicity is much lower. The colored sheets that we're bathing our kids in at night with all the dyes and all the hormone, the flame retardants, they're all hormone disruptors. A hormone disruptor is a chemical that alters the function of a hormone pathway in your body, and for me, when I hear hormone disruptor, I hear autoimmune instigator. I really think that those systems go hand-in-hand, and that they can drive each other.

You mentioned about flame retardant chemicals in children's clothing. What kind of clothing should our parents be getting for our kids?

Everyone should be wearing organic cotton. It's not possible for everybody at every moment, but the things that you spend hours and hours in, like your bedding, that's the one thing that probably makes the most sense to spend money on for your kids.

In the Netherlands we have a big problem now with one metal called Chromium 6. These are people that work in the military, and all the tanks that were in Afghanistan, for instance, also, the tanks from the United States, they were close to my university. Many of the men that worked there became ill after working for a couple of years in that cleaning industry.

Yes.
**Professor Tervaert:** The idea is that Chromium-6 has caused all kinds of problems. We have now an official team to look if we can get more knowledge about it and also, get more proof that indeed it is the case. Metal allergy discovery and determination of metal allergy is a big issue nowadays.

**[00:20:00]**

**Dr. Tom O'Bryan:** When you said these workers got sick, were they sick with autoimmune conditions?

**Professor Tervaert:** Yeah, well, there's three diseases that they have. One is the increased prevalence of cancer, especially cancer of the throat and of the stomach and of the lung. There's also an increase of nasal perforation that's a direct toxic effect of Chromium 6, and the discussions are especially about those patients who developed an allergy to Chromium 6, you have to, some men, at the age of 50, suddenly developed asthma, suddenly developed rhinitis, and hay fever, and all kinds of other allergies.

**Dr. Tom O'Bryan:** 50 years old.

**Professor Tervaert:** Strange, it's strange. I mean, normally you have these as a kid. Then, when you grow older, it disappears. He has the opposite.

**[00:21:00]**

**Dr. Sara Gottfried:** We walk around, we get exposed to all these pollutants. We walk on asphalt, we walk on, we get exposed to heavy metals on our shoes. Leaving your shoes at the front of the door isn't just some zen concept, it's actually to leave the heavy metals and the other environmental pollutants, so that they're not tracked through your whole home and causing problems with their air quality.

**Dr. Tom O'Bryan:** Especially if you have an infant.

**Dr. Sara Gottfried:** Yes.

**Dr. Tom O'Bryan:** Or a toddler. Someone crawling around on the floor.

**Dr. Sara Gottfried:** Yes.

**[00:21:30]**

**Dr. Tom O'Bryan:** You've been walking on the carpet with your shoes that have the fertilizer and insecticide and Roundup that you just walked past to go from the car to the house, and it's on your shoes. Now you bring it in, now it's on your carpet. Now your baby's crawling on the carpet, and they've got it in their hands, and then it gets in their mouth, and you're exposing them to so many more chemicals that way.

**Dr. Sara Gottfried:** Critically important. I don't have a toddler anymore, but I'm doing yoga on the carpet. Right?

**Dr. Tom O'Bryan:** Yeah.
Dr. Sara Gottfried: I'm getting exposed to it, so ...

Dr. Tom O'Bryan: Yes.

[00:22:00] Dr. Sara Gottfried: My kids, they'll lie on the carpet and do things on their laptops, so, yeah. Very important.

Dr. Tom O'Bryan: Yes.

Dr. Steven Masley: Food sensitivity, that would be the first thing I would think of, and someone who doesn't have a stellar response to adding smart foods in the activity I talk about, so I might do gluten, either I'll get them to try an elimination diet, where we give up like the top 7, gluten, dairy, soy, corn, egg whites. One of the most common things, peanuts, that people might react to, give, I mean, give those up for just 21 to 30 days. I mean, sometimes it's startling, the response.

[00:22:30] Then if it's not food, we can get into, some people are chemically sensitive. The cosmetics that people put on, the perfume, chemicals in our, we live in a pretty toxic world. When you think of all the chemicals in our home, they could, in some genetically sensitive individuals, trigger their autoimmune response.

[00:23:00] There's definitely chemicals out there, and so it, you know, I go with the most common things first, but eventually, you've got to think of mildew and mold and other potential triggers out there, chemicals in our home, all sorts of things, and they're all additive. You add up all these little bits of all these different triggers, and you have a massive trigger. That's the hardest part, I think, is figuring out what the triggers are, so that people can get out of this autoimmune cascade that takes their health from them.

[00:23:30] Dr. Tom O'Bryan: Yes. Yes, it is. Yes, it really requires some investigation, almost Sherlock Holmes, to figure out, so, you can start with the basics and a healthier diet, and if it doesn't work, then you have to really dive in there to see ...

Dr. Steven Masley: Oh, yeah, absolutely.

Dr. Tom O'Bryan: Where's it coming from?

Dr. Steven Masley: Usually, there is something.

Dr. Datis Kharrazian: Bisphenol A, also known as BPA, is the main chemical in plastic products, so, plastic bottles, plastic utensils. They spray this plastic in tin cans, even. They spray it over paper towels.
Carbonless credit card receipts.

Credit card receipts, right. That's all Bisphenol A. Studies have shown that about 90% or higher, 90% of the population in the US has very high levels of urinary Bisphenol A, this BPA compound.

So, this toxic chemical is in the urine?

Right.

For 90% of us already?

Right. It's really known mostly as an endocrine disruptor, meaning that this is a compound that can actually bind to a hormone receptor. There's lots of evidence that BPA is what they call an endocrine disruptor, so it can make females and males have abnormal hormone development, whether it's ...

Someone's body might think they've got a whole lot more estrogen than they do?

Right.

Or a whole lot more testosterone than they do?

Right. That's the cost of BPA being an endocrine disruptor. There was actually a US senate hearing about, world's leading experts on this BPA compound, whether it should be removed, then the expert opinion was to remove it, that this is dangerous to the population, but that hasn't been done.

Politics, right?

What they've done, some people will say things like, BPA-free, but now they're using something called BSA, which is more toxic, more inflammatory. There's a saying that Dr. Vachhani always says, plastic is plastic, and there's some truth to that. BPA is an area of interest for us, because we know what some of the research shows is that, once you get exposed and ingest this plastic compound, besides its endocrine disruption effect, it can actually bind to your protein, and then create a new trigger for autoimmunity.

We did a publication a couple years ago, where we looked at healthy blood donors, and about 10 to 12% of people had that reaction going on in the population of healthy blood donors.

Healthy people had this?
| **Dr. Datis Kharrazian:** | Yeah. You can do some things to limit their exposure, like for plastic, if it's heated, you get more release in your liquid. If you have water that's been sitting out in the sun, a water bottle, then that plastic BPA compound gets in the water. If the solution is really acidic, like soda, soda has a very low PH, right, it's very acidic. That acidic environment makes more of that plastic BPA compound go in the solution. |
| **Dr. Tom O’Bryan:** | The plastic bottles of soda that you can buy in the store are likely to have levels of BPA in them? |
| **Dr. Datis Kharrazian:** | Absolutely. If they are not refrigerated and if they're hot, just the fact they're acidic, there's a higher BPA content than, let's say, water. |
| **[00:26:30] Dr. Tom O’Bryan:** | A few things that you could do now, first, don't leave plastic water bottles in the car. |
| **Dr. Datis Kharrazian:** | Absolutely. |
| **Dr. Tom O’Bryan:** | It's great to have water in the car, but get glass bottles, or have like a coffee mug kind of thing. |
| **Dr. Datis Kharrazian:** | A metal thermos. |
| **Dr. Tom O’Bryan:** | A metal thermos. Stop using plastic water bottles in the car. The second thing is, if you're drinking pop, don't, but if you are drinking pop, don't get plastic bottles of pop. Is the can a little bit safer? |
| **[00:27:00] Dr. Datis Kharrazian:** | Well, the cans are still coated with BPA. |
| **Dr. Tom O’Bryan:** | Oh, well, that's it on pop. Sorry. Pop's out. |
| **Dr. Datis Kharrazian:** | The point is that these things do have an impact. The biggest insult, though, is when people drink coffee through a Coffee Lid. |
| **Dr. Tom O’Bryan:** | Yes. |
| **Dr. Datis Kharrazian:** | The heat releases the BPA into the liquid. |
| **Dr. Sara Gottfried:** | We talked about using stainless steel containers for water, and also glass containers. They’re totally inert, so that’s the safest thing to use. Use them, also, for food. My fridge is full of glass containers. I use also stainless steel containers, but then you can’t see it. For whatever reason, stainless steel just doesn't work as |
Dr. Tom O'Bryan: Yeah. I can't imagine, why do they put lids on pots that are not glass?

Dr. Sara Gottfried: I know.

Dr. Tom O'Bryan: You want to see how things are in there without having to take the lid off, right? Also, for storing food in the refrigerator using glass containers. Would you be cautious about plastic containers in the refrigerator with your foods?

[00:28:00]

Dr. Sara Gottfried: Yeah, so stay away from plastic. I mean, when I first started to see the data on plastic and what it does to the female body and to the male body, I just got rid of everything that I had. I had people who'd come over and they'll bring me a plastic container of something, it goes straight into either the recycling or the trash. I just don't want it in my home. Another important class is your pots that you're using for cooking. Have fun, the cheap, nonstick saucepan that you can get, they're terrible.

Dr. Tom O'Bryan: They're nasty.

[00:28:30]

Dr. Sara Gottfried: Teflon is an endocrine disruptor, it does a number of harmful things to the body. I use Scanpan. which is based in Scandinavia, and it doesn't have endocrine disruptors in it, or just use a cast iron pot, or an enamel pot.

Dr. Tom O'Bryan: We use the Le Creuset?

Dr. Sara Gottfried: Le Creuset. Yes. I love La Creuset. It's great for making soups and stews and everything.

Dr. Mark Menaloscino: The EMF exposure, I think, is going to be a bigger problem than we think. There is some suggestion that it's already a hormone disruptor for the adrenal gland. That data is fairly clear. There seems to be cancers in unusual places where people keep their phones, and particularly, for the younger people in our society. The younger you are, the more that the EMF penetrates the body. There's some good data that shows the depth of penetration of the brain for little kids versus adults is much, much more dramatic.

[00:29:30]

I think it's one of those things where, sometimes it makes sense to be more prudent before the date is actually here, especially when it's a do no harm choice. I really think that, as time goes on, we're going to find that there are things we're doing that we probably should have been doing.

Dr. Tom O'Bryan: I fully agree. As a parent, one of the things they could do is just demand that their children are using chords with the phones, not a Bluetooth, because then you're putting a battery next to your brain anyway, but using a cord that plugs into the phone and there talking on a headset.
Dr. Mark Menaloscino: Yes. That's what I do. That's the way ...

Dr. Tom O'Bryan: That's what I do, also.

Dr. Mark Menaloscino: I think that's the smart way to go.

Dr. Tom O'Bryan: Yeah.

[00:30:00]

Dr. John Cline: You know, a person has a lot of electromagnetic radiation exposure in their homes or workplaces, it's fairly simple to create safe zones, like the bedroom, for instance, so that they are not being constantly bombarded with electromagnetic radiation. Removing electromagnetic radiation is a fairly simple thing to do, and profound.

Dr. Tom O'Bryan: May I ask you about that?

Dr. John Cline: Sure.

[00:30:30]

Dr. Tom O'Bryan: People think, well, I don't have any electromagnetic radiation. It's really easy to run a test to see if you're being exposed to electromagnetic radiation when you're out in the world. All you have to do is turn on your smartphone and then try to connect to a wireless, and look at how many wireless networks are within range of your smartphone. That means that electromagnetics is in your aura, in your presence.

[00:31:00]

Dr. John Cline: Absolutely. All our computers are cable, so we do not have wireless routers. Then, I've tested our home for a phenomenon called dirty electricity. You can get these Graham-Stetzer meters, they're not expensive. We have one in the clinic, we loan out to patients. They draw a little map of their homes, where the plug-ins are, and then they go from plug-in to plug-in with this meter, and record the digital readout. The wiring in a home can act like a large antenna, and pull radio frequencies, microwaves, out of the air.

[00:32:00]

Dr. John Cline: If your home is close to an electric generating station, or a switching station, the electricity goes out through the wires and into our homes, but then it has to return to the station, because it's a loop. If you're in that pathway, that will move through your home, and through the wiring, and it can come out in your atmosphere.

[00:32:30]

Dr. Tom O'Bryan: I remember, in the mid-eighties somewhere, reading a study that, if you live within a quarter-mile of high power electrical wires, the incidence of children with leukemia was much, much higher.

Dr. John Cline: Sure. If you find areas and the home where there's a very strong dirty electricity, you can buy a filter and just plug it in. In our bedroom, we've got 3 filters. If the head of your bed is close to the wall and there's wires in the wall, there will be a field from that. Good idea to pull the bed away from the wall.
Dr. Sara Gottfried: There are some women who never wear lipstick. Bless them. I'm someone who loves lipstick, and I only wear organic now, but that wasn't always the case.

Dr. Tom O'Bryan: Yes.

[00:33:30]
Dr. Sara Gottfried: I actually measured, in, this was maybe five years ago. I periodically run my own functional medicine tests on myself. I found that my lead and my mercury levels were quite high. The mercury I understand, because I have a fondness for sashimi, and I have to be careful about it. That's one of the reasons why I test my heavy metal. The lead was so confusing to me. I started to look at, you know, what were the sources of lead?

[00:34:00] I tested my water. I use the water filter, I have a very long time, and it wasn't my tap water. It wasn't filtration system that I'm using. What I found was that it was my lipstick. I was occasionally using some lipstick that I thought was safe. Can I say some of the brands?

Dr. Tom O'Bryan: Yeah.

Dr. Sara Gottfried: I was using Burt's Bees, their lip shimmer. That actually has lead in it. Might have been removed by now, but that 5 years ago, it still had lead. I love Chanel. I love kind of their new look every 6 months, and I was using a Chanel lipstick, mostly for going out at night, not every day, but these were enough of an exposure to get my lead level to a significant ...

[00:34:30]
Dr. Tom O'Bryan: They were accumulative.

Dr. Sara Gottfried: Yes.

Dr. Datis Kharrazian: I don't think we're ever going to get to the point where we can really reduce our exposure is, right? There's just too much latex gloves used with foods, too much plastic bottles, there's too much chemicals that are used in cleaning products, there is formaldehyde in carpets, right? There's all these things around us, and there's no strategy to reduce that load. The only chance we have is to try to improve our own tolerance.

[00:35:00]
It's not as simple as you just do something like chelation therapy, where you try to pull these metals out of your body, that you're still going to, even if you did chelation, you would still have reactions to plastic that wouldn't be chelated out. You would still have reactions to formaldehyde that don't get chelated out with those types of agents, right, which is a normal treatment.

[00:35:30] There's a point that we all have to consider improving our overall tolerance, especially if we were reacting to chemicals in early stages, and especially for those that have autoimmunity. As far as other things that you can do that, like, chemical tolerance issues, raising antioxidant levels and glutathione levels, especially ...
Antioxidants are in the vitamins and minerals that we take, right?

Right. If we can have a high antioxidant-rich diet, or take them as supplements, that can have an impact on tolerance, but at the end of the day, the key thing is to not ignore those symptoms of reacting to chemicals and sort of reactive foods, because it really suggests that you’re losing your tolerance to the environment and the foods you eat, and the next thing that happens is you lose tolerance to yourself and start to develop autoimmune diseases. They could be anywhere.

The toxicants that I never used to worry about, they're called non-persistent, because they have short half-lives. They are out of your body in a few hours or a couple of days, who cares? Well, it turns out that, we’re breathing them in all the time. In our homes, the air pollution levels are just astounding. And cities, from the vehicular exhaust, vehicular exhaust has greater association with cardiovascular disease and heart attacks than cholesterol does.

Wow.

Women, the greatest risk for giving birth to an autistic child is how close that woman is living to a busy roadway. There are at least eight studies now, across the country, showing the same thing. If that woman continues to live in that home, that child's autism gets worse.

You know, we know, I know of the studies that show that children in Mexico City have Alzheimer's already, early Alzheimer's. They can identify the plaque in the brain is because of the toxicity of the air.

Yeah. It's, the vehicular exhaust is not a good thing. I don't know why this is not more well-known, but you can make lab rats fat, obese, from air pollutants, vehicular exhaust. You can make them diabetic. In human studies, the cardiovascular disease, the autism, allergies, asthma, so these environmental toxicants are multi-faceted. They knock out the immune system. They knock out the mitochondria, so you don't have energy. Chronic fatigue.

That's the furnace in every cell that generates energy.

You don't have energy, and if you can't take that fuel and burn it for energy, it goes into storage, fat.

Yep.

These things, for me, are the vehicular exhaust, the plasticizers that we get in our air, and as well as our personal care products that, the greater the level of phthalates or plasticizers in the urine, the higher, the bigger the belt size in males, females, and children.
Dr. Tom O’Bryan: There's a correlation between the urine phthalates, meaning our body's trying to get rid of this stuff, get it out of there, and their belt size.

[00:38:30] Dr. Datis Kharrazian: Correct. Now, these toxicants, they damage the mitochondria, the immune system, and we've known there's been this imbalance in immunity for a long time. Now, it's clearly researched. I can piece it all together for you. These toxicants imbalance the immune system so that you can't fight off virus or bacteria well. You end up with chronic infections. Limes disease, chronic Epstein-Barr, chronic herpes, all these other things, and then, so that's low TH-1, high TH-2, allergies, which have been at epidemic proportion for the last 40 years, or 50 years, and autoimmunity.

[00:39:00] Dr. Tom O’Bryan: Yeah.

Dr. Datis Kharrazian: It's the same imbalance that is found in the host of all the chemical toxicants that the CDC has proven are in all of us.

Professor Tervaert: There was an airplane falling on Amsterdam, causing a lot of problems. It was an El-Al airplane, and then, after the airplane fall on a part of the city, it appears that there were many patients with autoimmune diseases.

Dr. Tom O’Bryan: They began to ...

Professor Tervaert: Yeah. They developed ...

Dr. Tom O’Bryan: Developed autoimmune disease.

Professor Tervaert: They developed autoimmune diseases. The question was, what was the reason? They were looking for origins and for all kinds of toxicities, and then, we put forward the hypothesis that it was just the silica, the silica coming, because the buildings were damaged, and there was a lot of silica coming into the atmosphere.

Dr. Tom O’Bryan: That's a mineral, silica?

Professor Tervaert: Yes. SEO-2. It's the main component of the earth crust, actually. Of course, if buildings fall down, then a lot of silica comes in the air. It wasn't a hypothesis at that time, but some years later, there was an earthquake in Japan, and they actually calculated exactly how many more autoimmune diseases they saw, and they proved, actually, that it was the silica that was causing this problem.

Dr. Tom O’Bryan: The same mechanism where ...

Professor Tervaert: The same mechanism.
Dr. Tom O’Bryan: When buildings collapse, some of the construction material is in the air, and part of that particulate matter is silica, which people breathe in.

Professor Tervaert: Yeah. Yeah. For instance, 9/11, probably the same issue.

Dr. Tom O’Bryan: I’ve seen some of those studies on 9/11, and the amount of autoimmune diseases that people are getting now ...

Professor Tervaert: Right.

Dr. Tom O’Bryan: Who were the rescue workers at 9/11.

[00:41:00] Professor Tervaert: Right, right.

Professor Yehuda Shoenfeld: It would be of interest to you to know that the workers who worked in the ground zero, after the 9/11 destruction of the twin towers, after working in the reconstructions of the beautiful buildings which are now the ground zero, many of them developed autoimmune diseases. This was published in the arthritis rheumatism, a very respectful journal of the rheumatologists in the last year, to indicate that they were exposed constantly with different metals, some of them aluminum, when they destroyed or demolished the ruins and tried to reconstruct this beautiful building.

[00:41:30] Everywhere in our life, the modern life, we are exposed to noxious materials, which can stimulate the immune system and, in a few subjects, which we know who they are, and we can predict them, or predict the, or, let's say, diagnose or depict these people, they might develop autoimmune diseases by being exposed to all these substances that you release fit.

[00:42:00] Dr. Walter Crinnion: Yes, the environment is overwhelming, but you can do some very simple steps. I’ve come to the place in my career, Tom, with the research that I read and study, and you probably have not, I doubt you’ve heard any healthcare provider say this, I think the number one thing people should do to be healthy, even before organic food, is get a high quality air purifier in their home, one that forces the air through a series of HEPA filters and charcoal filters.

[00:42:30] Just by doing that, dust control in your home, I have the Walters Holy Trinity, get the furnace vents sucked out, get the dust sucked out of them, because these environmental toxicants aren’t free-floating in the air, they’re on the dust. Then, buy the high-quality, pleated, electrostatic air filters. They’ll cost you 20 bucks a pop. That grabs the dust, doesn’t let it get in the vents, and then you get a good, high-quality air purifier.
Usually, that's about a thousand bucks. For that thousand dollar investment, or twelve-hundred dollar investment or whatever it is, the opportunity is there to knock out the allergies, to prevent a woman having an autistic child, to reduce your risk of heart attack.

Dr. Tom O’Bryan: Yes.

Dr. Walter Crinnion: It's just, that's number one.

Dr. Tom O’Bryan: The air that we have control over, which is in our home ...

Dr. Walter Crinnion: You have control over the air in your home.

Dr. Tom O’Bryan: That we spend at least half of our time in, because we sleep there.

[00:44:00] Dr. Walter Crinnion: Exactly. Now, there's many steps to go beyond there. Get the carpeting out of the house, don't wear shoes in the house.

Dr. Tom O’Bryan: What do you do if you walk into a hotel room and you smell all the cleaning stuff? What can a person do?

Dr. Hyla Cass: Make a note that, next time you ask for a non-toxic room, for a hypoallergenic room. For the time that you're there, if it's really bad, you move, but they're usually all that bad, and you ask them not to use cleaning things the next time in that room. I don't have people clean my room when I'm in a hotel, actually. That's another thing to do, and to bring in an air filter. There are HEPA air filters in hotels that you can ask for.

Dr. Tom O’Bryan: Yes. Oh, hotels carry HEPA air filters. Oh, what a great idea.

Dr. Hyla Cass: Yeah.

Dr. Tom O’Bryan: That's a great little pearl.

Dr. Hyla Cass: I'm going to start a run on HEPA filters. HEPA just means it's a very small pore, so it really filters out the fine particles.

Dr. Tom O’Bryan: You're cleaning the air, so that that environmental exposure is not as bad for you.

Dr. Hyla Cass: Right.

[00:45:00] Dr. Antonio Marinho: If you are a son of a patient with rheumatoid arthritis, and you are positive for NTCCP antibodies, or a rheumatoid factor antibody, it's possible to have rheumatoid arthritis, almost, in 50% of the sons or direct family who smokes.
Dr. Tom O’Bryan: Smoking may be a trigger that seems to be correlated with ...

[00:45:30] Dr. Antonio Marinho: Yes, but is well-correlated. Okay? That would be an environmental statement.

Dr. Tom O’Bryan: Those family members of someone with rheumatoid arthritis, if they’re smokers, they’re likely to have elevated antibodies ...

Dr. Antonio Marinho: Yes, and likely ...

Dr. Tom O’Bryan: To rheumatoid.

Dr. Antonio Marinho: Yes, and likely to have the disease.

Dr. Tom O’Bryan: Have it, but they may not have symptoms yet.

Dr. Antonio Marinho: Yet, but they will be a very good candidate to have the disease, the clinical disease.

Professor Yehuda Shoenfeld: Smoking. You wouldn't believe how deleterious smoking is for the immune system. Let me give you just one example, how it can induce the immune system to react toward our own organs. When you smoke, you smoke the proteins in your alveoli in the lung, you change their conformation, and they are not recognized anymore as our own tissues by the immune system, and the immune system attacks it.

[00:46:00] Professor Yehuda Shoenfeld: There is even a theory that everything start from smoking or inhaling toxic substances into our lungs, and then, the cells distribute it to the different organ to induce one of the 80 different autoimmune diseases. Moreover, it has been found that, in smoking, quite often, our therapies will be called biological therapy, the newly developed anti-missile therapy. They are not effective if you are smoking.

[00:46:30] Dr. John Cline: Thank you for taking the time to listen to various experts in their fields when thinking about this important subject. The subject that I’ve been asked to discuss today is how toxicants in the body, the burden of toxins, and the whole subject of detoxification can impact autoimmune disease.
I hope that you will grasp, kind of, the big picture of the timeline of our lives, and how we go through life, various exposures and traumas that cause tipping points for our immune system, inflammatory systems, to become more reactive, and how addressing many factors can cause the immune system and inflammatory cascades to calm down and restore life and vitality.

Dr. Tom O’Bryan: This was an exciting episode. It's a shock to see that all of these environmental toxins are causing some of the autoimmune diseases, especially BPA phthalates. Make sure to take this information and apply it to your own life. Make sure to learn more about proper detoxing to get rid of these toxins from your body. For tomorrow's episode, we'll be looking into diseases related to the brain.

You will find out about how brain deteriorations and Alzheimer's can be properly treated, and you will also find out about the shocking truth about connections between vaccinations, autism, and attention deficit. Did you know that Alzheimer's and Parkinson's originates in the gut, years before there are brain symptoms? This just came out in the research last year. Okay. See you tomorrow.
EPISODE 5—ENVIRONMENTAL TOXINS: THE HIDDEN DRIVERS OF DISEASE

SUMMARY AND ACTION ITEMS

A policy statement was released by the American Academy of Pediatrics in 2011 that contained some shocking statistics. It stated that there were 74 billion pounds of chemicals that were being imported or produced in the United States every single day in the year 2010. That equated out to 250 pounds of chemicals per person per day. The human population is growing at a rate of .77% per year. Chemical use is increasing at a rate of 3% per year. While our current use of chemicals is staggering, research has estimated that chemical use will have doubled between the years of 2000 and 2024.

There are over 87,000 chemicals that are approved for use in our industrial society and they are ending up in our air, water, food, and soil. As we breathe, eat, and drink...they are ending up in us. We are now finding chemical residues in our hair, blood, fat, urine, breast milk, and even the umbilical cord blood of unborn children. When the levels of chemical in our bodies increases, so do our rates of disease.

In Episode 5, we begin to hear the many ways in which chemicals may be contributing to the drastic rise in autoimmunity:
1. Exposure to toxic chemicals in utero may change the development of immune cells leading to more autoimmune diseases.
2. Pesticide use is altering the microbes found in the soil and in humans possibly contributing to autoimmunity.
3. Chemicals are sticking to proteins in the human body forming new antigens (neoepitopes) that our immune system does not recognize. As a result, the new chemical combined to human protein combinations are leading to an increase in autoimmune reactions.
4. Air pollution is damaging the tissues in our lungs making that tissue unrecognizable to immune cells and initiating autoimmunity.

So...what can we do?
Chemicals In – Chemicals Out = Toxic Load

Your toxic load equals the chemicals you are exposed to and cannot eliminate.

Here are some things that were mentioned in this episode and in the interview transcripts that help you reduce your exposure to chemicals:
1. Use stainless steel or glass water bottles and food storage containers. This will reduce your exposure to phathalates and BPA. These are two plasticizing agents that wreak havoc on your immune system.
2. Choose skin care and other personal care products that are free of fragrances, colors, parabens, silicones, triclosan, and other harmful compounds. You can find a great list of chemicals to avoid and products to buy at http://www.ewg.org/skindeep/.
3. Take your shoes off before entering your house. This reduces chemicals that get on your flooring.
4. Purchase organic cotton and hemp clothing and bedding materials to reduce your exposure to harmful dyes and flame retardants.
5. Purchase organic foods whenever possible. If they are not available, refer to the EWG.org [clean 15 and dirty dozen lists](https://www.ewg.org).  
6. Clean your air with an air purifier that gets rid of VOCs and new pleated electrostatic air filters for your furnace. Remember to have your ducts cleaned too as toxins will accumulate in the ducts.

**Here are a few ways that you can increase your elimination of toxins:**

1. Make sure you have daily bowel movements. If your bowel movements are backed up, you will absorb more toxins in your intestines.
2. Get plenty of sleep and reduce stress. Your body detoxifies when you rest.
3. Increase your consumption of broccoli, cauliflower, cabbage, kale, Brussels sprouts, arugula, radishes, and other cruciferous vegetables. They will ramp up your ability to detoxify chemicals.
4. Drink plenty of water to increase your urine output and your ability to sweat. Many toxins travel out of the body via sweat and urine.
5. Exercise, take hot baths, and do saunas to increase sweating.

As stewards of this earth, it is our responsibility to become as educated as possible on this topic and take as many actions as we can to preserve healthy air, water, and soil for future generations.
“I have seen too much suffering. And it’s unnecessary suffering. After traveling the globe and interviewing some of the brightest medical minds on the planet, it is clear that there are simple options that can reduce and sometimes end the struggles of millions of people. It has been my dream to bring these simple solutions to you and your loved ones so you can live long and vibrant lives filled with joy and hope. Thank you for making this dream a reality.” Dr. Tom O’Bryan

Dr. O’Bryan is considered a ‘Sherlock Holmes’ for chronic disease and metabolic disorders. He is a clinician par excellence in treating chronic disease and metabolic disorders from a Functional Medicine Perspective. He holds Adjunct Faculty positions with the Institute for Functional Medicine and the National University of Health Sciences. He has trained thousands of practitioners around the world in advanced understanding of the impact of food related disorders and the development of individual autoimmune diseases.

Dr. Tom’s 2016 critically acclaimed ground-breaking book, ‘The Autoimmune Fix’ outlines the step-by-step development of degenerative diseases and gives us the tools to identify our disease process years before the symptoms are obvious.