



Smartphones: How Hazardous are they Really? - Speech by Dr. Martin Pall



Dr. Martin Pall is Professor Emeritus from Washington State University and has researched in depth how the omnipresent electro-smog effects biological systems. He explains the dangers he found as well as the proof that the regulators threshold values are far from safe. Our Kla.TV Team had the unique chance to visit him and record a lecture about his knowledge in this field.

Will his warning call reach enough open ears on time? Everybody can help this cause by sharing these facts in every day life.

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Did you know that there is a universe of published scientific findings that are quite underreported, making them widely unknown in the population? One example is the field of digital wireless technology. Today there are many professors and researchers warning about the harmful effects of the radiation emitted by our smartphones, WiFi routers, base-stations and the such. Surf hundreds of best broadcasts - on what these experts in many cases have dedicated their lifetime to study and explain - on Kla.TV in this link:

kla.tv/5G-WirelessCommunication-en

Will the warning call reach enough open ears on time? Everybody can help this cause by sharing these facts in every day life.

Here now we present Dr. Martin Pall's valuable speech. In the second half of this speech, he elaborates on very important studies and health observations - so stay tuned and don't miss the end of this.

Speech:

One of the things about biology, including medicine, is that it is incredibly complex. Because of its complexity, people can tell you all kinds of things about them, and you often do not have the slightest idea whether they are right or not.

So what you really need in biology, including medicine, are certain things that are really solid and understood, and go from there to work your way out into understanding things. And that's what we're going to do today with the biology of electromagnetic fields.

And so, electronically generated electromagnetic fields (E.M.F.s), are quite different from

most natural E.M.F.s.

The electronically generated E.M.F.s are produced by electric currents, and those currents then generate an electromagnetic field around them.

This was first shown by the great British physicist Michael Faraday in 1831.

And since then, there have been, of course, a lot of studies on this, and there is a whole chapter in one of the important electricity and magnetism textbooks on how this occurs and the consequences of it.

The importance of this is that electronically generated E.M.F.s produced by electric currents are coherent.

That is, they are put out in a particular vector direction with a particular polarity, phase, and frequency, whereas most natural E.M.F.s are incoherent.

And they go off in different directions with different polarity phases and often frequencies, so they are incoherent.

The coherent E.M.F.s produce strong electric and magnetic forces, whereas the incoherent ones do not.

And that is the crucial thing that is different about them: they produce effects through those electric and magnetic forces.

The point is that, all wireless communication goes through electronically generated E.M.F.s.

Those are the things we get exposed to from all of this stuff.

And yet, the industry and the agencies that are supposed to be protecting our health pay no attention to any of this.

Now, what do these forces do?

What has been shown is that they work primarily by putting forces onto voltage-gated ion channels.

These ion channels have a structure called the voltage sensor, which has a bunch of electric chargers in it.

It is the forces on that voltage sensor that then activate these channels, open them up and produce biological effects.

Now, the voltage sensors that are most important are the voltage sensors on the voltage-gated calcium channels.

And the reason for that is that calcium has major effects on the body.

Under most circumstances, it is very important that intracellular calcium levels are low.

So, when you activate these channels, they open up, and you get huge amounts of calcium flowing in the cell.

Why is that?

Well, there is something like 10,000 times more calcium outside the cell than inside the cell.

So you get huge amounts of calcium going into the cell, and they then produce effects. Now, then, what kinds of effects do we get?

So the voltage sensor looks like this.

And it has four different parts to it.

And this S4 helix, which is shown here, so these little curlicues are helices, alpha helices.

And the S4 helix has a bunch of charges on it, typically five, but generally ranging from four to seven.

They ratchet out in the direction of these arrows.

When they do that, they pull on some of these other helices, and the forces then open the channel and allow ions to flow through.

As I said before, the most important ones are the calcium channels. And how do we know that?

We know that because you can use calcium channel blockers that are specific for blocking

these voltage-gated calcium channels.

And I abbreviate those V.G.C.C.s.

They then either completely block or at least greatly lower the biological effects we see.

So, we know that the biological effects go through the activation of these voltage-gated calcium channels.

That was first shown in a paper that I published in 2013 that has now been cited 480 times in the Google Scholar database.

There have been many scientists who recognize the importance of those findings. That is important.

So then, how do we get these effects into the body?

The answer comes basically from this figure.

So, we have a wide variety of frequencies that work to produce this V.G.C.C. activation.

When they are activated, you get an increase in intracellular calcium. That, Ca^{2+} , is calcium in the cell, intracellular calcium

And then it acts through two pathways to produce pathophysiological, [Pathophysiology seeks to explain the functional changes in an individual due to a disease or pathologic state.] or damaging, effects.

One of them is excessive calcium signaling.

Calcium signaling is very important in the body.

But when you get way too much of it, that causes problems.

So that is one approach.

That is one kind of effect that you get that produces pathophysiological effects.

The other is that you get increases in peroxynitrite, [Peroxynitrite is a cell-permeable, short-lived, strong biological oxidant agent that reacts with and can damage DNA] free radicals, oxidative stress, NF-kappa B and inflammation.

And that pathway then produces pathophysiological effects.

It also, by the way, impacts mitochondrial function.

So, energy metabolism is impacted as well.

So, those are all important things that affect the cells of our bodies.

There is, interestingly, also another pathway that produces therapeutic effects that can actually protect us.

That occurs when you get modest increases in intracellular calcium, not large ones. And it goes through nitric oxide signaling.

And also, it raises the level of something called N.R.F.2, which is a very important cytoprotective [Cytoprotection is a process by which chemical compounds provide protection to cells against harmful agents.] protein that controls many different genes in the human genome.

It produces many different cytoprotective effects. That is the way we get therapeutic effects.

So both of those occur.

And so that is very important.

You have to realize that this is a complex system.

Now, I.C.N.I.R.P., that is, the International Commission on Non-Ionizing Radiation Protection, was an organization that was set up by the industry to suggest what kind of safety guidelines we should have to help protect us.

And what I have here is a table of the 1998 I.C.N.I.R.P Safety Guidelines, which were the first ones they brought out.

But the more recent ones are almost identical to this. So, there has not really been much change.

And these safety guidelines have basically been used by all kinds of radiation protection

organizations that are supposed to be protecting us from this radiation.

So, essentially, all of these so-called protective guidelines are of this sort. So, what is their structure ?

First and foremost, they are all based on average intensities over either a six-minute or a 30-minute period.

And secondly, the allowable levels—the levels they claim are safe—are based only on having thermal effects.

That is heating the body.

And so all of these effects that are produced by electric forces and time-varying magnetic forces in the body are completely ignored by these safety guidelines.

And so that is an absolutely crucial issue here. So what do we have here, then?

What we have here is that, first, the allowable levels for whole-body exposures are much lower than for partial-body exposures.

That really does not make any sense when you are talking about a mechanism that acts at the level of individual cells.

Because that cell is going to respond the same way, whether the whole body is exposed or only that part of the body is exposed.

So that makes no sense.

The second thing that makes no sense is that occupational exposures are much higher—about five times higher than our public exposures.

But the people in these occupations are never informed about what effects are going to be produced, and they are never given any way of protecting themselves.

So that does not make any sense either.

And so there are a number of things that do not make any sense.

And I think there have been a whole series of review articles that have been published that have reviewed evidence of findings—repeated findings—that falsify the safety guidelines. So falsification, as you may know, is the most important and powerful thing in the scientific method.

When you falsify something, what does it mean? It means, okay, I have got this theory. It has been tested.

It has been shown to not make good predictions.

And therefore, what is it you have to do in science? You have to throw the theory out, right?

We have these safety guidelines.

They make projections, and they have been tested.

And so, what are some of the tests that have been used?

One of the tests that has been used is that there are 12 reviews that have reviewed evidence that shows that pulse-modulated E.M.F.s [Pulse modulated EMFs: Electromagnetic radiation that is sent out in regular intervals, like a light rhythmically being turned on and off] produce, in most cases, much stronger biological effects than do non-pulsed E.M.F.s of the same average intensities.

What does that tell you?

It tells you, firstly, that average intensities do not predict biological effects.

It also tells you that because pulse modulation is used in all wireless communication except for FM radio, the exposures we have from all wireless communication are grossly underestimated by the safety guidelines.

The whole structure of the safety guidelines is, in fact, bogus.

And I think it is particularly bogus with regard to the exposures we actually have from wireless communication E.M.F.s, and that is crucial.

There are a whole series of other things here that I do not have time to talk about.

There are nanosecond pulses that have been studied a lot, where you have a pure pulse that goes up and down.

These are not modulating pulses. They are just E.M.F.s that go up They are quite strong.

A nanosecond pulse is defined as There is quite a range of times.

and down very quickly.

a pulse between one nanosecond and one microsecond.

But when you take these, and they produce effects over and over again, when you average them over either a six-minute period or a 30-minute period, the average intensity then drops by a factor.

Something like a million times a million times lower.

And of course, then the safety guidelines predict you can not get any effects, but you do over and over and over again.

That is another thing that falsifies the safety guidelines.

We also have intensity windows.

These are specific ranges of intensity of a particular E.M.F. that produce maximum effects.

But when you go lower or higher, they drop way down.

What does that tell you?

Firstly, they are totally nonlinear.

They do not always increase with increasing exposure.

They can see a big decrease with increasing exposure.

Using averages only makes sense if you have linear dose-response curves. And these are not only totally nonlinear, they are non-monotone.

They do not always increase with increasing exposure.

The whole structure of the safety guidelines is bogus.

It simply makes no sense.

There are a number of other things, which I am not going to talk about, that also falsify the safety guidelines.

But basically, the whole structure of them is bogus.

As I said before, falsification is the strongest thing in science.

When you falsify those safety guidelines, you have to throw them out.

But these are the things that are used to expose almost every single man, woman, and child on Earth.

To E.M.F.s, it is just insane.

So, I have a summary here.

Electronically generated E.M.F.s are what we have talked about so far.

Electronically generated E.M.F.s, which are always used in wireless communication, are coherent.

Placing strong electric and magnetic forces on electrically charged groups in our cells.

This acts mainly by placing forces on electric charges in the voltage sensor that controls the voltage-gated calcium channels and other voltage-gated ion channels.

And we know that most of the effects go through the V.G.C.C.s, the voltage-gated calcium channels.

Because if we use a blocker for those channels, we can greatly lower those effects.

And so that is important.

The I.C.N.I.R.P. and other similar safety guidelines, which are supposed to protect us from E.M.F.s, in fact only protect us from thermal effects.

They do not protect us from the effects that are actually producing all the effects in our bodies.

As I said before, we know that most of the pathophysiological [Pathophysiology seeks to

explain the functional changes in an individual due to a disease or pathologic state.] effects are produced through two pathways, the excessive calcium signaling pathway and the peroxinitrite oxidative stress-free radical pathway.

And so those are quite important as well. So that is the first part of my talk.

Part 2: The Effects that are studied and seen

And now I am going to get into the second part, which has to do with what kinds of effects we see.

And so the effects that we see involve a lot of neurological and neuropsychiatric effects.

These have been shown in about 40 different reviews on neurological effects, but only about a third of those are on the neuropsychiatric effects, which I am going to focus on.

So you got about, I do not know, 14 different reviews that have reported similar effects in the body.

One of them is mine. And what do you get?

You get insomnia, fatigue, depression, headaches, a lack of concentration, cognitive dysfunction, anxiety, stress, agitation, and memory dysfunction.

Major structural brain changes are seen in animals from these E.M.F.s.

And those, by the way, look very much like neurodegenerative effects.

I will talk about those later.

Now, you also get effects on the electrical activity in the brain.

These have been shown experimentally in humans to occur from various kinds of E.M.F.s impacting the human brain, changing the electrical activity in the human brain.

So what does that tell you?

And some of these, by the way, are millimeter-wave frequency things, which the industry claims can not produce penetrating effects but obviously are penetrating through the skull into the brain and changing the electrical activity in the brain.

And that is important because, you know, a lot of the stuff the industry says is wrong. But these effects are seen all over the world.

We know that. Everybody knows that.

We know that huge numbers of people are having problems with insomnia and fatigue.

We know that depression and anxiety are very important, very common, and very particular problems.

And interestingly, when we put Wi-Fi in schools, what happens?

You have students who have great difficulty focusing.

So you have a lack of concentration and cognitive dysfunction.

We have seen large increases in suicides among college and high school students. And these can be explained by this.

That does not tell you for certain that that explanation is correct. But what is absolutely insane is simply ignoring all this stuff.

And that is pretty much going on now.

We have lowered fertility.

And let me say that I am going to talk about male fertility because it has been the most studied.

It is easier to study male fertility than female fertility.

But almost everything having to do with fertility is impacted by E.M.F.s.

There is a lower libido.

There are lower levels of hormones.

And specifically, there is lowered activity in the testis, which has an impact on human sperm.

They have been shown experimentally.

You can take sperm samples, you know, ejaculate, split them up into two parts, and irradiate one with E.M.F.s and not the other.

You see huge changes.

And all this stuff is denied by the industry. I mean, it is just absolutely incredible.

I mean, we are talking about the effects of cell phone radiation, of Wi-Fi, and of various other kinds of radiation that we are exposed to all the time and that can affect human sperm.

What happens?

You have lowered motility. [Motility: the ability of an organism to move independently]

You get lower amounts of normal morphology. [Less normal morphology: less organisms have normal shape, structure and features]

It is very common now in human populations that only 2% to 4% of the sperm are normal.

Now, I am not saying that the ones that are abnormal are completely ineffective.

They are not, but you do get lowered.

You know, this does affect real reproductive activity.

So, you know, motility is obviously crucial for fertilization.

You also get increases in apoptosis, or programmed cell death, in the sperm.

And then you also get a lower sperm count in human populations.

We have seen that all over the world.

That is probably affected more by the test and what is going on in the testes than by the direct effects on human sperm.

But both of them are occurring. And so we are.

Let me just say there was a paper published about 30 years ago by Magris and Zenos, a couple of Greek researchers, where they took young pairs of mice and put them on the ground in little cages in an antenna park.

And of course, they fed them and saw what they were doing in terms of reproduction.

What they found was that the numbers of pups in the first litter were down, in the second litter they were down, and in the third litter they were down.

At the highest level of exposure that they studied, again, in this antenna park, there was no fourth litter.

They went off the reproductive cliff to zero.

And if you took them out of the E.M.F., you would get almost no recovery.

So, these were pretty much permanent, irreversible effects.

Now, we are seeing fertility problems all over the world.

One question is: how long is it going to take for us to fall off the reproductive cliff that Magris and Zenos saw in those mice?

I do not know the answer to that, but it could be quite quick, especially when you introduce new things like 5G into the system.

So, that is an issue.

You have cellular DNA damage.

Three different types of cellular D.N.A. damage.

You have single-strand breaks in the cellular D.N.A. You get double-strand breaks.

You get oxidized bases in the cellular D.N.A.

All of those can be produced by the free radicals and free radical breakdown products of peroxyntirite [Peroxyntirite is a cell-permeable, short-lived, strong biological oxidant agent that reacts with and can damage DNA] that I showed you are greatly elevated on EMF exposures.

So, we know how they can be produced.

We know that they are produced by many different kinds of E.M.F.s that we are exposed to.

And again, nobody is worrying about this.
You get apoptosis, or programmed cell death.
You get increases there.
You get oxidative stress and free radical damage.
We already talked about how that happens.
You get endocrine [Endocrine system: a messenger system of hormones targeting and regulating organs] and hormonal effects.
And I am not going to talk about how we get those, but we do get them.
You get excessive intracellular calcium.
We have already told you how to get that.

You get cancer.
44 different published reviews argue that E.M.F.s cause cancer.
And yet we are still arguing about it.
Why?
Because the industry has so much money and so much power.
It makes absolutely no sense.
And let me just say something about this, specifically with regard to cell phones.
Cell phones, and probably cordless phones as well, have shown that brain cancer is much higher on the ipsilateral side of the brain, the side of the head where you use your cell phone, than on the opposite side.
And so there you have it—almost perfect control.
What you are seeing is that you are getting higher levels of brain cancer from the way people use their cell phones.
It seems to me that is pretty close to definitive evidence that these things are causing cancer, as you are likely to find.
And yet, again, it is being ignored. It is being ignored. It is being denied. But that is what the data shows.

Cardiac effects, it has to do with the electrical control of the heart. And what do these do?
These produce changes in the way the heart beats.
And they produce both tachycardia [tachycardia: medical term for a heart rate over 100 beats a minute] and a rapid heartbeat.
You get bradycardia, slow heartbeat, more often over time.
That is, it has no immediate effect.
It has a long-term effect.
You get arrhythmias [arrhythmia: irregular heartbeat] in both cases.
Arrhythmias are often associated with sudden cardiac death.
And we are seeing large increases in sudden cardiac (death)...
By the way, it can cause sudden cardiac death in animals, it has been shown that E.M.F. exposures.
Also, we are seeing large increases in sudden cardiac deaths.
We see particularly athletes and other people who are under great stress dying.
Sometimes they can be brought back to life with suitable instrumentation and the like.
But rather than worrying about where it is coming from, what do we do?
We put devices out, so you might actually have some of these people survive.
But I am not saying we should not do that.
But what I am saying is that we need to pay attention to what is causing it.
So these are some of the effects that we see over and over again.

And I want to say that on the cardiac effects, I have argued and provided evidence on this. I believe that these are effects that occur directly on the pacemaker cells in the sinoatrial node of the heart.

So this is the part of the heart that controls the heartbeat.

In that part of the heart, there are pacemaker cells that produce that control. Those pacemaker cells have high densities of V.G.C.C.s.

So, I think they are particularly sensitive to these effects for that reason.

And over time, people become more and more sensitive to it. Then you start seeing people die.

Also, we do see people dying.

It happens in many cases.

You know, there have even been people dying on airplanes—sudden cardiac deaths—probably because either the Wi-Fi or the other electronics in the airplane are producing, you know, high exposures.

So, we are in great trouble.

We really are.

Now, let me go on to Alzheimer's.

I published a paper last year on 18 distinct types of evidence, which collectively show that E.M.F.s cause Alzheimer's disease, including extremely early-onset Alzheimer's disease.

Some of these studies are on animals. Some of them are humans.

And, you know, you really have to read this paper to go through all 18 of them, to show, what is most important here.

But, you know, what I have done is to focus here on just five of them because we do not have time to talk about 18.

But number one, we have seen in recent years a decrease in the age of onset of Alzheimer's.

And in addition to that, young people who use their cell phones for many hours a day and who are on high-powered Wi-Fi for many hours a day develop what is called digital dementia.

So we are talking about, you know, teenagers, sort of.

Developing dementia from these long exposures.

And, you know, now we do not know what the physiology is going on there.

But we know that there are very serious problems going on there.

So, is this extremely early-onset Alzheimer's?

It could be, maybe.

So, there are a lot of studies that have been done in animals on E.M.F.s producing neurodegeneration [neurodegeneration: loss of nerve cells in the central nervous system incl. brain] , including Alzheimer's disease.

And I am going to talk to you about two or three of these studies.

One of them is a study that I only discovered recently, even though it was published in 2008, which I think is probably the most important study that has ever been done on E.M.F.s.

Experimental study.

It was published by El Swefi et. al, a group in Egypt.

And what they found was that rats develop severe neurodegeneration from exposures to mobile phone base station radiation.

So, these are things that we are exposed to all the time. These animals were exposed to very low intensities - this was 3G mobile phone base station radiation - two hours a day, developed severe neurodegeneration in four weeks.

Four weeks, four weeks is obviously a very short time for us. It is also a very short time for rats.

Rats live about 36 months.

So, this is about 2.7% of their lifespan.

They are developing severe neurodegeneration from E.M.F. exposures that obviously are not occurring in their controls in animals that are not exposed.

And so, what is happening?

Approximately 34% of the brain cells are dead after four weeks, I mean, absolutely incredible.

Now, the interesting thing about the El Swefi studies is that they measured 11 different changes in the brains.

They found that they could greatly lower each of these 11 changes by using amlodipine, one of the V.G.C.C. calcium channel blockers.

So, the whole pattern, the whole spectrum of neurodegeneration that is involved in neurodegeneration, is produced by V.G.C.C. activation in these animals.

This was shown in 2008, absolutely amazing.

The behavioral changes were also greatly reduced by amlodipine [amlodipine: calcium blocker medication].

They measured four different behavioral changes.

They were also greatly lowered.

So that is one thing.

Now, they did not look at any Alzheimer's-specific things.

But there was another group.

This was a group in China that looked at Alzheimer's-specific things.

And they found that if you used it, you gave them pulses every day.

Well, firstly, they found that if you just gave them pulses one day, and this was the two-month-old rats, which are basically adolescent rats, and rats develop very quickly.

If you give them the pulses just in one day, at two months of age, and even in one second of one day, you develop Alzheimer's at 18 months.

So, these 20-month-old rats—they said rats typically live 36 months— So, this is very early-onset Alzheimer's.

Alzheimer's from E.M.F. pulses given in one day and even one second of one day, absolutely stunning.

Now, if instead of giving them pulses one day, you give them pulses on the same day, but you give them pulse once a day.

Then, they develop Alzheimer's six months later, rather than 18 months later, so three times faster, roughly.

And in fact, they did much more intensive studies to show that this was Alzheimer's.

So they looked at a number of different Alzheimer's-specific responses in the hippocampus, which is the part of the brain that is specifically impacted by Alzheimer's disease and is involved in memory.

So, it is not surprising.

These are absolutely stunning effects.

So we know that this stuff is going on in animals.

And I got involved in this basically because we were looking at the V.G.C.C.s produce large increases in intracellular calcium.

There is a hypothesis about Alzheimer's disease that it is caused by excessive intracellular calcium.

So, all of this comes out of that hypothesis.

And all the effects that are involved, both specific and nonspecific, in causing Alzheimer's are produced through that excessive calcium.

And we see that in these animal studies.

It is thought to be true for humans as well.

We know that calcium, and not only calcium, but the V.G.C.C.s themselves are important in Alzheimer's production in humans from genetic studies.

And also from studies of calcium channel blockers, interestingly. So, we have all this stuff.

I mean, it is just incredible.

Now, what can you do about all this stuff?

I think one thing you can do is... There are two things, basically, that I am going to talk about.

One has to do with shielding. So you can get shielding. I think shielding can be effective.

I believe that shielding acts mainly by disrupting the coherence of the E.M.F.s that we talked about before.

That is, the shields are made up of things like little, tiny metal fibers, which bounce off the E.M.F.s in various directions, but also graphite fibers and graphite-based materials.

Fibers in graphite paint, for instance, can act as an effective shielding.

Again, what do those little fibers do?

They bounce off the E.M.F.s in different directions. I think that is the main way in which shielding can be effective: by disrupting the coherence. So not just by absorbing it but by actually disrupting its coherence.

A second approach to protection, and let me say, none of these are magic bullets given the world we live in because of all the exposures we have.

Another approach is to raise the level of N.R.F.2.

And I talked about N.R.F.2 very briefly in terms of its therapeutic effects and how they are produced, but there are many, many different health-promoting factors that raise N.R.F.2.

So we have a figure here that involves many different health-promoting factors that raise N.R.F.2.

Those include many factors in the diet, phenolic antioxidants, isothiocyanates, the allium sulfur compounds in garlic and onions, the whole group, the omega-3 fatty acids in fish oil, carotenoids, terpenoids, some of the unusual forms of vitamin E, the gamma-tocopherol and the tocotrienols, the ones that are being ignored by most people but should not be.

And then there are other things that can promote health.

One is low-level oxidative stress, which, interestingly, produces a protective effect called hormesis.

How does it do that? It raises the level of N.R.F.2.

Exercise can raise the level of N.R.F.2. Calorie restriction can raise the level of N.R.F.2.

So, N.R.F.2, by the way, N-R-F-2, number two. It is fine. So, N.R.F.2 is a transcription factor that controls something like 500 genes in the human genome.

It produces many different cytoprotective effects. And among those, it increases the level of antioxidant proteins. It improves mitochondria [mitochondria: source of chemical energy for the cells] by stimulating mitochondrial biogenesis.

So, it produces new, effective mitochondria.

It increases energy metabolism.

It produces detoxification of many carbon-containing compounds and toxic metals.

And it produces autophagy, [autophagy: your body's process of reusing old and damaged cell parts] so it can get rid of dysfunctional proteins and dysfunctional mitochondria, and it can lower inflammation. And that is very important.

So, you know, it produces many, many health-promoting effects. I talk about this like it is a wonder drug, but I really think it is in a lot of ways. So, I believe that the most healthful diets known, which are the traditional Mediterranean and Okinawan diets, are very high in foods that raise the level of N.R.F.2. The probable Paleolithic [Paleolithic: period in human history called Old stone age] diet is probably quite good as well. But many modern diets are deficient in these things. And so we are in trouble, in part, because of our not-very-good choices in terms of diet. So, that is another thing. But I think this can be useful in lowering E.M.F. effects for reasons that if you compare these effects with what I showed you before coming off, particularly about the peroxyinitrite pathway, you see that they are, and it will lower basically everything from that peroxyinitrite pathway. So in summary, the incidences of each of these E.M.F. effects that I have discussed are going up in many places around the world. We see an increase in sudden cardiac deaths. We see the early onset of Alzheimer's disease occurring. We see many of the different neuropsychiatric effects that we talked about. And each of those is important. And the stupidity of all of this is that we do not pay any attention to these things. It is just incredible. I mean, when we introduced Wi-Fi in schools in various places in the world, I know this is true in North America, but I believe it is true in Europe and other places. And what do you see? You see all kinds of problems with students, with learning, lack of concentration, fatigue, depression, and often, large increases in suicide rates. I mean, we are still not paying any attention to this. It is just incredible. So, let me say, it is my belief, and I have not documented this for a number of these things, but it is my belief, that E.M.F.s are very important for almost every single thing that we see going on in the world over the last 25 years or so. And I am not saying you should take that as gospel truth. You should not. But what I am saying is that we need to take these things with extraordinary seriousness. Otherwise, we are in trouble, and I believe we are already in deep trouble. Thank you.

from Dr. Martin Pall

Sources:

Dr. Martin Pall's research:

<https://onlinelibrary.wiley.com/doi/full/10.1111/jcmm.12088>

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<https://www.radiationresearch.org/research/dr-martin-palls-latest-compilation-of-emf-medical-research-literature/>

Other Professors:

<https://research.radiation.dk/>

<https://neilcherry.nz/>

<https://news.berkeley.edu/2021/07/01/health-risks-of-cell-phone-radiation>

EMF-Portal:

<https://www.emf-portal.org/en>

Film: "Remembering Nearfield"

<https://childrenshealthdefense.org/defender/remembering-nearfield-film-electromagnetic-hypersensitivity/>

<https://vimeo.com/810958040>

More information:

<https://www.kla.tv/5G-WirelessCommunication-en>

How is an electromagnetic field produced?

[1] https://ec.europa.eu/health/scientific_committees/opinions_layman/en/electromagnetic-fields/l-2/1-electromagnetic-fields.htm#:~:text=They%20are%20generated%20by%20natural,equipment%20that%20generates%20electromagnetic%20fields.

This may interest you as well:

#5G-WirelessCommunication-en - 5G - Wireless Communication - www.kla.tv/5G-WirelessCommunication-en

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