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EMF Exposure — A Major Factor in the Development of Autism

Analysis by Dr. Joseph Mercola | June 21, 2026

STORY AT-A-GLANCE

- Autism needs to be approached as a system; systems biology looks at everything in biology as a web where everything is connected. When you tug at one part of the web, the rest of the web changes
- Dr. Martha Herbert believes autism develops in response to environmental factors that irritate and excite the brain, such as toxic exposures, allergens, and electromagnetic fields
- Autism can be predicted by looking at the level of brain irritability in the child. Mercury, EMF, glyphosate, vaccine adjuvants, and processed foods are all contributing factors
- The neural network disturbance found in the brain of autistic children has been shown to be proportional to the amount of mitochondrial dysfunction they have; in other words, autism is an outgrowth of mitochondrial stress and dysfunction
- De novo gene mutations can result when sperm is exposed to wireless radiation. Men desiring healthy children should avoid carrying their cellphone in their pants pocket

Editor's Note: This article is a reprint. It was originally published May 28, 2023.

This interview was recorded in November 2018 at the annual Academy for Comprehensive and Integrative Medicine (ACIM) convention in Orlando, Florida, but it was only last year that it ran on the site. At the time there was concern that the topic

was too controversial, but now that six years have passed and COVID changed the controversial landscape, we thought it would be good to release the video on this important topic.

I had the opportunity to interview two experts on autism and dirty electricity, Peter Sullivan and Dr. Martha Herbert, who cowrote "The Autism Revolution: Whole-Body Strategies for Making Life All It Can Be."[1] Here, we discuss some of the toxic factors that contribute to the development of autism, especially the role of electromagnetic frequencies (EMFs) and dirty electricity.

Sullivan's Journey

Sullivan has struggled with **electromagnetic hypersensitivity**, and still does to some degree, which was his primary motivation for learning more about it. He's become a fount of knowledge as a result. As a software engineer in Silicon Valley in the 1990s, he was passionate about personal technology.

> *"I studied in Stanford. I did all kinds of human-computer interactions. I worked at multiple companies: as a troubleshooter in Silicon Valley, an engineer and a software designer at the very end. I worked at Netflix and some other companies people would know of,"* he says.

In the early 2000s, problems began to take root. Fatigue and food allergies cropped up, and his children were struggling with developmental delays. He eventually realized he had toxic levels of mercury in his system.

> *"I eventually just took time off from work, in about 2005. I just said it's ridiculous, with all these things going on, to have two people in the family working. I was focusing on my kids' health and my health and really had some time and energy to really go deep and find out what was really out there.*

I had a great doctor, Dr. Raj Patel … an integrative medical doctor who would talk about Candida overgrowth, mercury, and all that stuff. He got us on track. Eventually, the kids slowly got better, but even after detoxing, I did not. I kept getting worse.

I got down to 131 pounds. I became electrically sensitive. My brain kept telling me, 'All the stuff is safe and well-tested. I love technology.' But my body was reacting like there was something really wrong. I was catching myself just throwing a cellphone away — feeling cellphones and then transformers when I plugged them in."

He eventually learned about dirty electricity, and once he started addressing his exposure, he regained 10 pounds in a couple of months, along with his health. Today, he's passionate about sharing information about the dangers of EMFs and dirty electricity, and how to address electromagnetic hypersensitivity.

"We're just trying to share the information, make the field credible, because it's very credible, and make sure people don't have to suffer," he says.

He even created an EMF-free tent that he brings with him to different seminars and conferences that people can sit in, as many of these events are held in places where you're exposed to very high amounts of EMF. He's also funded some of Herbert's research.

Herbert's Story

I first met Herbert at a Cure Autism Now event (now Autism Speaks) in 2009. Herbert's two children struggled with symptoms of autism when they were young. Today, they're both grown and have fully recovered. Her initial focus was on mercury toxicity, looking at ways of doing noninvasive screening for toxic metals.

A lifelong environmentalist, Herbert went to medical school after getting a Ph.D. in history of consciousness at the University of California Santa Cruz. She studied pediatric neurology, and fell into working with autism after inheriting magnetic resonance imaging (MRI) scans from the first MRI study performed on autistic children in 1989.

> *"I was one of the first people — but not the only one — to identify white matter abnormalities in autism through brain imaging, not through gray tissue,"* Herbert says. *"That really violated the paradigm that behavior comes from the cortex. I was already kind of a whole-body person. I was seeing patients.*
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> *[Few of them] had these rare neurogenetic diseases that you're trained for in pediatric neurology. But everybody was coming in with diarrhea and eczema, and they couldn't sleep. It was almost like primary care in neuropsychiatry. That's where I sort of edged my way into the whole-body approach.*
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> *I had an epiphany in 1999 … that all the stuff I was seeing in my patients really could connect with the environment … I started putting together and figuring out that this was really a systems [biology] approach to these conditions."*

A Systems Biology Approach to Autism

Systems biology looks at everything in biology as a web, in which everything is connected to everything else. When you tug at one part of the web, the rest of the web changes. In conventional science, individual components and variables are studied in isolation. That's how clinical research is designed.

> *"We're looking for pure forms of disease. But mostly in these conditions that we're talking about, it's a mess,"* Herbert says. *"Everybody has a bunch of different [symptoms], some of which are more prominent than others. Early on in figuring out autism as a systems problem, I was looking at specific language problems or developmental language disorder.*

But if you look at these people carefully, they have coordination issues … You see this subtle breakdown of the precision and fine-tuning of the brain … I finally … I found a great article about the networks in the brain that are messed up in psychiatric illnesses (not just autism but also schizophrenia, depression, and so forth).

The hubs of these networks have very high-frequency gamma frequency … It turns out that this gamma frequency is driven by cells that are very high-energy demand mitochondrially centered cells …

We now have enough studies showing that the metabolic stuff going on in the brain match onto the networks going on in the brain. The proportion of network disturbance in some of these cases has been shown to be proportional to the amount of mitochondrial dysfunction."

The Transcend Research Program

Herbert has created a brain research program at Harvard called TRANSCEND[2] (Treatment, Research, and Neuroscience Evaluation of Neurodevelopmental Disorders). They use MRI, magnetoencephalography (MEG), and electroencephalogram (EEG). MEG measures the magnetic activity of the brain, whereas EEG measures the electrical activity.

"When you have electrical activity, the magnetic is at 90 degrees. They measure the same thing, but in somewhat different ways," Herbert explains. Her hypothesis is that autism is not something you're born with. It's something you develop in response to environmental factors.

"In order to study that, I started studying babies from the time they were in their mother's womb. We got biosamples from the mothers. We got biosamples at birth, and then — until the mothers stopped nursing — we get biosamples from them, plus EEG and autonomic … using wristbands … to see how things deteriorated in the kids who developed autism.

What we found was something that could be interpreted in a variety of ways. We're working on publishing this. We have EEG data of 2-week-old babies, predicting their outcome at 13 months.

Now, I just finished saying that I think that autism is something you developed. That would sound like something you're born with, but you can't say that they have autism. The way I think about it is if their brains are really excited and irritated. So, it matters very much what happens [in their early environment to make them] more predisposed."

Whole-Body Wellness Approach Can Minimize Autism Risk

Using this early predictive ability, a small number of primary care pediatricians have started implementing whole-body approaches to the parents and children, showing that when whole-body lifestyle modification is implemented, such as avoidance of toxins and allergens, virtually none of these predisposed babies actually develop autism.

"My feeling is what we need is a public health intervention where people are taught how to keep healthy from preconception to pregnancy to infancy. If they get an EEG that says that their brain is irritable, you don't want to do a drug … You want to do safe and healthy things, because [drugs and toxins are] the problem in the first place," Herbert says.

There are many anecdotal stories from families with autistic children suggesting EMF causes problems, and Herbert and Sullivan are working on setting up an online database to capture this data.

"That when you reduce the Wi-Fi, the symptoms abate a lot. I know a kid who was stimming like crazy. He liked to stim by the dishwasher. Guess what, there was dirty electricity in this dishwasher. They fixed it and he stopped that, and a lot of his symptoms remitted," Herbert says.

Common Risk Factors

Essentially, Herbert believes autism can be predicted by looking at the level of brain irritability in the child. But what might contribute to this kind of irritability? Sullivan believes mercury, EMF, and glyphosate are three major triggers, even more so than vaccines.

Herbert believes processed food is another major contributor. "Simply reducing allergens in the mother's diet from preconception to pregnancy is a really big deal," Herbert says. That said, it's really the total load that matters, not any particular given factor.

"There are 10,000 different ways to injure mitochondria. It all piles up. All these little seemingly innocuous exposures add to the pile, so they all matter," she says. Sullivan has created a video talk and booklet, "Simplifying Autism Improvement and Recovery,"[3,4] which includes a list of suspects for parents to consider.

One big one that few people consider is de novo mutations resulting from sperm being exposed to wireless radiation from cellphones and laptops. Men desiring healthy children would do well to avoid carrying their cellphone in their pants pocket while it's on, as the cellphone radiation can mutate the genes in the sperm. If you're going to keep it in your pocket, make sure it's off or in airplane mode.

Herbert is currently enrolling patients for her Child Health Inventory for Resilience and Prevention (CHIRP) study, which will gather information about the associations between the total burden of environmental stressors and exposures and chronic disease in children. If you have a child between the ages of 1 and 15, you can apply[5] by filling out two prescreening questionnaires to determine your eligibility.

Most Parents Start Treatment at the Wrong End

Herbert and Sullivan have worked with autistic children and have advised parents for a long time. What are some of the common mistakes they see people make? Sullivan replies:

"People assume it's a problem with the child. They jump in and start treating the child. They assume it's genetic or whatever, and they're doing behavioral therapy. The things that I would do again for myself, if I could do it all again, is I would start with the environment. I would start with EMF, especially at night.

We turn off the baby monitor, the cordless phone base station, Wi-Fi, and even sometimes the circuit breaker for the bedroom … A wired baby monitor is safe … Plug everything into a power strip. Put the strip in the wall. When you go to bed, just pull out the power strip. In the morning, plug it back in. It's not hard. Or, put it on a timer.

I would say it's a state of overload not just for the kids, but for the entire family … There are [many] things you need to do [to clean up your environment]. The key is in the sequence. Do the easiest things that get you the most impact.

That's why we're starting with EMF. Because once you reduce that, you start sleeping better, and then you start to have more capacity. You want to build a spiral of capacity. You start an upward spiral …

Martin Pall's paper[6] on the neuropsychiatric effects from microwaves and EMFs show it's a big factor, as is sleep, because sleep and [lowering] inflammation are fundamental to good mental health."

More Information

For more information about autism and wireless radiation, how EMFs affect sleep, and recommendations for EMF meters and tips for EMF safety, see Sullivan's website, ClearLightVentures.com. On Herbert's site, drmarthaherbert.com, you can find information about how to improve your overall health and lower your total body stress burden for a healthy pregnancy and baby.

Sources and References

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