SUPERHUMAN BRAIN MASTERCLASS

**Autoimmune Influences on Brain Disorders and Disease**
Guest: Dr. Peter Osborne

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**Dr. Jones:** Welcome to Superhuman Brain Masterclass. I'm Dr. Isaac Jones. I'm here with Dr. Peter Osborne, who is such a brilliant clinician, as well as somebody that's going to help us understand the autoimmune brain connection, one of the most interesting topics and most relevant topic to 21st Century brain health. Peter, thank you so much for being with us today.

**Dr. Osborne:** Oh, a pleasure to be here, Dr. Jones. I just, I'm excited and ready to share.

**Dr. Jones:** Awesome! So I'd love for you just to share a little bit about your background. I know that you've gotten to a point where you're coaching and training doctors now and some of the lead wellness practitioners around the world. And you're also educating masses of people on how they can really change and transform their health. You're an author. So I'd love to get a little bit of background for the audience just to learn a little more about who you are and what you're up to.

**Dr. Osborne:** Yeah, sure. I started this journey really in to autoimmune disease when I was in the VA Hospital working the rheumatology wing. And the VA Hospital, it's a veteran's hospital. I'm a veteran of the Air Force. And people were just being treated in a way, in my opinion, that was inconsistent

with good health and inconsistent really all the way across the board with just being a human.

It was not good, heavy doses of immune suppressant drugs, heavy doses of steroids, a lot of surgery for joint replacement. It was basically, to me, it was a mill. I didn't want to be there in the sense that they weren't willing to look at nutrition and diet, even when I brought them research from rheumatological journals that showed that things like fasting, and gluten avoidance, and certain food avoidance, and omega-3 fatty acids could actually have a more profound impact on autoimmune pain than the standard treatment model that was being delivered. So they weren't really interested in science so much as they were just interested in continuing the status quo.

And so when I left the hospital there, one of my very first patients in private practice was a little girl. She was nine years old. Her name was Ginger. She had terminal juvenile rheumatoid arthritis, and meaning that they gave her six months to live. Imagine, as a parent, going to the doctor and having the doctor say, "Look, you've got to go home and prepare for your child's funeral. There's nothing more we can do."

**Dr. Jones:** Horrendous!

**Dr. Osborne:** Horrendous! Horrible case! It was as simple as going gluten-free. Yeah, within six months, we had the permanent stint that was embedded in her arm out. She was no longer going back and forth to the hospitals. Her knees were no longer swelling up to the size of softballs. She was able to run, and play, and do things again. And then, today—this was a long time ago—so today she's graduated from college. And she's off doing great things in the world. And that was a six-month terminal diagnosis. All it took was the knowledge of diet change.

**Dr. Jones:** Wow! Unbelievable!

**Dr. Osborne:** Yeah, so for me, that was my first endeavor in to, "I need to get more people this information." And that's really what forged and created our mission. My mission at DrPeterOsborne.com and GlutenFreeSociety.org is to help 100 million chronically sick people with real, natural answers. To get that information into their hands.

And so part of our mission is direct to consumer in the sense that we have a huge database of articles and materials that people can come and learn for free. But we also train physicians. My goal is to train 10,000 physicians

 

because that's how we're going to reach 100 million. So that's our mission. And that's what we're about.

**Dr. Jones:** So powerful, that's so powerful. Now, you've gotten into the details of autoimmune and how it affects your whole body. But why don't we just talk a little bit about some of the challenges that you're seeing with people's brain health in respect to all of the 21st Century issues that are going on?

**Dr. Osborne:** Yeah, we have such an epidemic of brain problems. I really think a lot of the problems, in our country specifically, are because of brain dysfunction. People who are more angry, more irate, freaked out people who are struggling with depression in record numbers, record numbers of diseases like bipolar and autistic spectrum problems so the brain is absolutely involved.

One of the reasons why I think we're seeing such a fundamental increase in the problem is what's in the food: the chemicals, the pesticides, the food dyes, the food preservatives, the way we process the food, the way we feed and treat the animals before we eat them. There's this whole chain of the way that food and farming has been scaled for a money perspective, but not from a moral or an ethical perspective. And I think we're seeing that play out in the big stage.

But one of the other things, that in my own personal clinical experience, is that gluten and grain can contribute to massive, massive problems. And people are just not aware of that. We have this food guide pyramid that's always been very supportive of grains, as a base, for the consumption of our caloric intake. And there's no science that shows that we should be consuming this much grain.

As a matter of fact, a lot of the science is showing that eating less grain is actually a better thing. That if you go back in time, and we look at schizophrenia, as an example, schizophrenia's original name was bread madness. People don't realize that. They don't know that part of the history of that illness. But what would happen is people would eat bread, and certain people actually felt a madness, a psychotic-type of behavior that would lead to those types of diagnoses.

And just 50 years ago, the diagnosis of schizophrenia would land you in a permanent hospital scenario where they would do brain shock treatments. And you weren't getting out. So today, we have gluten. And we know that gluten can contribute to schizophrenia and other neurological disorders, brain disorders, neuropathies. We know that it can contribute to dementia and

 

Alzheimer's. So now that we're learning this stuff, we can apply it and we can save a lot of people the grief around neurological disease.

**Dr. Jones:** Wow! Yeah, and just to piggy back on what you just said, when I was in special needs taking tests in high school and elementary school where I needed that extra time to take tests, I was in normal classes, but to take tests, I had to jump over to special needs, but it was a humiliating experience for me. And I can remember when I went to this alternative physician that my mom found that there was so much hope in the way that he was talking to me because he just saw just miracles happen all around him in getting people off of all of these different medications, and getting them to understand the importance of diet, and optimal nervous system functions, and balancing the gut, and healing the leaky gut that people have, etcetera.

And so just three months after cutting out gluten, getting rid of food dyes, getting under a chiropractic care, going to a naturopath and getting an understanding of the overgrowth of various biotoxins and unhealthy microbes in my gut, three months later, I went from being diagnosed with ADHD and on medications to literally not needing any medications and fully functional, getting straight A's in classes.

And this is just an example of why we even called the Masterclass Superhuman because ultimately the reality is most humans are, like you said, they don't know what they don't know. They're asleep to the reality of what's possible for the upgrade that exists just around the corner for them.

And just knowing the simple changes, like what you just suggested, for me is the whole reason why I'm a doctor and the reason why I'm doing what I'm doing. But I love that. I love that story of that little girl, six months, now she's graduated college and has a life. But what are some of the biggest challenges that underlie the issues that you're seeing or like if you could summarize some of the main maybe seven or three or two issues that we're seeing? Brain certainly is one of them. Pesticides, you mentioned. But what are some other underlying issues?

**Dr. Osborne**: Big issue, the brain is 60% fat. If we want to nourish it, we've got to eat fat. The last 50 years of nutritional policy in the United States is getting low-fat diets and in most industrialized countries, not just the U.S. And I think if we look at the unethical nature as to how that came to be, we know that the sugar industry actually hired scientists to demonize fat. And that's been a big part of what's created this scenario, as well, is just low-fat diets.

So I think people should realize and understanding that we don't have time to get into which kinds of fats are healthy, and which kinds aren't, and why but as the general rule of thumb, manmade fats that are hydrogenated from genetically-modified oils that are either corn or soy-based are not healthy fats. And if we want to talk about what is healthy fat, real food fat from real animals that are taken good care of, there's nothing wrong with animal fat. But there's also fats that Mother Nature creates. The fat in avocado, the fat in coconut, these are healthy, regardless of whether or not they're saturated. And people need to understand that message.

Then we have the excessive carbohydrate intake in this country. Excessive carbohydrate creates a process in the brain, creates a process in the bloodstream where that excessive sugar, that excessive carb coats our proteins, it coats our neurotransmitters, and it coats our hormones. This process is called glycation.

That's why when you go to the doctor to measure diabetes, they run a test called a hemoglobin A1C. It measures glycation. It measures how the proteins in your bloodstream are coated with sugar. And when you coat something with sugar, it's sticky, it's gummy, it does not work as well. The hormones don't communicate as well. The neurotransmitters don't communicate as well. So high-carbohydrate diets are part of the problem.

Medication use is part of the problem. Look, we've got record use of antibiotics. Whether they're prescribed or whether they're being used in animals, you're still being exposed to them. If you're in a major metropolitan city like me, the Houston area, 42 prescription medications in the drinking water. We can identify those after the water's been filtered. That's a problem.

We all know the law of synergism. When you add one medicine to another, it creates an unpredictable outcome that potentially can be at 10 times or 100 times or 1,000 times synergistic and have a huge effect. So we've got 42 prescription medications that are being identified in our drinking water in the Houston area.

Then we have, aside from medications from unintended exposure, you have doctors writing scripts for medicines for heartburns, for medicines like antibiotics, for medicines for pain. These things can all contribute to—like your Tylenols, not your Tylenols, but your Ibuprofens, your non-steroidal anti-inflammatories—rip a hole in the gut lining. And this is the first step.

We've all heard of leaky gut, but there's another process called leaky brain. And before we can develop a leaky brain, we have to first develop a leaky gut. And so the use of non-steroidal anti-inflammatories as if they're handing them out like candy, we know those cause leaky gut. We know that those, even at low doses, cause gastric and intestinal ulcerations that can open a hole in the gut lining.

We know that drugs like the antacid family that suppress stomach acids can contribute to leaky gut through increasing our risk for infection. We know that those drugs can actually create problems with malabsorption of vitamins like vitamin B12, which is very critical to produce the myelins that coats the white matter in our brain. We need B12 to do that. So we've got so many people being put on so many different medications that can alter the GI tract, creating leaky gut that subsequently can lead to a leaky brain.

Then we have medications that can directly affect the brain. Things like statins, one of the top drugs that are used in this country. Statins cause Coenzyme Q10 deficiency and vitamin D deficiency. And cholesterol's important for hormone formation. And it won a Nobel Prize. LDL bad cholesterol won a Nobel Prize in 1998 because it was discovered that you need bad cholesterol to form brain synapsis.

So we have so many people being told, "Do these medicines because your family history and because you're doomed to illness if you don't do these medicines." But the outcome of doing these medicines, so many of them contribute to leaky gut or so many of them contribute to brain toxicity in ways that doctors are not giving full disclosure.

You go in for a surgery, you sign 50 waivers because they're giving you full disclosure. If you go in and get a prescription, there is no full disclosure. You're not being sat down and said, "Look, these are the really big risks for taking these medications. These are the short-term risks. These are the long-term risks." Nobody's getting full disclosure. And I think that's a really huge part of this problem.

**Dr. Jones:** Oh, my, gosh, absolutely, you're getting me fired up here. Dr. Peter, this is such a huge issue. And what I find in a lot of the labs that I run is that there's so many intracellular micronutrient deficiencies of antioxidants, amino acids, vitamins, minerals. And the list goes on. Chromium is typically deficient because of all the sugar that we're eating. There're typically fructose insulin sensitivities. And all of that affects your brain. And a lot of that, again, is caused by the medications.

But you're getting at such a good point, whether you're actually taking medications or not, if you're just even consuming the drinking water, or consuming conventional meat that have the estrogens and the antibiotics, and the various other medications they use to get the meat ready for consumer for sale.

Now, what's interesting about all of this is in my intake forms that I get from people, what I also see is a lot of people are just missing some of the basic things like hydration. Your brain is 70% water. And a lot of people are dehydrated.

One of the things that creates even bigger problems that I'm seeing, that you're seeing, as well, is intracellular micronutrient deficiencies just from the food being so deplete of minerals, and vitamins, and amino acids because of the over-farming of the soil and obviously the pesticide use.

But, Peter, powerful, powerful challenges that we're seeing. It's good to be aware of them. And this feels, perhaps, a little doom and gloom because you're like, "Oh, my, gosh, this is just stuff that we're all being exposed to. There's environmental toxins, as well." But there's so many amazing solutions. There're so many great things that you can do.

I would just love, perhaps, for us to take a little bit of a turn and talk about some of the things that you do practically with the people to make the biggest difference in maximizing overall health. And we can get into the autoimmune epidemic here and what is actually causing that, which creates the breach in the blood brain barrier, which oftentimes leads to a lot of the brain-based issues that we're seeing.

**Dr. Osborne:** Yeah, I think practical, fundamental things that the audience can walk away with. I look at seven things. There're seven fundamentals that you have a control over in your life every day, and you should get educated about them, and approach them in an intelligent fashion if you want to maintain good health without the doom and gloom, right, because rule number one and fundamental number one is hope and love.

You've got to have hope in your heart that you can get better and you've got to have love around you because those two things are critical to set the stage for the proper healing mechanisms.

But beyond hope and love, we've got food. Food should be clean. You should eat real food, not processed foods. So you should start reading labels. You

should start really redefining what you value or what you call food. When you drive through a fast-food restaurant, somebody else has prepared that from some frozen concoction of some kind of Frankensteinian base.

And people call that food. And we really need to start redefining what we call food. Real food comes out of the ground. It grows. Real food comes from animals that are properly cared for, properly taken care of, and properly fed. So when we're defining real food, let's start from the fundamental premise that if we eat real food, we're going to go a long way toward avoiding a lot of the things that we just talked about: the pesticides, the chemicals, etcetera. So food is a major component.

Clean air and clean water are two other major components. And look, we live in an industrialized world. And we're not going to stop living in an industrialized world. And I think there are benefits to living in an industrialized world.

Look, life is a lot easier than it was 100 years ago. Heck, my father-in-law grew up with an outhouse. They didn't have running plumbing and water in their home. We look at that, for example, not having running water increases the risk of spreading communicable diseases, right, because when you're sharing the same bathtub with 6, or 7, or 12 other people, you're sharing the same germs. You're living in closer quarters.

So technology and industry have allowed us to understand these things. And it's allowed us to implement great things. And a lot of people want to demonize technology and industry. I'm not in that camp. I think it's great. I think we just have to realize, look, with technology comes some other risks that maybe we didn't have before, but we can mitigate those.

And part of that is cleaning our air. We can put and we can implement air filtration in our homes and in our offices where we work. We can implement water filtration in our homes and at our offices where we work. Heck, I've got a filtration system in my practice and I've got one at home. So it's not hard to do. You just need to recognize that it has to be done, so clean food, clean air, clean water, right, all controllable.

Sleep, sleep is controllable. Turn of the electricity in your home. When it's dark outside, you should be gearing for sleep, while so many people use technology to become insomniacs and wreck their health. So we want to understand that most healing occurs between the hours of 10 p.m. and 2 a.m.

 

And if you're not sleeping, you're not making those healing hours up if you sleep later. So get to bed on time and honor your body's need for rest.

Another one is sunshine. We've been told that get out of the sun because of skin cancer when, in fact, most skin cancers occur in areas that get the least quantity of sunshine. It's not saying that you should go out every day and burn your skin, but let's use some common sense, people. The sunshine makes vitamin D. It helps us make melatonin. It helps regulate our circadian rhythm. It's very, very important. We need to get that sunshine on a daily basis, on a regular basis. And that's free.

The other thing that we need to make sure that we're tapping into is movement: body movement and exercise. It doesn't matter whether you're a CrossFitter or a yoga person, you should be doing something. As you said before, the brain is 70% water, but so is the rest of the body.

And stagnant water, right, breeds infections. Stagnant water turns bad. We want a sack of water, our body water, to have motion and movement because it's that motion and movement that lubricates our joints, that lubricates our brain through cerebrospinal fluid.

Movement, as a chiropractor and as part of my training, when you walk, when you move, your sacrum does this [*makes circular motion with hand*]. It creates a figure eight motion that supports the spinal cord and pumps cerebrospinal fluid around the brain. It keeps the brain nourished. So we've got to have movement in our life. It's fundamental.

So those are some of the things that are free. Those are some of the things that you can go do right now. And now, that you've heard them and you understand why they're important…And again, for me, education is a big part of it. A person can say, "Well, my doctor said to exercise, but he didn't say why." And if people don't understand why it's important or how it can impact their health in a good or a bad way, a lot of times they're just not going to do it. So now that you understand a little bit about why, go out there and implement.

**Dr. Jones:** Hmm, that's great. Love all of those tips.

Quick clarification, one of the things that I've been talking about is, essentially, controlling electromagnetic frequencies from your computer. Like, for instance, right now, I'm not on Wi-Fi. It's directly plugged in. I've got

[inaudible] units all through my house that decreases the overall EMF of the house to a much healthier level. And that's something that we talk about.

I had built in an electrical switch to the electrical outlets that the electricians came in and put in for me to the outlets that are in and around my room and my kids' room. But for people that maybe don't want to invest into an electrician to pre-wire that switch, is there anything that you would recommend to decrease the electrical pollution when you're sleeping because it does affect sleep so much.

And your brain is electrical. These electrical signals, we don't understand fully the impact of Wi-Fi, and Bluetooth, and all these other technologies on our brains. But what we're starting to find out is actually relatively frightening. And the brain tumors that are forming. And the fact that the World Health Organization has called cellphones carcinogens. So what are your thoughts on that?

**Dr. Osborne:** I agree, you've got to at least approach it from the perspective of minimizing your exposure where you can. In my house, we hardwire everything. In my office, we hardwire. So everything is hardwired in so that we're not having to have as much of that floating around through our air.

At night, when you're going to bed, put your cellphone in airplane mode or turn it off, or put it out of the room. If you want to keep it on so that when somebody calls you, you can put it out of the room. Keep it away from your brain, at least 12 feet away from your brain, when you're trying to sleep at night so that you can minimize any risk of those signals.

If you're running Smart TVs and other Smart devices, hardwire them into the wall. If you've got a router in your home that is sending a Wi-Fi signal, turn it off at night. So these are again, just very, very simple things that can be done. Another thing that can be done—and it's an investment that you can make, but it's not as expensive as bringing out an electrician and installing specialized devices—is a grounding sheet.

It's putting a grounding sheet on your bed that grounds to an outlet in your home because one of the things that we've seen in research is that when humans are connected with the Earth, it actually increases healing. It actually increases our capacity to heal.

Lance Armstrong's team, the biker who won so many different Tour de France's, the U. S. team had less injuries and healed faster than every other

 

team. And they had a greater degree in terms of people being able to finish the race from their team. And one of the reasons why, one of their hidden secrets, was every night, they would be grounded.

And so grounding your bed when you're sleeping at night can be a very, very effective way, as well, at making sure that you're picking up the right kinds of electromagnetic frequency that can actually accelerate and improve healing, as opposed to interfering with it.

**Dr. Jones:** Beautiful. Yeah, and just as a quick tip, if you go to Amazon, you can find outlets. They're like little things that you can plug into the outlet that then you can plug your Wi-Fi in to that has a timer on it. So between the time of ten o'clock and six o'clock in the morning, I actually have all the Wi-Fi in the house shut off completely. And it's something that I don't have to remind myself of. It's just all automated. And those timer switches are something you can buy, very inexpensively on Amazon. I love that.

And then, one of the things that you'd said was with sunshine. Now, how much time in the sun should we be looking at getting per day? And how do you, for people that are concerned about the propaganda out there that the sun causes cancer, what would you say to that?

**Dr. Osborne:** Everybody's different. I would say this to the audience, "You know the limitation of your skin better than anyone else, right." If you are a red head, freckled, very pale person, you're not going to want to go out in the sun for an hour and just roast yourself, right. If you're going outside and you're going to be on a boat for six hours, protect yourself. Like, there are times where we have to use good judgment and common sense.

So my advice is get sunshine to the quantity of your skin's ability to tolerate it without burning. There's something called a minimal erythemal dose, which is the quantity of time in the sun that it takes for your skin to burn. Don't go out long enough to burn. Go out long enough to not burn. And do that on a regular basis because consistency is what wins here.

It's not, "I'm going to make up all my lack of sunshine on the weekend and get six hours on a Saturday and roast myself." It's, "If I can get 20, 30 minutes a day," then that consistently day in and day out is going to serve you.

One of the things that I do, just a tip, is every morning when I come into the office, I drive up—we have a parking garage—I drive up to the top floor. I roll

 

down the windows and push back the sunroof. And I'll just sit there. And I'll soak up the sun for 30 minutes.

I might be reading or listening to an audiobook or something along that line, but that's one of the ways I get my sunshine every single day without excuse because if you work 9 to 5's, especially in the winter months, the further Northern climate state you're in, you get off of work and it's dark. And so you want to have a way that you can implement sunshine on a regular basis in your life. Another thing you can do, if you go to work every day is take your lunch outside. If you bring your lunch, go eat it outside. Now, again, that can be harder to do in the middle of winter when it's 20 degrees and very, very uncomfortable. But get as much as you possibly can.

And if you live in one of those climates above 27 degrees latitude, you might consider a light or a sun light. You might consider a photo lamp to put on your desk 20 minutes a day or so. It won't make vitamin D for you, but it will help your brain in terms of producing the adequate quantities and regulating serotonin and melatonin. So those are things that can be done, as well.

**Dr. Jones:** Years ago, when I interviewed Alan Christianson when he had his *Adrenal Reset Diet* come out, he had also talked about the benefits of sunlight to normalizing cortisol, and stress, and optimizing sleep cycles, and healing the adrenal glands. So yeah, it's amazing for brain function.

And you think about going in a studio and you've got all these studio lights shining bright on you. Like on Monday, I did 12 hours of video shoots, which I'll never do again in my life, but there were really bright lights on me. If you go outside and just get overcast sunlight, you're getting like 10X the photo rays into your body that is so much healthier for you than a lot of the artificial light that's found inside. So getting outside is absolutely huge.

And one tip that I'll also throw in there that I did right before this call is I was on a phone call that didn't require video. I just walked outside. I unbuttoned this shirt. And it's overcast right now. I just walked around for around 30 minutes.

And if there's any opportunity for you to be on the phone, just grab a wireless phone or your cell phone. Ask them to call you back on your cell phone if you're using a landline and go for a walk outside which is a huge opportunity. Number one, you're getting to walk, which is great and one of the most underrated exercises out there. And number two, you're getting out in the sun. I love that.

 

So let's talk about autoimmune and the brain. You're one of the world's top autoimmune experts, which is the biggest challenge, I would say, that's driving a lot of the conditions like cancer, heart disease, Alzheimer's, dementia, Parkinson's, etcetera, that really is the cause of the cause of these challenges. So why don't you just share a little bit about what autoimmune is, how it forms, and then how it impacts the brain?

**Dr. Osborne:** Yeah, the premise for me on health is that all forms of disease that are non-genetic—like, I'm not talking about cystic fibrosis or down syndrome here. We're talking about chronic lifestyle diseases—are nothing more than your body's alarm systems trying to warn you. Names for disease are irrelevant, in my opinion, because if we give it a name, we give the person a victim status.

How many times have you heard a person refer to their disease, "My celiac disease, my rheumatoid arthritis," like they own it. Instead of them owning, and they own the disease, then the disease owns them. And then, it becomes a part of who they are. And to me that does not empower a person to make meaningful change.

So understand that all disease is nothing more than your body's inability to adapt to the choices that you're making consistently over time. And if we understand that, then we understand that we can change our choices. And if we change our choices, we change the ability for our body to adapt differently.

Let me give you an example. If you overconsume sugar, and sit down for 10 hours a day, and you don't exercise, you will probably develop diabetes. But the diabetes is nothing more than an inaccurate manifestation of the way your insulin is being produced. Your insulin is being produced because of the choices that you're making. So again, your body is adapting by making more insulin because of your choices. And so you're adapting into the disease.

You're going walk out of the disease just as easily as you can adapt in to it. So understand that your genes aren't to blame. That your choices are most likely interfering with the way your genes behave. Your genes are actually just trying to keep you alive. So all disease is, is an adaptation of your body trying to keep you alive. Your body's super smart. And in the case of diabetes, if your body didn't make more insulin, you would go into a coma. And you would die. So your body is adapting into the disease.

So with autoimmune disease, it's much the same way. Now, we know there are certain triggers for autoimmune disease. And clinically speaking, what I

 

like to do is I like to look at these triggers first. What are those triggers? Because if we know what they are, for the person, then we can educate the person about what changes that they can make.

And these four triggers are biochemical triggers. There are other emotional and spiritual triggers that can also occur. I'm not going to get into that today because I want to get into the biochemical triggers. So there's four. Number one, we've talked about it already. And that is food. Gluten is one of the biggest triggers for autoimmune disease as a food, as a food-based protein. But lots of foods can trigger autoimmune disease. I've seen cases where people had autoimmune disease because of blueberries. I've seen cases where people had autoimmune disease because of broccoli.

So one man's food is another man's poison. And we have to honor that. And we have to be able to measure that in a distinct and unique way so that we can get that person a diet that's fit for them and not generalized for everyone. So food is a trigger.

Number two, chemicals are a trigger. And some that have been the most well-studied, pesticides have been very well-studied, as have heavy metals. Things like mercury, and cadmium, and lead, and arsenic, and valium. So we want to understand that chemical exposures overtime…

And most people don't go out and get an acute exposure to lead. They're not going out and sucking on a mercury thermometer and getting mercury poisoning. They're getting chronic, persistent, persistent exposure through their environments. And with that bioaccumulation, so to speak, over time, remember the body is trying to deal with that. So it's adapting to those exposures. And it's adapting into autoimmune disease. And that's, again, why we want to identify whether those exposures are happening and how to deal with them so chemical exposure, food.

Number three's infection. And there are a lot of different forms of infection. Experts in Lyme disease because Lyme can be a trigger, Lyme infections. Yeast overgrowth or yeast infection can be a trigger. Mold infection or mold reaction, nasal mold reactions, I see very, very commonly for people with brain problems. They have mold growing in their sinus cavities because of immune suppression. And it's a type of infection.

Although, most doctors when they do a nasal culture don't even culture for mold, they only culture for bacteria. And if it's a negative culture, they just dismiss it as not being an infection and give somebody some kind of sinus

 

rinse that isn't really going to solve that problem. So we want to look at infection as a potential possibility. And that could be viral bacterial. It could be fungal. It could be parasitic. And so we want to understand that those can play a major role in contributing to autoimmune process.

The fourth trigger biochemically is nutritional deficiency. And you mentioned this earlier—micronutrient deficits. Vitamin D deficiency triggers autoimmune disease. Zinc deficiency triggers an autoimmune disease. Vitamin C deficiency causes dysregulation in the immune system that contributes to autoimmune disease. You need to have some kind of a tangible, objective way to measure these things. And my advice is get with the doctor and have them measured so that you know, look, what is your body lacking or missing. What is it that you can do to empower yourself to either supplement or eat more of the food that contains more of a particular nutrient so that you can get those deficiencies corrected.

And one of the other things on that note is many of the medications that people are on—this is a topic that very, very few doctors ever discuss—it's called drug-induced nutritional deficiencies. But it's a very, very common thing. I used to lecture about this internationally.

And so, for example, estrogen hormones can cause vitamin B2, vitamin B3, and magnesium, zinc deficiency. Statin medications for cholesterol can cause CoQ10 and vitamin D deficiency. High blood medications like the diuretics can cause potassium, and calcium, and magnesium, and zinc, and CoQ10 deficiency.

So people are on these medications on a consistent basis. They have no idea. They have not gotten full disclosure about the potential for drug-induced nutritional deficiencies. They're on these medications for 5 years, 10 years, 15 years. And what end up happening is these medicines force deficiencies. And some of these medicines, like heart disease medicines, they're designed to reduce the risk of heart disease, but they're creating nutritional deficiencies that actually increase the risk of developing heart disease.

So again, those are critical to understand. If you're out there and you've been put on multiple medications, you need to have that conversation with your doctor, drug-induced medical deficiencies. There are actually two different medical textbooks written on the topic. And so it's not something that they shouldn't be trained in, it's something they should understand. And, in my opinion, if you're going to prescribe the medicine, you need to know the side effects in and out.

 

**Dr. Jones:** Absolutely. Wow! So profound. At the core of autoimmune is these four factors. And I think it's important for everyone to understand that you can take control of your health. I love the concept, Peter, of your decisions over time create adaptations, which end up expressing certain types of challenges in the body genetically. And that the genetic adaptation of cancer, of diabetes, etcetera, those are your adaptations to actually protect your body from dying. A lot of people don't understand that. It's such a profound concept to really understand that there's an amazing healing and regulating power inside of your body that is literally working for you, not against you.

So let's talk a little bit about the impact of leaky gut and the breach of the blood-brain barrier. And then, how autoimmune disease, through that mechanism, can create brain challenges.

**Dr. Osborne:** So let's start with the premise that the gut is a quarantine zone. That's it's job, but its job is not to provide access to your bloodstream. Its job is to quarantine everything that comes in the body and separate good from bad. That is the sole function of the GI tract that it, again, quarantine, meaning we don't want things in the gut going through the gut wall, into the bloodstream because that's when the dangerous inflammation and reactions could start to begin.

So understanding that it's the job of the gut to keep things separated, we have to understand that what we put in our body, whether it's a medicine, whether it's a food, or a perceived food like a Frankenfood, we have to understand the impact that those can have on our barrier.

Our gut has five primary barriers that protect it from breaking open. The first barrier is your stomach acid. Okay. Your stomach acid, as food comes in and hits the stomach, there's acid there because if you're eating things with bacteria, or viruses, or other things, many of those are sitting with the acid. So the acid is a protective mechanism that kills off anything that could get down into your lower intestine and have potential penetration. So the acid is a very important barrier.

The second barrier is a compound that we make in our mucus. So we have this mucosal lining within our GI tract. And that mucus secretes, we call it secretory mucus, it secretes an antibody called IgA or secretory immunoglobulin A. This is our first line of defense. It's our immune system's first line of defense. So if we eat something that is not necessarily good, that IgA works like a handcuff. And it binds it so that we can get rid of it. So that

 

we can poop it out. So that it's not coming into the bloodstream. So IgA is the second barrier.

The third barrier's our microbiome. So our microbiome, this is the bacteria that lives inside of us who do several things. These bacteria help us digest our food. And a lot of people develop food intolerances because they have microbiome deficit. So the microbiome talks to our immune system. It actually sends chemical messages to our immune system and vice versa to talk about what's in the gut and whether or not the immune system needs to get ready to battle something. So there's this crosstalk or cross communication between our microbiome and our immune system that's very, very critical. So the microbiome being healthy is very important.

But our microbiome also helps us to produce short-chain fatty acids that keep the colon healthy. And it helps us to make certain vitamins. You can't make adequate biotin, for example, which is a B vitamin, that you need. And about 60% of your biotin comes from your microbiome. About 40% of your vitamin K comes from your microbiome. So if you are one of those people that are antibiotic, antibiotic, antibiotic, what you're doing is you're disrupting an entire gut barrier. So that microbiome is a very important part of the gut barrier.

The fourth barrier in the GI track is something called a tight junction. And it's the little anchoring proteins that make sure that the cells in the gut are not separating or spreading out. So if you could imagine…I like to think of it as a Lego block. If you've ever played with Lego blocks, as a kid, you got one block here with a little prong and another one here with an ending and like connect together. And when we try to pull them apart, it's hard to pull them apart.

Now, imagine if we shaved out the prong, the blocks would just fall apart. Well, that little prong is what we would call a tight junction in the gut if we're using that as an analogy. And so tight junctions snap the cells in the GI tract together to prevent a leakage across that barrier. They're like little gate channels. And they open and close, depending on what we're doing.

And there are a lot of things that can cause the leaky gut. And we've talked about a lot of them. The wrong food, food allergies, certain medications, certain types of infections can create or trigger this leaky gut to occur at the tight junction level. So tight junctions are one of those critical barriers.

The fifth barrier in the gut is called the GALT, the gastro-associated lymphoid tissue. Some doctors say, some scientists say that that represents 70% of the

 

entire immune system clustered and focused right behind the gut wall. I like to think of it as a massive set of tonsils that wraps around the intestine. Because what happens, if something breaches those barriers, is you've got the biggest part of your immune system is there to take care of business. It's there to protect you.

And so there are those five barriers. And if we start doing things that cause breaches in those barriers, this is where leaky gut starts to set in because those barriers are there to protect us. So once leaky gut sets in, things can leak into the GALT, the gastro-associated lymphoid tissue.

The reason I'm talking about this is because I want you to understand how autoimmune disease starts. Okay. When something that doesn't belong leaks in to the GALT, the GALT use it as a threat. And so it starts to produce antibodies and to produce chemical cytokines to deal with that threat. It's doing its job. Again, autoimmune disease is not the body going awry. Autoimmune disease is the body adapting to try to protect and preserve.

But what happens is some of those chemicals that can leak through a leaky gut, for example, one of them is called a lipopolysaccharide. It's a bacterial byproduct. Think of it as bug poop, bacterial poop. Okay. It looks like, to your immune system, it looks like an enemy. So your immune system's attacking it.

But what happens is sometimes the bug poop or these other proteins that leak through can look like your organs or look like your tissues. So some of them might look like your thyroid gland, or your thyroid hormone, or your joints, your cartilage, your muscles, your tendons. Some of them might look like your heart. Some of them might look like your liver. And so initially your immune system, your GALT, doing its job properly, is attacking what's leaking through.

But if what's leaking through looks like you, okay, then your immune system starts to turn on you. And that process is called molecular mimicry. And we've known about it at least since the early 1980s. Okay. So this is not new information. We're almost 40 years from that point.

But in science, unfortunately in an autoimmune science, particularly, a lot of the doctors who specialize in the autoimmune disease and the mainstream, they won't even recognize the term molecular mimicry, they won't even recognize the term leaky gut, even though now there's so much research on it.

I always say great ideas, revolutionary ideas that become a very good big part of science, our history's fraught with that. The doctor that discovered hand

 

washing was laughed into an early grave. X-rays, when they were discovered, they were not used. It took 30 years for them to become used mainstream. It took that long for the idea to become special. Antibiotics, as much as they can be detrimental, they are also very lifesaving in the right circumstances. It took, I think, 36 years for antibiotics to really truly be fully accepted.

So with every revolutionary idea in medicine, with every revolutionary thought process comes this timing of 30 to 50 years before everybody accepts it as, "It is what it is." And I think where we're at with molecular mimicry and autoimmune disease today, I think we're coming into we've got now enough fundamental research where the mindset is starting to shift in that direction.

**Dr. Jones:** Wow! Wow! So, so profound. And one of the biggest challenges with the breach of the gut with those five barriers creating leaky gut, creating molecular mimicry is that you then get this degradation of the integrity of the blood-brain barrier. So won't you talk about that second phase that happens and then how the brain ends up getting impacted through all of this.

**Dr. Osborne:** Well, there's a couple different mechanisms that we know about. And one of those mechanisms is the disruption in the microbiome. There's a nerve that goes from your brain to your gut, the vagus nerve. It's very, very important. And we now know it's like a two-way highway. Seventy percent of the lanes on that two-way highway come from the gut to the brain. Thirty percent of those lanes go from the brain to the gut.

So we know the gut has a huge influence on thought. And if we look at the neurotransmitters that are produced by the microbiome, 60% to 70% of dopamine is estimated comes from your healthy gut. Okay. So imagine taking that antibiotic and it disrupts your dopamine. This is one of the reasons why it can cause depression, an antibiotic. Think about that in terms of serotonin.

We know about 90% of the serotonin is produced by the gut, not the brain. So we have the gut producing these neurotransmitters trying to relay messages back to the brain. And the information from the gut, it far overweighs the information from the brain to the gut. So the gut has its own brain, its own nervous system. And it does a lot of communication to our master brain in our head. And that's one of the mechanisms.

So the antibiotics are a big factor in that, as are other things that can disrupt the microbiome. Eating foods with pesticides. Pesticides are antibiotics. Drinking water with chlorine. Chlorine is an antibiotic. We use it to disinfect our water. So if you're not filtering your water, you're getting chlorine and

 

chloramines, again you're creating a gut dysfunction that leads to chemical reactions in the brain that change the way you think, and change the way you feel and behave. So that's one of the mechanisms is through the actually microbiome and the vagus nerve.

Now, one of the other mechanisms is once we get a breach of that, once we have a leaky gut, we have a breach of the gut barrier, we're allowing for chemicals that are not supposed to be in the bloodstream to penetrate. And some of these chemicals can have an effect on the endothelial component of the blood-brain barrier meaning that the blood-brain barrier's a lot like, if you look at it under a microscope, it looks a lot like the gut barrier. We've got these very tight junctions and these tight seals.

Well, now those same things that can disrupt the fourth barrier in the GI tract, which is the zonulin proteins, those tight junctions, the same thing can happen in the brain. Now, those chemicals are just traveling to the brain. And they're going to create a disruption in the tightness of the blood-brain barrier. And that allows other things to start leaking in to the brain.

And so now, the brain has to fight stronger. And it has to produce more antioxidants. It's under more of an assault and more of an attack than what it should be. And so we know there's a concept. I use the word brainflammation. Grainflammation creates brainflammation. So when you're doing things that cause a leaky gut, and those things traverse to the blood-brain barrier and rip a hole in your blood-brain barrier, you now are opened to brainflammation as a result of normal behaviors and normal activities, eating normal foods. Because once those barriers are breached, things that are leaking in that don't belong that are supposed to be checked and balanced out are getting through. And that's not a good thing.

**Dr. Jones:** So profound. Peter, this is such great information. Dr. Osborne, the thing I think a lot of us need to recognize is that we're all predisposed genetically to certain types of diseases that won't be triggered unless the environment and our decisions that we're making create it such that there is an adaptive mechanism that caused the genes to be turned on.

And so for some of us, which for me, my grandfather died of Alzheimer's, and my number one genetic susceptibility is Alzheimer's disease. And does that mean I'm going to get Alzheimer's? No, because I'm living a lifestyle. I'm doing the things that I need to do in order to prevent that from happening. However, heart disease is number two for me. And so there are things that I do every

 

single day that Dr. Osborne beautifully exemplified in this interview to help prevent those diseases to be turned on.

Now, Peter, it's exciting to think about the epigenetic impact, which is the environment in and around our cells having an impact on the gene expression that will turn health-promoting pathways on, and not disease-promoting pathways for people that want to prevent disease. However, for people that already have brain-based challenges like I used to have with ADHD and dyslexia, and mom used to have with depression—key word is used to. She was on Effexor and Prozac, no longer on all of those. She used to be an insomniac, no longer an insomniac—so there are so many exciting things that you can do. But what have you seen, Peter, in people being able to see a reversal of some of these challenges through lifestyle modification and change?

**Dr. Osborne:** That's just it, we've talked about some of the triggers earlier. For me, again, I come from the clinical perspective because that's where I live and breathe is in the clinic. And so one of the things that we see is we measure, we measure the four triggers first. In every person that's struggling with current illness, we measure for infection, we measure for vitamin and mineral deficiencies, we measure for food reactivity, and we measure for environmental toxins and reactions to environmental chemicals.

And those are the big pieces that we control. Once, we start controlling those pieces as it matches that person's uniqueness, what we see is very, very profound, we see the complete reversal of autoimmune diseases. And so that, to me, is the motherload because most autoimmune diseases, you've got an endocrinologist treating your thyroid disease.

You go to the rheumatologist treating your autoimmune inflammatory joint disease, you're told, "It's forever. It's genetic. We don't really know what causes it. But here's a drug that you can take for the rest of your life." It doesn't make sense. It makes no sense to say, "We don't know what causes it, but we know what fixes it," that doesn't make any sense.

And the thing that really gets me is, "Yeah, we know what causes it, it's inflammation. So let's give you something to block the inflammation." But they don't take the next step, which is, "Well, what's causing the inflammation? Because if I can stop what's causing the inflammation, instead of masking it, then I can get to the root of this."

 

And that, again, so it's this paradigm shift that really needs to happen. But for us, it's understanding objectively, for a unique person, what are those triggers so that we can actually put them on the right path for the rest of their lives, and avoiding the things they need to avoid, and doing the things that they need to do in order to ensure that their body's genetic expression is one that's conducive to hope, and light, and health, and vibrance.

**Dr. Jones:** Dr. Osborne, this is a very emotional and powerful conversation to have because I just think that if people are willing to understand what you just talked about, your interview with me today will completely change and transform their life. I'm so grateful for you, for what you're up to, for your stand in the World that you're taking to help people transform their health and their vitality, and really reverse a lot of these challenges and prevent them ultimately from happening in the first place. So, so grateful for you. I'd love for you to share where they can learn more information about you and what you're up to that they can plug in to.

**Dr. Osborne:** Yeah, we've got two places really that we can send you. One, if you want to learn more about my clinic and what we do, it's DrPeterOsborne.com. And if you want to learn more about our mission around gluten, you can visit GlutenFreeSociety.org.

**Dr. Jones:** Beautiful. Well, thank you again so much. I can't wait for people to get this information. And keep being the amazing person you are, Peter.

**Dr. Osborne:** Thank you. Thank you for putting this summit on and being brave enough to challenge the status quo. I appreciate all you're doing.