

Siim Land Interviews Dr. Mercola About 'EMF*D'

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✓ Fact Checked

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STORY AT-A-GLANCE

- › Electromagnetic fields (EMFs) cause massive mitochondrial dysfunction, thus raising the risk for, and worsening, chronic and degenerative diseases
- › A perfect storm of DNA and cellular protein and membrane destruction is created when you aren't burning fat for fuel (which creates excess superoxide) and then get exposed to EMFs
- › By creating doubt and controversy, the wireless industry effectively prevents the public from knowing the truth and demanding safer products. Another wireless industry strategy that prevents the problem from becoming public knowledge is the capturing of our federal regulatory agencies
- › Elon Musk's Starlink project, which was slated to deploy up to 42,000 satellites into orbit around the earth, will blanket the entire planet with 5G internet frequencies. You won't be able to escape it
- › Based on the studies already done on previous generations of wireless, we know it's harmful, and 5G is only going to make matters worse, as it will dramatically increase our exposures

I was recently interviewed by Siim Land about my new book, "EMF*D," described by Siim as "the most comprehensive guide ... to everything you need to know about EMF."

In it, I explain what electromagnetic fields (EMFs) are, the different types of EMFs you're exposed to, the harms associated with exposure, the concerns surrounding 5G and,

ultimately, how to protect yourself and limit your exposure.

As I explain in the interview, the thing that catalyzed me to write "EMF*D" was my deep appreciation of the impact of mitochondrial function in health and disease. Once I realized how EMFs impact mitochondrial function – because it's very clear that EMF causes massive mitochondrial dysfunction – the danger our wireless society poses became very clear to me.

I also read a study¹ stressing the importance of mitochondrial numbers for improving senescent cells – cells that are, in a manner of speaking, "senile" and have stopped reproducing properly. Instead, senescent cells produce inflammation, contributing to old age and, ultimately, death.

The fewer mitochondria you have, and the more dysfunctional they are, the faster you'll age and the more prone you'll be to chronic degenerative disease. By inducing mitochondrial dysfunction, our wireless world may well be driving us all into an early grave.

Cellphone Industry Hides Truth by Manufacturing Doubt

Considering the research data now available, you'd think everyone would understand and accept the fact that EMF is a serious health danger, yet many are still completely in the dark. With "EMF*D," I hope to help more people understand this biological threat.

In 2011, the World Health Organization's International Agency for Research on Cancer (IARC) classified radiofrequency EMFs as "possibly carcinogenic to humans."² Then, in 2018, the U.S. National Toxicology Program published two lifetime exposure studies conclusively showing [cellphone exposure causes cancer](#).

The NTP's findings were also duplicated by the Italian Ramazzini Institute just a couple of months later. In the wake of these studies, Fiorella Belpoggi, principal investigator and director of the Ramazzini Institute, urged the IARC to upgrade RF-EMF to "probably carcinogenic" or higher.³

Now, just like smoking cigarettes, EMF exposure takes decades before its effects become evident (and even then, the health problem might not be directly linkable to EMF exposure), and this is a significant part of the problem as it allows the telecom industry to – just like the tobacco industry before it – whitewash concerns, manipulate research and prevent proper safety studies from being done.

There's no doubt cellphone manufacturers are aware that EMFs from cellphones contribute to health problems, though. The evidence has been published for decades, and new research is constantly being added.

However, by downplaying positive findings and saying that findings of harm are inconclusive – in other words, by creating doubt and controversy – they effectively prevent the public from knowing the truth and demanding safer products.

Wireless Industry Is Even Worse Than the Tobacco Industry

Another wireless industry strategy that prevents the problem from becoming public knowledge is the capturing of our federal regulatory agencies, which the tobacco industry wasn't even capable of.

The U.S. Environmental Protection Agency, the Surgeon General and the Centers for Disease Control and Prevention all warned people about smoking, yet the tobacco industry continued successfully selling cigarettes for another 20 or 30 years. The wireless industry, on the other hand, has captured the federal regulatory agencies, which prevents those warnings from being issued in the first place.

For example, the chief lobbyist for the wireless industry, Tom Wheeler, was appointed by President Obama to be the head of the Federal Communications Commission, which is a most egregious example of the fox guarding the hen house. Not surprisingly, then, in December 2019 the FCC announced they're going to fund rural 5G deployment to the tune of \$9 billion!⁴

The telecom industry has engaged in a vast and illegal fraud where, for decades, basic telephone rate payers – wire line customers – have funded the deployment of wireless

in general, and now 5G in particular, through their phone bills.

This illegal redirection of funds amounts to about \$1 trillion over the past 15 years, and without this money, 5G would not have been possible in the first place. Were the wireless industry forced to pay its fair share of infrastructure costs, 5G simply wouldn't be economically feasible as a consumer product.

What's so Great About 5G?

What exactly is 5G and why do some people want it? In short, it's all about improving speed. Compared to 4G, 5G is 100 times faster. On a side note, you can determine what your bandwidth is by pulling up fast.com on your cellphone's browser. If you're on 4G, your bandwidth is probably not going to exceed 10 megabytes per second (mb/s). If you're on 5G, it's going to be between 500 and 800 mb/s.

So, the primary benefit of 5G is noticeably faster speed. The vast majority of people simply don't need this kind of bandwidth, but it has great applications for commercial uses such as self-driving cars.

The problem is, 5G may end up making the earth uninhabitable for many who are already struggling with electrosensitivity, and the countless others for whom 5G may prove to be the thing that tips them over the edge into electrohypersensitivity syndrome.

Elon Musk's Starlink project, which was slated to deploy up to 42,000 satellites into low earth orbit, will blanket the entire planet with 5G internet. You won't be able to escape it, no matter how far into the wilderness you go.

5G Is a Prescription for Biological Disaster

Then there are the long-term dangers of 5G, which we still do not have a complete picture of. There has not been a single safety study done on 5G. Studies using 2G, 3G and 4G, however, including the NTP and Ramazzini studies, clearly show there's cause for concern.

5G is more complex, as it uses a variety of frequencies, which makes it a potentially greater threat. The frequency of 4G is typically around 2 to 5 gigahertz (GHz), while 5G will be around 20 to 30 GHz, initially.

Eventually, it may go as high as 80 GHz, which will cause problems for people trying to remediate exposures because there are currently no inexpensive meters that can measure frequencies that high.

Based on the studies already done on previous generations of wireless, we know it's harmful, and 5G is only going to make matters worse, as it will dramatically increase our exposures. 5G requires what essentially amounts to a mini cellphone tower outside every fifth or sixth house on every block.

We also have studies showing the impact of millimeter waves, which is what 5G is using, on insects, animals and plants, and those hazards are well-documented. So, it doesn't just pose a problem for human health, but for the ecosystem as a whole.

Martin Pall, Ph.D., wrote an excellent paper explaining how EMFs affect your voltage gated calcium channels (VGCCs) – channels in the outer plasma membrane of your cells. Each VGCC has a voltage sensor, a structure that detects electrical changes across the plasma membrane and opens the channel. EMFs work through the voltage sensor to activate the channel and radically increase intracellular calcium levels into dangerous ranges.

Similar channels are found in most biological life, including animals, insects, plants and trees. So, flooding the planet with these frequencies will undoubtedly have serious biological consequences across the ecosystem. As such, it's an existential threat to humanity.

One biological consequence is arrhythmia (irregular heartbeat). Other potential consequences include autism and Alzheimer's. Heart and neurological problems top the list because your heart and brain have the greatest density of VGCCs. Men's testes also have a very high density of VGCCs and, indeed, we have evidence showing **EMFs increase men's risk of infertility.**

Everything points to these frequencies being a prescription for biological disaster, and between skyrocketing autism, Alzheimer's and infertility rates, how can a society be sustained? It can't. It will be extinguished.

We Don't Need Wireless 5G

In reality, we can still get the bandwidth of 5G without 5G wireless. The alternative would be to deploy fiber optic cable. It's faster, safer and less expensive.

Unfortunately, the money originally set aside to implement nationwide fiber optics was rerouted and illegally used to build the wireless infrastructure instead. This is why a group called The Irregulators⁵ are now suing the FCC to put a stop to the illegal subsidy to the wireless industry.

Wireline customers paid for an upgrade to fast and safe fiber optic wiring across the nation, but now we're getting harmful 5G wireless instead. This lawsuit has the potential to alter the telecommunications industry from the ground up, and may be the "weapon" we need to halt to the 5G rollout in the U.S.

The Importance of EMF Avoidance to Protect Your NAD+ Level

Along with practical remediation strategies, "EMF*D" also covers things you can do to protect yourself on a biochemical level. A perfect storm of DNA and cellular protein and membrane destruction is created when you aren't burning fat for fuel (which creates excess superoxide) and then get exposed to EMFs.

This causes a radical increase in nitric oxide release that nearly instantaneously combines with superoxide to create enormous levels of peroxynitrate, which triggers a cascade of destructive events to your cellular and mitochondrial DNA, membranes and proteins.

Although all biologic damage is of concern, it is the DNA strand breaks that are most concerning as they will lead to a radical increase in inflammation and virtually all

degenerative diseases.

The good news is your body has the ability to repair this damaged DNA with a family of enzymes called poly ADP ribose polymerase or PARP. It is a very effective repair system and works wonderfully to repair the damage as long as it has enough fuel in the form of NAD+.

The bad news is many of us are running low on this fuel. When excess peroxynitrate activates PARP to repair the DNA damage, it consumes NAD+, and if you run out, you can't repair the damage. This appears to be a central cause for most of the diseases we now see in the modern world.

Optimizing your NAD+ levels may be the single most important strategy for improving your mitochondrial health. The first step is to reduce NAD+ consumption by the correct diet (low in processed foods and net carbohydrates and higher in healthy fats), along with EMF avoidance, as recent research shows NAD+ levels dramatically drop when exposed to EMFs.

Time restricted eating is also very helpful, as is exercise, both of which are powerful, inexpensive and safe ways to boost your NAD+ level.

Helpful Strategies to Limit EMF Damage

In "EMF*D" I also cover the Nrf2 pathway and the importance of minerals such as magnesium to limit the biological damage caused by EMFs. As explained in this interview, upregulating your Nrf2 pathway activates genes that have powerful antioxidant effects, thus helping protect against EMF damage, while magnesium — which is a natural calcium channel blocker — helps reduce the effects of EMF on your VGCCs.

On a side note, molecular hydrogen tablets are an excellent source of ionic elemental magnesium. Each tablet provides about 80 milligrams of ionic elemental magnesium.

Addressing EMF Pollution – A 21st Century Health Imperative

There's no doubt in my mind that EMF exposure is an important lifestyle component that needs to be addressed if you're concerned about your health, which is why I spent three years writing "EMF*D."

My aim was to create a comprehensive and informative guide, detailing not only the risks, but also what you can do to mitigate unavoidable exposures. If you know or suspect you might already be developing a sensitivity to EMFs (full-blown hypersensitivity can often strike seemingly overnight), mitigating your exposures will be particularly paramount.

Many sufferers become obsessed with finding solutions, as the effects can be severely crippling. My book can be a valuable resource in your quest for relief.

The EMF Experts website⁶ also lists EMF groups worldwide, to which you can turn with questions, concerns and support. Should you need help remediating your home, consider hiring a trained building biologist to get it done right.

Brian Hoyer, a leading EMF expert⁷ and a primary consultant for "EMF*D" also has a company called [Shielded Healing](#) that can provide a thorough analysis of the EMF exposure in your home, and help you devise a remediation plan.

Sources and References

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