



The Harmful Effects of Electromagnetic Fields Explained

Story at-a-glance

- ▶ Exposure to microwave EMFs, like cellphones, causes massive mitochondrial dysfunction due to damage done by free radicals from peroxynitrite that also cause single and double stranded breaks in your DNA
- ▶ Excessive free radicals triggered by low-frequency microwave exposure from cellphones and Wi-Fi networks have been linked to chronic diseases such as cardiac arrhythmias, anxiety, depression, autism, Alzheimer's and infertility
- ▶ Excessive calcium signaling produced by EMF exposures also has important roles in producing pathophysiological effects of EMFs including each of the effects listed above
- ▶ Strategies that may help reduce the harmful effects of EMFs include optimizing your magnesium level, certain Nrf2-boosting foods, exercise, calorie restriction and strategies that boost nitric oxide signaling (which acts, in turn, by raising Nrf2)

By Dr. Mercola

I've often noted that [electromagnetic fields](#) (EMFs) are a pernicious, hidden health risk. But exactly how does this kind of microwave radiation damage your health? Martin Pall, Ph.D., has identified and published research describing the likely molecular mechanisms of how EMFs from [cellphones](#) and wireless technologies damage plants, animals and humans.^{1,2,3,4}

Pall has a bachelor's in physics from Johns Hopkins and a Ph.D. in biochemistry and genetics from Caltech, and is uniquely qualified for this type of research. For the past 18 years, he's been scouring the medical literature, integrating and drawing parallels between work done by others to answer this pressing question. Pall explains:

"There is a huge amount of information out here that nobody has the time to integrate, digest and make connections [between]. That's what I've been doing ... I was interested in EMFs before I could understand how they worked. Then I stumbled onto two papers that told me, 'Well, this looks like the way they work,' and then I dug out more and more papers ..."

What the [initial two] studies showed was that you could block or greatly lower the effects [of EMF] by using calcium channel blockers ... That was the key observation

...

Now [I have found] 26 [papers] ... They all show that EMFs work by activating what are called voltage-gated calcium channels (VGCCs). These are channels in the outer membrane of the cell, the plasma membrane that surrounds all our cells. When they're activated, they open up and allow calcium to flow into the cell. It's the excess calcium in the cell which is responsible for most if not all of the [biological effects]."

EMFs and Intracellular Calcium

When you expose cells to EMFs, there's increased intercellular calcium. You also get increases in calcium signaling, which is important as well, in terms of explaining the damage EMFs cause. For the past 25 years, the industry has claimed that non-ionizing radiation is harmless and that the only radiation worth worrying about is ionizing radiation. Pall's research unequivocally proves that this assumption is false.

"It's been very clear, going back all the way to 1971 and even before that, that this wasn't true. But we didn't know what the mechanism was. Now, we do. I think it's very important, because the industry's been trying to hoodwink everybody for decades. Now we know how it works. One of the other things that's very important about this is that there is a wide variety of different health impacts that have been reported. Now we can explain how [these problems arise]."

How EMFs Damage Your Health

When your VGCCs are exposed to [EMFs](#), they open up, allowing abnormally large volumes of calcium ions into the cells — about 1 million ions per second per channel. 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 levels into dangerous ranges.

"Because of the structure of the voltage sensor and its location in the plasma membrane, one can predict from basic physics that it's extraordinarily sensitive to the electrical forces from EMFs," Pall notes. On average, these forces are approximately 7.2 million times stronger on the voltage sensor than they are on singly charged electrical groups in the aqueous (watery) part of the cell. What this means is that current safety standards are off by a factor of about 7 million.

That's how these very weak EMFs, which industry claims can't possibly cause you any harm, are actually taking you out prematurely. They work by activating VGCCs. This turns out to be

absolutely critical, because when there's excess calcium in the cell, a number of things happen. Not only do you get excess calcium signaling, you also get increased nitric oxide (NO). While NO has many beneficial health effects, massively excessive NO reacts with superoxide.

Superoxide levels also rise in response to increased intercellular calcium. Together, they form peroxynitrite, which is an extremely potent oxidant stressor. While not a free radical, peroxynitrites break down to form reactive free radicals, both reactive nitrogen species and reactive oxygen species (ROS) including hydroxyl free radicals.

“You get both, because you get hydroxyl radicals and carbonate radicals and NO₂ radicals,” Pall explains. All three do damage. According to Pall, most of the damage is likely done by excessive free radicals, but some damage is caused directly by the peroxynitrites. The end result is rather massive harm, as excessive [oxidative stress](#) and nitrosative stress are involved in nearly all chronic disease. Much of the pathophysiology also has to do with the excessive calcium signaling, independently of peroxynitrite.

NO Signaling Pathway Versus Peroxynitrite Pathway

It's important to realize that not all oxidative stress is harmful. There's a certain baseline of free radicals that's biologically useful and necessary. NO, for example, is a free radical, yet it has many very beneficial effects. The problem is excessive oxidative stress. Interestingly, Pall notes that the NO signaling pathway and the peroxynitrite pathways inhibit each other, which I never previously knew. This provides support for the new [nitric oxide dump exercise](#) to decrease damage from EMFs.

Why You Cannot Depend on Industry Claims

Many are unaware that the telecommunications industry is perhaps more well-funded than the pharmaceutical industry, and just as powerful politically. Their lobbyists are very effective in disseminating and protecting the industry's version of the truth. Needless to say, the industry will also actively discredit research that demonstrates harm and/or defund research projects that start to reveal problems.

In fact, the current head of the Federal Communications Commission was formerly the chief lobbyist for the telecommunications industry — one of the worst cases of the disgusting revolving door between industry and government and the fox guarding the hen house that I have seen in sometime.

“I know how they've attacked various people,” Pall says. “In the U.S. ... the funding for the EMF research [by the Environmental Protection Agency] was cut off starting in 1986 ... The U.S. Office of Naval Research had been funding a fair amount of

research in this area [in the '70s]. They [also] ... stopped funding new grants in 1986 ... And then the National Institutes of Health (NIH) a few years later followed the same path ...

[I]t's actually shocking to say there are only two countries in the world that are doing a lot of research in this, well beyond their normal scope ... Turkey and Iran ... they're doing quite a bit of good research in both of those countries on EMFs ... What I've been doing is I've been doing it on my own. I've been contributing my time to it and my efforts and, at least to a small extent, some money to it. But it doesn't cost that much, so I can do it.

So, we have the fact that the money was cut off. One strongly suspects the industry had a role on that. The industry, with the 1996 Telecommunications Act, gave the regulation to the Federal Communications Commission (FCC), which has done nothing in terms of protecting the public.

In addition, they prevented the public from protecting their health with regard to their exposures from the cellphone towers. We cannot sue to prevent cellphone towers from being put near our workplace or homes. Basically, what the Congress did was to say our health makes no difference ... So, we're in extremely deep trouble," Pall says.

Neuropsychiatric Effects of EMF Exposure

And this brings us to the crux of the problem, namely the physical locations where VGCCs are the densest, and the subsequent diseases you can expect from chronic excessive exposure to EMFs. The highest density of VGCCs are found in your nervous system and, indeed, studies dating back to the 1950s and '60s show the nervous system is the organ that is most sensitive to EMFs.

Some of these studies show massive changes in the structure of neurons, including cell death and synaptic dysfunction. When the VGCCs are activated in the brain they release neurotransmitters and neuroendocrine hormones. Hence, consequences of chronic EMF exposure to the brain include the following, which Pall details in a 2016 paper:⁵

- [Anxiety](#)
- [Depression](#)
- [Autism](#)
- [Alzheimer's](#)

In animals exposed to EMFs, there are massive, cumulative effects in the brain. Genetic

polymorphism studies also show that elevated VGCC activity in certain parts of the brain produces a variety of neuropsychiatric effects.

“I reviewed a [large number] of studies on various kinds of EMF exposures, each of them showing neuropsychiatric effects. What you find is that these effects have been repeated many times in these epidemiological studies. It’s the same thing that everybody’s complaining about, ‘I’m tired all the time,’ ‘I can’t sleep,’ ‘I can’t concentrate,’ ‘I’m depressed,’ ‘I’m anxious all the time,’ ‘My memory doesn’t work well anymore.’ All the things everybody’s complaining about.

We know all those things are caused by EMF exposures. There’s no doubt about that. Because we know their effects on the brain, we know that the VGCCs’ excessive activity can produce various neuropsychiatric problems.

Here we’ve got all of these epidemiological data that confirms this is happening in humans who live near cellphone towers, who were exposed to Wi-Fi, who were exposed to broadcasting radiation, who use cellphones, tablets and so on. That’s very important. I think we should care about this.”

Cardiac Effects

Your heart is also very sensitive to EMFs, particularly the pacemaker cells of your heart, as they have the highest density of VGCCs. As a consequence of this, we find that EMFs tend to trigger the following conditions. If you have any of these conditions (or any of the ones discussed above and below), you need to know that EMF exposure is a major contributing factor and take immediate and aggressive steps to remediate your exposure.

- Cardiac arrhythmias (associated with sudden cardiac death)
- Atrial fibrillation / atrial flutter
- Premature atrial contractions (PACs) and premature ventricular contractions (PVCs), also known as heart palpitations
- Tachycardia (fast heartbeat) and brachycardia (slow heartbeat)

Reproductive Effects

A third area with densely populated VGCCs is the reproductive system, particularly the male testes. A consequence here is impaired or reduced fertility. There is evidence showing EMFs can cause both male and female infertility, but male infertility has been more studied. Pall describes a classic reproduction experiment published 19 years ago by Ioannis Magras and Thomas Xenos in Greece:

“They took young pairs of mice, one male and female. They put them in a little cage on the ground outside in an antenna park ... The [radiation] levels at the ground were well within our current safety guidelines ... They put them in two different locations, one with a higher level of exposure and one with a lower level of exposure.

What they found was that at the higher-level exposure, each pair produced one litter that was approximately normal sized, then a second litter that was clearly down in numbers and then complete infertility — not a single mouse born ...

At lower level exposure, it was basically the same story, except it took twice as long. They produced four litters with decreasing numbers, and then complete infertility. We have now, in humans in many countries around the world, decreased male sperm count — down by over 50 percent in Western countries, and about half of that amount in other countries around the world. ^{6,7}

The senior author in that paper is saying, ‘If this keeps going, we’re going to become extinct,’ just from the drop in male sperm count. We know that that occurs in humans — in people who carry their cellphones in their front pockets, men who use their laptops with the Wi-Fi on sitting on their lap. We know that occurs. But of course, industry denies everything.”

Indeed, studies have linked low-level electromagnetic radiation (EMR) exposure from cellphones to an 8 percent reduction in sperm motility and a 9 percent reduction in sperm viability.^{8,9} Wi-Fi equipped laptop computers have also been linked to decreased sperm motility and an increase in sperm DNA fragmentation after just four hours of use.¹⁰

EMFs and Cancer

Studies on cancer have also been blocked by the industry in a number of ways, including preventing researchers from obtaining real-world data on cellphone usage. Obviously, people who use their cellphones the most are at greatest risk. While not at the top of the list of concerns associated with EMF exposure, cancer is yet another potential consequence of mitochondrial damage.

Women who carry their [cellphones in their bra](#), for example, risk cancer in the upper inner quadrant of the breast, which is very atypical and not the usual upper outer quadrant.

[Brain cancer](#) is another possibility from extended cellphone use if you keep the phone to your ear. That said, emphasizing the cancer risk is likely counterproductive, as most people use cellphones and those who develop brain cancer are few and far in between. The problem is brain cancer has a latency period of a decade or more. Arrhythmias, autism, anxiety and Alzheimer’s,

on the other hand, are extremely prevalent these days, and we now have a mechanism that explains how EMF contributes to all of them.

So, even though two U.S. senators likely got brain cancer from cell phones (Ted Kennedy and John McCain), it's important to understand that cellphone dangers are not just about brain cancer. It's all these other problems as well, including infertility. "In my judgment, cancer is down around No.4 or No. 5 on the list of my concerns. It's not that cancer is not important. It's very important. We're just looking right now at the early stages because of long latencies," Pall says.

What Is More Dangerous, Cellphones or X-Rays?

If you are like most, the answer is obvious: X-rays. That is because you have been convinced by the deceptive lies of the telecommunications industry that have lobbied the government to reinforce this delusional myth. The reality is that there is compelling evidence showing cellphones are more dangerous than X-rays — by several orders of magnitude.

Some of the best evidence comes from a German study (headed by professor Franz Adlkofer), in which the effects of ionizing radiation equivalent to 1,600 chest X-rays were compared to 24 hours on a cellphone. Surprisingly, they found both produced roughly equivalent amounts of DNA breaks in in-vitro assays. According to Pall, this actually vastly underestimates the effects of cellphones, because they used a continuous wave EMF, not pulsed.

There's extensive evidence showing pulsed EMFs are far more damaging than continuous wave EMFs. That's important for a number of reasons, including the fact that all wireless communication devices communicate by pulsations. In another paper, the group showed that when you use pulsations designed to be similar to the pulsation from a real cellphone, damage occurred at far lower intensities.

"This raises the question, 'How can this possibly happen?' I think the answer comes from the kind of diagram I've published, which is how EMFs produce free radicals," Pall says. "Both ionizing radiation and the microwave frequency EMFs produce DNA damage through free radicals. They're similar in that way. Where you get the free radicals is through the peroxynitriate pathway.

It turns out that when you go from EMFs to the free radicals on that pathway, there are three steps that involve high levels of amplification. One of them is when you open up the channels, you get about a million calcium ions flowing in per second. The second is that you get increases in NO and superoxide.

Those, in effect, will be the calcium acting catalytically, because once it's in the cell, as long as it's elevated, you keep getting more and more [NO and superoxide]. And

then those two react with each other to form peroxyxynitrite. The reaction rates are the product of the two concentrations. So you have three levels of amplification. If you have three levels of amplification, you get a hell of a response to a very small stressor.”

Ionizing Radiation and DNA Breaks

The industry says there’s not enough energy in microwave radiation to cause direct damage to covalent bonds in DNA. This is true. There isn’t. It’s the biological amplification resulting in excessive oxidative stress that causes the damage. Interestingly, even most of the damage caused by ionizing radiation is actually due to secondary free radical formation that breaks DNA. It’s not directly from the energy within the radiation. Pall explains:

“That was published by Arthur Compton. He got the Nobel Prize for it in 1927. The way in which ionizing radiation works, it basically gets molecules and atoms and knocks electrons out, and then you get pairs of free radicals generated. That’s called Compton scattering.

There is amplification from ionizing radiation, but it’s only at one level. One energetic photon can produce a chain of free radicals. You’ve got three levels of amplification with the microwave frequency EMFs. The amount of damage you get based on those studies is truly extraordinary. Of course, Adlkofer and [Pilger] Rudinger were severely attacked by the industry.”

Practical Strategies to Limit Your Exposure

Naturally, to reduce your risk of harm, you need to [reduce your exposure to EMFs](#). Cellphone towers should be a major concern if you work or go to school within 300 meters (about 1,000 feet) of one. Even just driving around can expose you to substantial cellphone tower radiation.

Your cellphone is a major source of exposure, as are [cordless phones](#), Wi-Fi routers, Bluetooth headsets and other Bluetooth-equipped items, wireless mice, keyboards, smart thermostats, baby monitors, [smart meters](#) and the microwave in your kitchen. Ideally, address each source and determine how you can best limit their use.

A simple remedy is to turn off your Wi-Fi each night. That’s just unnecessary exposure. Not carrying your cellphone on your body, and not using your laptop directly on your lap are other simple measures.

You can get cellphone pouches that are shielded on one side, so putting that side toward your body gives you some protection. Use your cellphone with a headset or on speaker phone. Work

toward hardwiring your devices so you don't have to be in a Wi-Fi field and don't get unnecessary radiation from cordless mice, keyboards and printers. It is also possible to put up shielding in your house or apartment to lower exposures.

Once you know the mechanism of harm, you have a better idea of how to remediate the problem. In this case, since we now know the effects of EMFs are reduced by calcium-channel blockers, a natural solution would be to make sure you're getting enough magnesium. Most people are deficient in magnesium, which will worsen the impact of EMFs. As noted by Pall:

“It is clear that when you're deficient in magnesium, you get excessive activity of the VGCCs. You also get excessive calcium influx through the N-methyl-D-aspartate receptor, caused by magnesium deficiency, which is also problematic, so it's important to allay that deficiency.

Now, I always tell people I'm a Ph.D. and not an M.D. None of these [suggestions] should be viewed as medical advice. But I think one approach to dealing with these things is to raise the level of nuclear factor erythroid-2-related factor 2 (Nrf2), which I published [a paper¹¹] on.”

How to Activate Nrf2 to Reduce EMF Impact

I am in the process of writing a very comprehensive paper on Nrf2, which is a vitally important biological hormetic that upregulates superoxide dismutase, catalase and all the other beneficial intercellular antioxidants. It also:

- Lowers inflammation
- Improves mitochondrial function
- Stimulates mitochondrial biogenesis
- Helps detoxify the body from xenobiotics, carbon-containing toxicants and toxic metals
- Activates the transcription of over 500 genes in the human genome, most of which have cytoprotective functions. This includes the three genes that encode enzymes required for synthesis of reduced glutathione, which is one of the most important antioxidants produced in your body

One simple way to activate Nrf2 is to consume Nrf2-boosting food compounds, such as sulforaphane from cruciferous vegetables, foods high in phenolic antioxidants, the long-chained [omega-3 fats](#) DHA and EPA, carotenoids (especially lycopene), sulfur compounds from allium vegetables, isothiocyanates from the cabbage group and terpenoid-rich foods.

Exercise, calorie restriction (such as intermittent fasting) and activating the NO signaling pathway (one way of doing that is the NO dump exercise) will also raise Nrf2. In his paper, Pall notes:

“The important detoxification roles of Nrf2 mean that raising Nrf2 activity is likely to be of particular importance to the hundreds of millions of people around the globe who are regularly exposed to toxic chemicals that cause diseases characterized by oxidative stress, inflammation and mitochondrial dysfunction, diseases which include most of the chronic diseases of 21st century life.”

“One of the things I argued in that paper is that the two most helpful diets known — the traditional [Mediterranean diet](#) and the traditional Okinawan diet — are both high in nutrients that raise Nrf2,” Pall adds.

Take-Home Message

I personally believe EMF exposure may be one of the most significant factors for the observed decrease in male sperm count, and the increased prevalence of anxiety, depression, autism and Alzheimer’s. It is also highly likely a contributing factor to cancer.

While not widely publicized, in May 2011, the cancer research arm of the World Health Organization, the International Agency for Research on Cancer, classified radiofrequency EMF — such as the radiation from cellphones — a class 2B carcinogen, meaning it is possibly carcinogenic to humans.¹²

Pall has made a significant contribution to public welfare with his discovery of how EMFs cause biological harm, and it would be wise to take notice. I personally believe he deserves a Nobel Prize for his contribution to the science.

Again, the damage is not done through heat or ionizing radiation; it’s done by activating your VGCCs, thereby triggering a chain-reaction that produces excessive amounts of ROS, peroxy nitrates and hydroxyl free radicals — the most destructive free radicals known to man, as well as through excessive calcium signaling.

Hydroxyl free radicals decimate mitochondrial and nuclear DNA, their membranes and proteins. Too much calcium in the mitochondria can also impact their function. The end result is mitochondrial dysfunction, which we now know is at the heart of most chronic disease. Since your brain, the pacemaker in your heart and male testes have the highest densities of VGCCs, these areas are the most prone to damage when exposed to EMFs.

What this research tells us is that excessive microwave exposure can be a direct contributor to conditions such as Alzheimer’s, anxiety, depression, autism, cardiac arrhythmias and infertility.¹³

So, if you care about your heart, brain and reproductive health, avoid carrying your cellphone in your pocket or on your hip, avoid using portable computers and tablets on your lap, and take measures to limit or eliminate as many unnecessary EMF sources as you can, in your home and at work.

Comments

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DIET NRF2, COVER THE ELCTROMAGNETIC FIELDS Dr. Mercola recommends a series of foods, which contain phytochemicals, which activate the transcription factor Nrf2, included in the DIET MEDITERRANEA, and the blue zones, such as OKINAWA, advised by PALL. In Depth: TRANSCRIPTION FACTORS are a class of protein that binds to DNA and induces the expression of particular genes, in the case of Nrf2, these are potent antioxidants like NAD (P) H: quinone oxidoreductase 1 (NQO1) (R) and glutathione S-transferases (GST), and many others, are contemplated in this link:

www.mygenefood.com/activating-nrf2-pathway-nutrition-need-know/ .

DIET NRF2, offers an opportunity to improve the Nrf2 gene, naturally. It consists of several forms of flavonoids, which can be obtained from common food sources such as berries, green and white teas, chocolate, grapes, apples, citrus, onions, broccoli, curcumin plant turmeric and carotenoids such as zeaxanthin and lutein , dark green vegetables and leaves (kale and broccoli, especially the seed extract) and spices saffron, turmeric or paprika) are a particularly rich source of polyphenols.

1) flavonoid polyphenols such as epigallocatechin 3-gallate (EGCG) from green tea and apple quercetin; (2) non-flavonoid polyphenols such as tumeric curcumin and resveratrol from grapes; (3) phenolic acids or phenolic diterpenes such as rosmarinic acid or carnosic acid, respectively, both of rosemary; and (4) organosulfur compounds including isothiocyanate, L-sulforaphane, broccoli and allicin, garlic thiosulfonate

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Generally, all these compounds are considered to be antioxidants. They can be classified in this way, either by directly collecting free radicals, or indirectly, by enhancing endogenous cellular antioxidant defenses, for example, by activating the nuclear factor 2 (Nrf2) transcription factor

pathway derived from erythroid. Alternative mechanisms of action have also been suggested for the neuroprotective effects of these compounds, such as the modulation of signal transduction cascades or effects on gene expression.

[alsworldwide.org/care-and-support/article/the-nrf2-diet..http://www.an..-part-2-foods-phyto-substances-and-other-substances-that-turn-on-nrf2 /](http://alsworldwide.org/care-and-support/article/the-nrf2-diet..http://www.an..-part-2-foods-phyto-substances-and-other-substances-that-turn-on-nrf2/)

www.lifevantage.com/blog/boost-your-nrf2-activation-with-these-foods/.

www.ncbi.nlm.nih.gov/pmc/articles/PMC4757558/..https://www.mygenefood...

This link studies Nfr2, as a factor to prevent aging, and delves into the mechanisms of protection of ginger, sulforaphane, vitamin E, Resveratrol, green tea, coffee, lycopene, fish oil and olive oil

www.anti-agingfirewalls.com/2012/02/06/the-pivotal-role-of-nrf2-part-2.. on-nrf2 /

Synergistic formulas like extract of Cardo mariano (Silybum marianum), Bacopa (Monniera Bacopa), Root of Ashwagandha. Green Tea Extract.

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Phytochemicals and nutrients, which increase the activation of the transcription factor Nfr2: 1. CURRUM (CURCUMINA) www.protandimmex.com/protandim-nrf2 .

www.sciencedirect.com/science/article/pii/S0006899309009299..http://ww.. .

Black pepper and quercetin increase the assimilation of curcumin. Foods rich in quercetin include red wine, red grapes, onions, green tea, apples, blueberries, black plums, red leaf lettuce, raw cabbage, chicory leaves, raw spinach, peppers, green beans and raw broccoli. The best natural source of quercetin are capers

2. LIPOICO (R-ALA, active form): m.pnas.org/.../3381.short

journals.plos.org/plosone/article?id=10.1371/journal.pone.0058371

3. BROCOLI (SULFORAFANO): alivecell.com/.../sulforaphane .

alivecell.com/en/sulforaphane/...http://onlinelibrary.wiley.com/doi/1..

www.sciencedirect.com/.../s1043661813001606

4. RESVERATROL. www.ncbi.nlm.nih.gov/.../20418481

www.ncbi.nlm.nih.gov/.../22917016

www.sciencedirect.com/.../S0014299908006511

onlinelibrary.wiley.com/doi/10.1111/j.1439-0396.2010.01123.x/full

5. EGCG): www.sciencedirect.com/.../S0024320510002663 ..

6. PROCANIDINES OF GRAPE SEEDS: www.mdpi.com/.../htm .

7. DIALYL TRISULFURE AND DIALYL DYSULFUR (PEITC) from the allium:
www.sciencedirect.com/.../S0167527312016324

mct.aacrjournals.org/.../1918.short

8. CATECHESTS: www.sciencedirect.com/.../S0955286312000423

9. Punicislagin (pomegranates): onlinelibrary.wiley.com/.../full .

10. OLIVE OIL POLYPHENOLS: online.liebertpub.com/.../rej.2011.1245

Posted On 09/03/2017

stanleybecker

Gui - your power of research is AWESOME! - lots of love and more power to your curiosity

Dear Readership - due to my clumsy finger work while tapping in revisions to my leading comment today I inadvertently tapped in "cancel" - this happens at least once to all human beings - unfortunately as perfectly good thread has vanished down the rabbit hole - never to be seen again - sorry about that, stan

Posted On 09/03/2017

iamblessediam

Hi Prpf. G. -- EXCELLENT summation on Nrf2 pathway and how to support it. I'll add one other addition - DHQ [Dihydroquercetin]. On the CAPE [Cell-Based Antioxidant Protection in Erythrocytes - which is a more accurate "assay" than ORAC] antioxidant scale, DHQ scores 10 - outscoring blueberry [1], blackberry [1] raspberry [1] and cocoa [4]. DHQ effects on the Nrf2 pathway: [www.ncbi.nlm.nih.gov/.../23419114] and [scholar.google.com/scholar?q=dhq+antioxidant+and+nrf2+pathway&hl=e..]. DHQ and exercise

recovery: [www.balinvest.lv/applications-of-dhq/dhq-in-sport/params/post/855274/]. Be well everyone! LBP!

Posted On 09/03/2017

Guillermou

Thank you, Mr. INVESTIGATOR, IAM. Agree. Dihydroquercetin is a potent antioxidant, which belongs to bioflavonoids, natural compounds, which is the source of Siberian larch. The RCAO is 105,000. According to my data 4 times more than the maqui. You know the Cape. ? The dihydroquercetin utility as the active ingredient is huge. Laureate Linus Pauling, a two-time Nobel Prize contended, that the consumption of this potent antioxidant helps the actual prolongation of human life several years.

Dihydroquercetin, thanks to its unique molecular structure, penetrates inside the cells, neutralizes harmful toxic, to the body of free radicals and therefore prevents the aging process. In addition, laboratory and clinical studies have shown that dihydroquercetin extracted from larch, has the highest antioxidant activity greater than its previously known natural counterparts - vitamins B, C, beta-carotene, tocopherols - dozens of times.

The main sources of polyphenols are red wine (grape resveratrol), dark chocolate and berries (blueberries, raspberries, blueberries ...). Of the 4,000 known polyphenols, only one type is common to these 3 foods: delphinidins. The ORAC of the maqui is 26,000, followed by the raspberry 19,000, red cranberry 9000 and blue cranberry 4000, Acai, 4000 and red grape 1,800. The onion shell 5% quercetin bioflavonoid antioxidant (up to 240 486 100-mg per g of the product, and only the bow 13 199-mg), but people intuitively knew of its benefits. For comparison - buckwheat contains quercetin g 8 100 to g.

Quercetin and other products: caper - 1808 328 mg / kg, celery celery - 1700 mg / kg, black elderberry - 420 mg / kg, cocoa fruit - 250 mg / kg, blueberry -177 mg / kg, blueberries - 146 mg / kg, blueberries - 121 mg / kg, chokeberry - 89 mg / kg, Rowan - 85 mg / kg blackberries - 45 mg / kg, broccoli - 32-110 mg / green tea - 2000 2500-mg / kg, cherry - 12 mg / kg, red wine - 8.3 mg / kg, apple with skin - 1,3 3-mg / kg, have small tomatoes grown naturally

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iamblessediam

Hi Prof. G. -- The CAPE assay method calculates the "potential" inside the cell under use - whereas the ORAC assay calculates the "potential" outside the cell BEFORE use. I personally think the

CAPe assay better fits into the methylation cycle picture - gives a better picture of any nutrient "potential" to "attenuate" a malfunctioning "pathway" like the Nrf2. DHQ is a great "recycling" agent - thus it's application in the sports arena. Another "adjunct" - which I forgot to add - that's recently been studied showing attenuation effects on the Nrf2 pathway in a positive manner is Transcranial magnetic stimulation [TMS]: [www.sciencedirect.com/.../S1935861X12000381] - it fits into the "wave-particle duality" concept in quantum mechanics - or - Einstein's "spooky action at a distance" observation: [www.sciencedaily.com/.../wave-particle_duality.htm]. I believe the human body is an ambient temperature fission/fusion nuclear reactor generating energy to fuel a laser light machine called DNA using both wave and particle interactions - it's why I'm fascinated with both native [geomagnetic] and non-native [EMF/EMI] electromagnetic influences on cellular function(s) - the field of biophysics and biophotons and material science [structure]. So, wave-particle = mind-body = metal-material - any "sources" of electromagnetic wave energy - like EMF/EMI - that disrupts the coherent resonance of the "wave" causing "particle" issues creates an energy information exchange lacking proper harmonics - that equates to less than optimal health - Dr. Martin Pall has effectively "connected the dots" demonstrating how a particular wave "form" disrupts optimal cellular function - so do the wave forms of Sun spots: [www.ncbi.nlm.nih.gov/.../PMC3063695]. Tesla summed it nicely ~ "If you want to find the secrets of the universe, think in terms of energy, frequency and vibration." - the human body mirrors that! Be well! LBP!

Posted On 09/03/2017

RobertSniadach

Hola Gui - Most excellent information that you provide! Thank you. For many years I have been working with patients using water fasting and similar detox protocols. I have often thought to myself, what would be the IDEAL pre-fast diet and supplementation regimen, that would help prepare the body to best cope with all the detoxification processes that occur during the fast? How could I help my patients to maximize a very thorough detoxification for themselves, while also helping to make their fast more comfortable by minimizing symptoms?

I know that each case is different, of course, and that each patient presents with a unique situation that requires customized advice. But nevertheless, I have experimented with pre-fast and during-fast supplementation, hoping to make the improve detox and comfort levels with fasting. Mostly I have used proteolytic and lypolytic enzymes where indicated, both pre- and during-fasting. Fortunately, in most cases, the body knows very, very well what it needs to do and what it is capable of doing, so that understanding lifts much of the diagnostic burden. Oftentimes no intervention whatsoever is sufficient, and most people gain fantastic benefit from their fast. But I also come across many patients, esp long standing chronic disease cases where various systems and organs are quite compromised, sometimes permanently. So this is where I like to advise for specific pre-fast diet and supplementation.

If you are interested, it would be fun to create some generalized pre-, during-, and post-fast dietary and supplementation protocols for fasting patients. As you already know, fasting is HUGELY beneficial for nearly everyone. And yet, there has been VERY little research into it, because there is no money in it for pharma/medical industrial complex... and also nearly no clinical research into how to intelligently assist the fasting patient for best outcome. I am sure that many physicians who practice fasting therapy would benefit from this work.

Posted On 09/03/2017

Guillermou

Hi, Robert. It's very interesting, what you say. The first book on fasting that I read, is that of Alexi Suvorin. Do you know him? I have it on paper, in Spanish. He describes the different stages of fasting, and how in the different stages the healing of chronic diseases is achieved. He says, that the tongue is cleaned at 22 days, removing the seborrhea, and turning red. I found it interesting, H2 water, and send you several articles. Since I do not have clinical experience, I do not know if my theoretical knowledge, can help, but count you, with my contribution in what I can help.

Posted On 09/03/2017

annie1996

If you think that the current EMF bandwidth is bad, a much higher frequency version '5G - the internet of all things' is currently being implemented without a vote, health studies or regulations. We can conclude that our health and privacy are of no consideration when corporations stand to make billions and billions of dollars.

www.youtube.com/watch

Posted On 09/03/2017

betternbetter

Yes! They plan on hanging a 5G antenna on every light pole and using it for their " self driving " cars. Between the emfs, vaccines, pesticides, and chemicals, I think we are in for a rapid demise :-(

Posted On 09/03/2017

Falk

For Californians. we have SB 624 making its way to reality. If passed, it will likely increase. many times, the amount EMR we are exposed to.

leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=20152016..

Posted On 09/03/2017

forbiddenhealing

Beside the obvious takeaway of avoiding EMF exposure and oxidative stress via diet/detoxification of metals and lifestyle/exercise/sun exposure.....boosting antioxidants, a variety of polyphenols (cucumin, flavonoids, etc.) and precursors of internally produced glutathione/SOD/Catalase (like sulfur containing NAC, RALA, crucifers, onions, eggs, garlic) prevents free radical damage and stimulates nrf2 benefits.....Mega C raises electron charge terrain conducive to production and protection of internal antioxidants....Besides that, phones/screens have produced a generation of well informed and connected idiots detached fr nature and reality.

Posted On 09/03/2017

rrealrose

Capt'n Forbidden. What if its more than this? The above interview reminded me of something I watched a while ago, about having excess calcium in the body vs excess calcium flooding into cells (intra- vs inter-cellular calcium)...this is just for you? No! Hang on to about the 30 minute mark and for everyone over the age of 45! - the Silicon Valley health institute, May 2014 presentation: www.youtube.com/watch ~~~~~He goes to great lengths to discuss how to reduce the calcium buildup, and of course this features Vits C, D3, K2 and Mg!!!

Posted On 09/03/2017

forbiddenhealing

rrrealrose...YES...The gospel of Thomas Levy...Oxidative stress eats bone (and other connective tissues) calcifies body..so get mo C/bone broths-collagen..., Ca/Mg balance important too.

Posted On 09/03/2017

stoic

perchloric acid. talk about brothing bones. proly a lot like homeopathic dilution - the acid, it "remembers." i remember the tub scene, breaking bad. & houston. before harvey. nasty et's proly even more trouble than a 'cane. + i remember when harvey was just a 6'3" invisible rabbit. ☹

www.youtube.com/watch

Posted On 09/03/2017

stoic

forb...ave, imperator, morituri te salutant. oh, that was coliseum, not calcium. sorry. still, what's in a gladiator's name? the spaniard. the calcium. got (too much) milk\ed? "not yet." but soon enough. meantime, are you not entertained? entrained? oh, i know: binaural beat down. ☹

www.youtube.com/watch lol.....

serious q maCsimus: those romans were big on baths. transdermal VC? not talkin' punji sticks, which the romeos also used, just long soaks. vitamin sea. limey tubs. drinkin' screwdrivers iffy, but soakin' screwdrivers might tighten those connections? & so much easier than (sh)iv's. sittin' tub might postpone sittin' shiva indefinitely. are there c-notes to be earned, or saved, here? or am i just playing key of c? i know there's topical c serum. mebbe' cwater & dms0? inside a pressurized tank? mein gott! we're back to brundle-fly, but mebbe' w\o insects in the ointment? still cbeeing (remember the duke in the fighting seabees?) the levy vid. but time for dinner. time to eat. but what eats time? itself? focal point scurrying....

Posted On 09/03/2017

Krofter

Monsatan is currently facing some large class action lawsuits for poisoning the world. Telecom companies may be next in line.

Posted On 09/03/2017

Guillermou

!!! May your prediction be fulfilled, Krofter !!! Monsanto and pharmaceutical managers should put them in their chalet, high voltage towers. !! This is impossible, because they share the business, the

disease!

Posted On 09/03/2017

californiawoman

I cringe when I see pregnant women wearing the new Apple watches. Wonder what it is doing to the fetus. An added note: My husband contracted a cancerous lump - a lymphoma - on his thigh where he placed his laptop for many years. When I asked his mainstream surgeon if she thought the laptop was the culprit, she did not answer directly. What she did say was that she no longer carries a cell phone on her body. My guess is that she sees the correlation on the front lines with her own patients but can't discuss it until it goes official.

If that weren't bad enough, my husband developed a fibrinous lump on the side of his neck where he used his cell phone all day long in his sales job for many years. It was not cancer but it was growing toward his spine and was only millimeters away. He had no neurological symptoms yet, but the mass was so large that he could not turn his head well. The only mainstream answer was surgery which was risky since it was so close to the spine. In the past 2 years, a combo of proteolytic enzymes is helping it to shrink it and he can now turn his head without pain. I am trying to spread the word to everyone about emf's without much luck. Thank you, Dr Mercola, for bringing this topic up to the public.

Posted On 09/03/2017

Ronald_H

California woman and group, Regarding: "What she did say was that she no longer carries a cell phone on her body." Two categories of people warn us of such things: largely dismissed "conspiracy theorists" such as myself and brain surgeons. It's a mass Sheeple induced psychoses that has them ignore realities and trust their perceived authorities. This repeats in virtually all aspects of healthy living as avid readers of Mercola.com know well. I know a Cheetos munching engineer who publically ridicules me for healthy living because as everyone knows healthy living, doesn't cure disease because as everyone knows only pharmaceutical and doctor deities can do that.

Posted On 09/03/2017

GiGiOf2

californiawoman, Thanks for sharing about your husband's lymphoma and fibrinous lump. My daughter (34) had a lymphoma on her upper right back area two years ago which was surgically

removed. No other treatment needed.. She had a melanoma on the upper chest area several years before also surgically removed. She has lupus now. I had looked into proteolytic enzymes for my painful arthritis several years ago and took it for over a year without noticeable results. I ended up needing a hip replacement. Could you share what kind of proteolytic enzymes (brand and strength) have helped shrink your husband's fibrinous lump? Many thanks!

Posted On 09/03/2017

rrealrose

Gigi, You may be interested in reading an older book now, by 2 Aussie doctors who had about 400 patients w lupus in remission in the 1980's, their 2002 book is called "Dangerous Grains" and can be found on Barnes&Noble website or on Amazon at this link:

www.amazon.com/Dangerous-Grains-Gluten-Cereal-Hazardous/dp/1583331298 - this pertains to your arthritis and your daughter's lupus...you want to remove the toxic input first, before any enzymes or probiotics can work for you.

Posted On 09/03/2017

Robinfinity

When you mention the lump on your husband's thigh, this is called a lipoma. I think it's benign but best to treat so it doesn't continue to expand. It's possible to shrink lipomas down by drinking noni juice and taking grape seed extract capsules, both anti-inflammatory. This info per endocrinologist Dr Karen Herbst.

Posted On 09/04/2017

jmiller739

What has happened to our health? It's a question that few people can answer. I think the following article hits a home run: "Electropollution and the Decline in Health of a Nation-- It might surprise you to know that the 1950s, when there were few health clubs; the American diet was loaded with fat; vitamin supplements were rare; executives downed three martinis at lunch and everyone smoked like a smokestack, may have been the healthiest decade ever. Expectations for getting cancer were only 1 in 6; it is now 1 in 2 for men. Alzheimer's, Multiple Sclerosis and most modern autoimmune diseases were unheard of. Neurological disorders like Parkinson's and ALS were rare. Diabetes was only beginning to merge and heart disease for young people was unusual."

www.justproveit.net/content/electropollution-and-decline-health-nation..

Posted On 09/03/2017

jmiller739

Is EMF playing a sinister role in the dramatic increase in chronic degenerative diseases and the sharp decline of wellbeing? The sad reality is the background levels of EMF are on the rise with the proliferation of cell towers, WI-FI, WI-MAX, etc. Corporate and government entities have blatantly ignored the undeniable effects of electromagnetic radiation for far too long. The science of adverse health effects has been around for decades-- see the Dr. Zory Glazer archive. The wireless revolution should have never gotten off the ground. Many are trapped in a nightmare and have no idea what's happening. I fear that non-ionizing radiation is helping to fuel the suicide epidemic... www.magdahavas.com/wordpress/wp-content/uploads/2010/06/Navy_Radiowave..

Posted On 09/03/2017

stanleybecker

<http://www.zoryglaser.com/>

books.google.co.za/books?id=ueljAAAAQBAJ&pg=PT207&lpg=PT207&am..

this 2nd link has much information about children and EMFs

Posted On 09/03/2017

pporter

Since 2013, I have been following Lloyd Burrell, who has recovered from EMF damage. Every Thursday, he interviews an expert on some area of EMF pollution. His website is [electricsense.com](http://www.electricsense.com). You can go there and sign up for his newsletters and you will get notified of upcoming speakers. A recent topic was which light bulbs were the safest. Yes, some modern light bulbs are damaging, too.

Posted On 09/03/2017

stanleybecker

<https://www.electricsense.com/>

Posted On 09/03/2017

Guillermou

Effectively PPORTER. Low-energy bulbs, or FLC compact fluorescents, are substantially small in size, electronically wired with a high frequency (HF) switched feeder between 25 and 45 KHz depending on the model. They emit a lot of electromagnetic pollution of high frequency, very damaging to the health, in addition they dirty, with these electromagnetic fields the electrical installation of house, and the whole network, transforming the electromagnetic fields of the same, into something even more unhealthy. In addition, energy-saving light bulbs are not environmentally friendly, they contain mercury, their vapors, and various toxic powders in their interior, which are not recycled and dissolve in the aquifers.

Alternate 12-volt bulbs with transformer (GU5,3) are also not recommended, the transformer generates a lot of magnetic field, and if used with electronic feeders, will also emit high frequencies, such as low-energy bulbs. Replacing them with equivalent direct-charge bulbs (GU10) is a good idea, we will have more light, lower costs, and fewer electromagnetic fields, harmful to health. The old Edison bulbs, the ones of the whole life, are the best, generate an insignificant magnetic field, and little electric field at 50 Hz, that is very easy to eliminate almost completely.

Posted On 09/03/2017

S.Jones

Can you do an article on the dangers...if so..?? of FitBit activity monitors? Are they considered an EMF item?

Posted On 09/03/2017

Missnoma2

I have ditched my FitBit. I just could not reconcile being linked to Bluetooth 24/7. It cannot be a good thing.

Posted On 09/03/2017

sammy7

People are mostly leaving them on 24/7. I always thought they were EMF. Which is why I never bought one. And we are always on the computer to read Dr. Mercola articles, does he take that in consideration. Don't think he would write about this if he was. Lols.

Posted On 09/03/2017

betternbetter

Yes Fitbit is Bluetooth radiating 24/7. The company is not interested in offering an airplane mode in their products, so I ditched mine a couple of years ago. Now I use an inexpensive self-contained step counter. Not as much data as the Fitbit One but non-toxic.

Posted On 09/03/2017

Krofter

sammy - Some of us have ditched our dirty routers and now use an ethernet cable right into the computer. Laptops throw off less emf than more energy greedy desktops. I have my laptop set up at the end of my desk and keep the typewriter pullout pulled out all the way so I have to reach over it to access the laptop. The issue of emf coming from the keyboard - which I think is likely the lesser of all the emfs coming from computers - remains. So I've cut way back on the time I spend on the computer.

Posted On 09/03/2017

bchristine

Exposure is everywhere ... FitBits, Smart Meters, Smart BEDS, and the list goes on. Between EMF exposure, GMO's/RoundUp and everything in-between, we are totally bombarded in our daily living. I feel the best we can do in this disheartening world is to arm ourselves with knowledge - Dr. Mercola's website is a perfect start - share it as much as we can, use the knowledge as BEST as we can, speak out and vote with our pocketbook.

Posted On 09/03/2017

CaddyB

I saw an ad recently for Blue Tooth generated hearing aids. This can't be good, even if they allow for

better hearing. Does anyone know anything about them?

Posted On 09/03/2017

bchristine

CaddyB: In response to your question --- I worked in the Hearing Aid Industry over 2.5 years ago, and at that time the manufacturer Oticon (and possibly other mfrs.) offered a hearing aid which was controlled by BlueTooth via your phone. It was an excellent seller and most patients were happy with it. At the time I was only remotely aware of EMFs ... but now wonder what the negative affects will be down the road for the patients who use this technology.

Posted On 09/03/2017

rrealrose

I just charged my fitbit!! Oh well, need to walk at least 1 mile per day, and need to check my sleep cycles, Maybe after a bit I can reduce wearing it, at least I sleep grounded at night...

Posted On 09/03/2017

ghereinaus

Krofter - Computer radiation is a problem for me and I find using a desktop computer a couple of meters away from the keyboard and monitor, to be much less harmful than a laptop up close.

Posted On 09/04/2017

jebalong

S.Jones - I used a FitBit a couple of years ago to monitor my sleep and exercise. After a few days of keeping the FitBit in my pants pocket and wearing it on my arm at night, I began to start to feel unsettled and anxious. Then one night in particular I couldn't sleep and I told my husband I felt jittery (I literally felt a pulsating sensation, almost like a current - can't explain it but it was almost like I was vibrating). I immediately wondered about the FitBit but did not mention the pulsing sensation or the FitBit to my husband because he thought all the EMF exposure stuff was a farce. But after he put his hand on me, he said he could feel an electric current (his words) coming from me. He literally tapped out the vibrating beat that I was feeling. I took off the FitBit and returned it. I have not had a

similar experience since. I am convinced the FitBit was messing with my body, and interestingly enough, since that night my husband no longer poo-poo's all the concerns regarding EMF exposure.

Posted On 09/04/2017

desertpat

This is real. My son came home from Japan with serious chemical and EMF sensitivity (not related to Fukushima). He nearly died. I've never seen anything like it in terms of anxiety attacks, brain events triggered by foods, smells and proximity to wi-fi, plus a lot of physical symptoms such as severe headaches, arthritis-like joint pain, and inability to sleep.

NOT ONE medical doctor took it seriously. We threw everything at it we could find--all organics, EMF sheets on the walls in the house, a scalar home protection unit, a grounding mat, no wi-fi in the house, low lights, acupuncture, supplements, chiropractic, meditation, qi gong, massage, and much more.

After a year of this nightmare, he is mostly ok again, is back to his career as an editor (on a sealed iMac), can put gas in his own car, and a few other things. Mostly, he now knows what to avoid. His diet is still incredibly restricted, he uses no cell phone or other electronics, and continues to take supplements.

After he came home so ill, we started to talk to others and discovered that several people in my own neighborhood have the same thing. One has attempted suicide several times and started camping out in a national park. My city (Tucson, AZ) wanted to put in smart meters, but that got defeated (not sure why). I very much fear we are headed into a world where many more people will suffer. This is absolutely real, and it is awful! No one expects to see their child go through this.

Posted On 09/03/2017

rrealrose

DesertPat, Did you come across this UK article from 2016 on Snowflake AZ?

www.theguardian.com/society/2016/jul/11/snowflake-arizona-environmenta.. . Not that I would expect having an expose helps your son, but YOU may want to be aware of the drop-outs who somehow founded and are living in this isolated location in your state.

Posted On 09/03/2017

grulla

There has been much discussion on the news for the need of upgrading our national electrical power grid: www.businessinsider.com/replacing-us-electrical-grid-cost-2017-3

There has also been discussion over the past decade of building an international railroad between the two (E-W) hemispheres via a bridge or tunnel across the Bering Straits connecting Russia, as well as indirectly China and the rest of Asia, Africa, and Europe, to Alaska in the U.S and all of North and South America.: www.info-quest.org/ExtremeEngineering.html

Having said all that, my thought would be, if they can build a global, international railroad, then why not construct an international direct current (DC) power grid with just 2 BURIED conductors (+ & -) to tie in all the alternative solar, wind, and waterfall electric power generation sources from around the globe, feeding all regional and local power distribution infrastructures and substations, so reliable solar (and other alternative) electrical power could be supplied day or night, anywhere around the globe where and when the sun doesn't shine. And no or minimal EMFs due to eliminating the 50/60 HZ high voltage power line grid. However, there are other hurdles and considerations as well for local, electrical distribution.

www.theenergycollective.com/roger_rethinker/204396/ac-versus-dc-powerl..

www.quora.com/When-and-why-is-DC-used-instead-of-AC-for-long-distance-..

www.extremetech.com/extreme/142741-tesla-turns-in-his-grave-is-it-fina..

Posted On 09/03/2017

jeanpet

I was having symptoms coming from my office at work. After a lot of research, I contacted Electrahealth.com. I spoke to Sean Kranish himself, on the phone and ended up buying some of his products. The power strip they make is amazing! I bought several stetzizer filters, and shielded cords. I am feeling so much better. No symptoms anymore!

Posted On 09/03/2017

nao3425

do not forget, the 1st casualty Was the Truth. per usual... WWII brought us microwave radar for warfare. In 1947, Bell Telephone set up the first microwave phone relay between towers in Boston and NYC. The same year, TV was born and they also used microwaves for transmission. The 1980's brought cellular communications. What has happened since 1990 is astounding for the planet and life. The first mile above the Earth is now filled with 2 million times the amount of EMF that we faced in 1900. You heard

this in the EMF 1 video I posted. We can not truly know the problem largeness because the EPA was forced to stop measuring EMF over our country in 1979. In the USA, in 1979 there was no tech boom yet, but today there is. Today, our country leads the world in technology productivity and it is all based upon the quantum effects of electrons over a silicon wafer. It's infrastructure, however, was being built in Stanford University, in California, and by the Dept. Of Defense. The Internet story can be researched elsewhere. It is now common knowledge. The results of its explosion however are going to be your new inconvenient truth. We have not had one survey of EMF since this time in this country.

www.jackkruse.com/emf-5-what-are-the-biologic-effects-of-emf

Oh yes, the Earth's own magnetic field has consequences.... Simulated Sudden Increase in Geomagnetic Activity and its Effect on Heart Rate Variability:

www.academia.edu/27733477/Simulated_Sudden_Increase_in_Geomagnetic_Act..

Posted On 09/03/2017

bahmi0

Great, great article. We had a real donnybrook in my home town when cell towers were proposed. We raised money, made a lot of noise, but the big money won out. Lies from the communications company won the day once again.

Posted On 09/03/2017

19beets

Since government only helps industry no matter what the fallout, literally, and 5G is on the EMF'in horizon, it's time for some industrious souls to create viable products and methods to counteract these negative effects. While some products are currently out there, they seem wimpy and ultimately ineffective. We need EMF researchers to step up and guard our voltage gates!

Posted On 09/03/2017

betternbetter

You know, the iPhone or iPad can be hooked to the ethernet and used in airplane mode. It is a function not technically supported by Apple, but it works for me. For about \$70 one can buy the Apple USB Ethernet Adapter (MC704LL/A) and the Apple MK0W2AM/A Lightning To USB Camera Adapter which allows power to be fed to it with a lightning cable and plug it all together to an ethernet cable. I do not receive phone calls this way, but have rapid internet and downloads with no radiation.

Posted On 09/03/2017

ColourTrixx

The world's foremost expert on wifi and microwave technology is Barry Trower. In addition to Martin Pall, he would be a brilliant guest to interview on Mercola.com www.youtube.com/watch

Posted On 09/03/2017

stanleybecker

www.youtube.com/watch

Posted On 09/03/2017

TimW_203

Much was written in other comments about various foods which trigger protective pathways, etc; one which was not spoken about was astaxanthin, which has the highest antioxidant rating known to science, by orders of magnitude, ie factors of ten. If the algae which produce it can happily get fried by u/v all day long, and yet not only survive this bombardment, but thrive in it, then that will do for me. if you buy, buy as the native powder, not the capsules, which are a lot more expensive. I bought 5 years supply for £200, so it's super-cheap to do it this way. Small point, the article started off referring to "intercellular calcium"; the correct term of course is intracellular calcium. (The first means calcium between the cells; the second, calcium inside the cells.)

Posted On 09/03/2017

orgorg

I took a screen out of an old microwave window and folded a 90 degree angle in the middle so that it can stand up on my desk and kind of block the micro waves coming from the router on my desk. I have a cable connecting my router to my laptop. I turn off my wifi connection and just use cable.

Posted On 09/03/2017

hut

Yes any metal screen would have been useful, provided the mesh is smaller than a cm as microwaves are about 10 cm long. To eliminate most of the tunnelling, the door mesh is about 1 mm across. Now what happens if you ground the mesh?

Posted On 09/03/2017

Ronald_H

Not mentioned is the now increasingly popular induction cooking which has extremely high uncontained stray electromagnetic field intensity at extra low frequencies not measurable with conventional field strength meters and certainly not the stray microwave detectors, I know it's there, but I haven't seen anything on suspicion of health consequences. Anyone know, have links or data?

Posted On 09/03/2017

Guillermou

Effectively RONALD. Induction hobs work in a completely different way than conventional electric kitchens, inside instead of an electric resistance we find a large coil fed at relatively high frequency 50-70 KHz about 1000 times faster in its oscillation of the normal current of 50 Hz network, this high frequency is produced by a special ac / ac converter specially designed for each model.

While electromagnetic fields are quite confined within the resistances of electric resistances and glass-ceramic cookers, induction plates have electromagnetic fields of high frequencies made circulating necessarily by the surrounding space, fields so inductive that in addition to heating the metal frying pan can destroy the organic tissues of those who are close by instantaneously due to the Foucault eff

Posted On 09/03/2017

hut

This is not a good thing for me to say because it's anecdotal and as such meaningless. A lot of stuff one reads here has not been researched properly and may be bogus, so I'll add to the mix.

Induction cooking is basically using the idea of a transformer. Some 30 years ago I held a meter at the lunch table of a bunch of workers and the EMF's were extreme. About 5 m away on the other side of a cement block wall was a huge step-down transformer that provided the 120 AC for the whole building. I warned them that there were other safer places to chow but they stuck with their fav spot. The whole gang that sat there are now gone; many a decade younger than me.

jsmccord7

I thought that sudden athlete death was caused from lack of selenium.

Posted On 09/03/2017

Guillermou

A variety of cardiovascular abnormalities represent the most common causes of sudden deaths in competing athletes. The type of lesion responsible differs considerably in relation to age. In 35-year-old athletes, the vast majority of cases are due to severe congenital cardiac malformations, where the predominant anomaly is hypertrophic cardiomyopathy, which occurs in about one-third of cases.

The cause that follows in frequency, is the congenital anomaly of the coronary artery. These deaths occur most commonly in team sports such as basketball or soccer, which has a high level of participation. The vast majority of sudden deaths in middle-aged athletes are caused by arteriosclerotic coronary artery disease. It should be noted that in athletes with heart disease the predominant mechanism of sudden death is primary ventricular fibrillation,

Other congenital malformations involved in this condition may be aortic stenosis, dilated cardiomyopathy, Marfan syndrome, right ventricular arrhythmogenic cardiomyopathy, hypoplasia and myocarditis, each of which is responsible for only a small minority of the deaths. About 2% of young athletes who die suddenly have heart normal at autopsy, and the cause of death can not be established, such deaths are probably due to conditions not associated with structural abnormality eg Brugada syndrome, Wolff Parkinson syndrome .

Within the causes unrelated to cardiovascular disease it is of radical importance to name the commotion cardiac, by blow. It is one of the most frequent causes of sudden death in young athletes being more common in children and adolescents. In addition, there are other medical problems that could cause sudden death such as brain aneurysm, sickle cell anemia, bronchial asthma, and excessive ingestion of drugs such as cocaine.

Posted On 09/03/2017

Rachel49

Does anyone know how this relates to the PEMF (Pulsed Electromagnetic Field Therapy) used in

alternative doctors and chiropractors offices? That seems to really help reduce inflammation, infection and heal damaged tissues but is it also causing cellular damage at the same time? Or does it help just for a short term and you shouldn't use it on a regular basis?

Posted On 09/03/2017

Robinfinity

I am not a scientist, just a user of PEMF from time to time. It is a marvelous healing modality. It was used to return injured racehorses to the track in 1/4 the time. It boosts the energy the body needs for ion transport across the cell membrane as well as other beneficial physiological processes.

Posted On 09/04/2017

Pet Rock

I believe it was actually 1996, and not 1986, that the EPA was defunded. This was at the time of the 1996 Telecommunications Act, that also stopped anyone from trying to block a cell tower coming in on the basis of health or the environment. Another problem with wifi (radiofrequency radiation) and the like is malignant melanoma. www.ncbi.nlm.nih.gov/.../15232509

Posted On 09/03/2017

ragus

Thank you so much Dr. Mercola, this has got to be one of your most important articles. It's so important to make the public aware of this silent problem, which has such serious health consequences. I am looking forward to your paper on Nrf2. Perhaps EMF could be the subject of your next book?

Posted On 09/03/2017

lizziedeb

I am in the UK where increasingly meters for electricity and water no longer need a meter reader because signals reflecting use are sent out constantly. I've not been able to discover what radio waves are used but everyone must be being constantly bathed in them, in the home, walking on the street. Is this a problem? does anyone know?

Posted On 09/03/2017

pporter

lizziedeb, yes, this is know to be a problem. See my next post. Lloyd Burrell has some tips about Smart Meters on his web site.

Posted On 09/03/2017

grulla

Here is a U.S. AARL (HAM) website that may help answer your questions. Smart meters in the U.S. typically operate at 902 MHZ band and also the 2.4 GHZ band, and perhaps other frequency bands also. Not sure if the U.K. smart meter frequency assignments are the same??? Not all smart meters communicate over the air with radio frequencies, some exchange data info to a central server via the very power lines that supplies your electric power. www.arrl.org/smart-meters

Posted On 09/03/2017

Maritt

Article on Smart Meters published yesterday:

www.dailymail.co.uk/money/bills/article-4846700/Smart-meters-cost-hous..

Posted On 09/03/2017

Kate70

How do I turn off my wifi at night?

Posted On 09/04/2017

californiawoman

@GiGiOf2 To answer your question, I could not send you a private message due to your restrictions. In general, arthritis is probably due to many causes but a build up of fibrin is not one of them to my knowledge. Just an FYI in case you are still interested, serrapeptase,nattokinase and lumbrokinase are

some fibrin/protein digesting enzymes. It is a slow process and very much trial and error.

Posted On 09/04/2017

Chimonger

Wish I could find the 3-month series of in-depth articles, that New Yorker magazine published, in the summer of about 1994? Cannot remember exactly what year. Have not had time to try digging for it online, to find it again, for some time; but last time I tried, was unable to locate it. The 3-month series was published in approx. June/July/Aug. of one summer. It was all about MEF/RF damages, mentioned numerous studies, cases. Discussed what Stockholm, Sweden discovered, and how they remedied it. It was hugely informative. Good job, informing public about this horrendous issue, Dr. Mercola!

It gets steadily worse, with every increase in communication speeds...5G will be a louder 'tipping point'. The real question is, though, will the medical professionals even acknowledge it's a "thing"? Will they even document it if the patients tell them about it? Or, as they have already been doing, route patients to psych consults, and avoid retaliation by industries adversely affected by public learning of this?

Posted On 09/03/2017

Erena5

This is a great article! Would be very nice though to have a step by step instruction, what to do to eliminate, or at least lessen harmful effects of Electromagnetic Fields exposure.....

Posted On 09/03/2017

DuckyShades

Nah, just gives all the scary info so you can buy some product later on...

Posted On 09/03/2017

jsmccord7

So can a person use sodium borate or 20 mule team borax to get rid of that calcium...???

Posted On 09/03/2017

Calli14

So what are the options for people who do sit at home on wifi, with their laptops or tablets in their laps (aside from less time online in general)?

Posted On 09/03/2017

maxjohnson

I can't do this since my room is in the other side of the house, but instead of using a Wi-Fi router, you can connect your internet modem to a Switcher instead and use Ethernet cable. Some routers like Asus allows you to decrease the WiFi signal power, turn off WiFi radio completely or at certain time.

Many phones, including all iPhones, now have WiFi Calling which let you put the phone on airplane mode then turn on WiFi (which I believe is less damaging than LTE signals) and still make calls, as long as your carrier support it, which all major US ones does.

What I'm getting from this though is that micro nutrient deficiencies increased your damage from EMF, so that's probably a bigger concern since so you can't avoid EMF completely. I doubt it'll help much just to turn off your WiFi if you're living in the city with EMF assault from every directions. Definitely looking to increase my magnesium intake after listening to this interview though.

Posted On 09/03/2017

grulla

I use just a simple ethernet (LAN) cable to connect my tabletop laptop to the satellite modem. Various hardware (unmanaged) 'switches'/routers/hubs can be purchased if needed, as opposed to those RF EMF producing versions. Make sure your computer's internal WIFI option is turned "OFF" via the computer's "control panel" when you hook up to hardware ethernet (LAN) cable, assume nothing, and check periodically to make sure it stays OFF. Recently, I found my own WIFI had somehow mysteriously been activated (as I never use it), and blame that on Windows10 remote, periodic meddling. I have since reverted to using Linux O.S., but still check the WIFI option periodically none-the-less, to make sure it is still in the OFF position.

Posted On 09/03/2017

GiGiOf2

californiawoman, I'm afraid I don't know how to change my restrictions to allow you to send me a message. I did use serrapeptase for over a year without noticeable results. Don't know if it was the brand, which is why I would love to know which brand your husband uses. Some reviewers of the brand I bought on Amazon say they felt a difference almost immediately. I never did.

Posted On 09/04/2017

GiGiOf2

I watched some of the talks on an online alternative health summit and one discussed EMFs and how to protect ourselves and our homes from them. I went to the presenter's website and read about their Hedron EMF Shields and got some to put on our cell phones. There are ways to shield your home from EMFs, too. Check out the website and you can find out a lot of info. This link explains the Hedron device. www.hedronlifesource.com/the-solution

Posted On 09/04/2017

GiGiOf2

realrose, I wasn't able to respond to your response to me earlier, so am posting it here. Thanks so much for your comment about gluten and lupus and arthritis. I will look up the book you mentioned. Maybe the protease enzymes I took didn't help because I wasn't gluten free at the time. My daughter and I have now been GF for about a year and a half, though I do slip once in a while. (I don't know if that means I'm back to square one again or not.) I'm not sure if I feel a difference with my arthritis being GF. My daughter is on plaquenol now, though we're not thrilled about that. She has arthritis symptoms, too (maybe it's from the lupus) and gets acupuncture once a month for her painful joints in her hands. That helps tremendously.

Posted On 09/04/2017

marymaisonlaroque.c

Please can Dr M or someone post a few simple steps to take to limit radiation. effects. i.e. diet. supplements, use of ethernet. I know it is all there somewhere but for the ignorant (in that respect anyway) a basic guide would be a start while we educate ourselves re the effects of EMR. As someone who has been using my Mac a lot recently I have noticed that I have been depressed on a daily basis

where at one time it happened only very occasional and I could throw off the feeling after an hour or two. Now it is with me nearly all day and every day. All I want to do is eat and sleep and constantly have to fight against these moods. Help please.

Posted On 09/04/2017

ghereinaus

I've myalgic encephalomyelitis and E.H.S. I have a constant feeling of pressure in my head which varies with the amount of immune activity I have. Immune stimulating supplements make it worse, and the sensation goes up and down with other signs of immune activity. The worst thing for increasing that feeling of pressure in my head (several times worse and instantly) is exposure to mobile (cell) phone radiation. I believe I have antibodies attacking heat shock proteins (or antigens bound to them) being expressed from my brain myelin. (About 5% of people with M.E. tested by Dr. Byron Hyde have elevated polio antibodies. I got encephalomyelitis from a polio vaccine).

Phone radiation increases heat shock protein expression and therefore increases the number of antibodies attacking my brain myelin. No doubt phone and wireless radiation increases already elevated peroxynitrite, histamine, excitotoxicity and whatever else in me, but I am sure that the increase in autoimmunity caused by radiation is the main cause of my reaction to phone radiation. The one supplement that reduces the severity of my reaction to radiation is calcium aep, which helps protect cell membranes against autoimmune attack.

Posted On 09/04/2017

nao3425

In the Old days, there were things a lot worse than being Dis-Googled Dr. Mercola... Plante has a dubious history in EMF-health research. He played a central role in covering up one of the most intriguing epidemiological studies ever carried out on EMFs. That study was done at McGill under the direction of Gilles Thériault, the then chair of its Department of Occupational Health. Plante served as Hydro-Québec's liaison to the McGill team.

Thériault's results, which were published in 1994, showed a strong association between exposure to transients and the incidence of cancer among Hydro-Québec workers. Thériault found that the cancer risks among those most highly exposed were up to 15 times the expected rate (see MWN, N/D94, p.4). That study used the Positron meter to measure the workers' exposures to power line EMFs and to high-frequency transients. This is the meter which Paul Héroux helped design back in the 1980s.

Hydro-Québec was furious that Thériault had published his findings and immediately confiscated the

raw data, which had been collected at a cost of millions of dollars (see MWN, N/D94, p.1). Further access was barred and all further research stopped. Thériault's paper is now largely forgotten. The work was never followed up. Héroux Publishes, Bypassing Further Peer Review Héroux is now stepping back into the EMF cauldron. microwavenews.com/news-center/unified-theory-magnetic-field-action Thériault's Original Report which his research papers were confiscated www.hydroquebec.com/.../repertoire_exposition.pdf

Posted On 09/03/2017

cpquinn8990

I don't know about you guys, but I always seem to get pain in my head after putting my cellphone right up next to it. I only use speaker, and ground regularly. Also make sure to take chlorella and get plenty of magnesium.

Posted On 09/03/2017

nao3425

More on the Cancer link Unlike normal human cells, which have 46 chromosomes, cancer cells can have a larger —and variable— number of chromosomes. (Having more than 46 chromosomes, known as hyperploidy, is usually a sign of trouble, as in Down's syndrome.)

A type of breast cancer cell, known as MCF-7, has an average of 74 chromosomes. When exposed to a 60 Hz magnetic field of as low as 25-50 nT (0.025-0.05 μ T or 0.25-0.5 mG) for six days, the cells lose more than 10% of their chromosomes, according to Héroux and Li. They call the effect karyotype contraction and say that the change is highly statistically significant. They repeated the same experiment with four other cell lines —those of lung and colon cancer and two different types of leukemia— and found essentially the same effect every time. The cells exposed to magnetic fields show a number of remarkable properties:

- After three weeks in the field, the number of chromosomes returns to baseline numbers;
- Once adapted to the magnetic field, the cells become exquisitely sensitive to further variations of the magnetic field. An increase or decrease of only 10 nT (0.01 μ T, 0.1 mG) will prompt another round of karyotype contractions.
- The karyotype contractions vary very little over a wide range of field intensities —from 100 to 500 nT (0.1-0.5 μ T, 1-5 mG). That is, there's no dose-response.

Héroux and Li concede that much of this behavior is “unusual” and runs counter to "classical toxicology and epidemiology." They say that they're in uncharted territory that's "unforeseen by conventional toxicological principles." In all five cell lines, the effects “are strikingly similar,” they write, and this

suggests a "common, basic mechanism."

microwavenews.com/news-center/unified-theory-magnetic-field-action

Posted On 09/03/2017

nao3425

I would say the Good Dr. Pall needs to consult with Paul Héroux and his studies about how Cancer proliferates... A Unified Theory of Weak Magnetic Field Action .. McGill University Professor Proposes Radical New Outlook "A type of breast cancer cell, known as MCF-7, has an average of 74 chromosomes. When exposed to a 60 Hz magnetic field of as low as 25-50 nT (0.025-0.05 μ T or 0.25-0.5 mG) for six days, the cells lose more than 10% of their chromosomes, according to Héroux and Li. They call the effect karyotype contraction and say that the change is highly statistically significant.

They repeated the same experiment with four other cell lines —those of lung and colon cancer and two different types of leukemia— and found essentially the same effect every time. The cells exposed to magnetic fields show a number of remarkable properties:

After three weeks in the field, the number of chromosomes returns to baseline numbers; •Once adapted to the magnetic field, the cells become exquisitely sensitive to further variations of the magnetic field. An increase or decrease of only 10 nT (0.01 μ T, 0.1 mG) will prompt another round of karyotype contractions. •The karyotype contractions vary very little over a wide range of field intensities —from 100 to 500 nT (0.1-0.5 μ T, 1-5 mG). That is, there's no dose-response.

Héroux and Li concede that much of this behavior is "unusual" and runs counter to "classical toxicology and epidemiology." They say that they're in uncharted territory that's "unforeseen by conventional toxicological principles." In all five cell lines, the effects "are strikingly similar," they write, and this suggests a "common, basic mechanism."

microwavenews.com/news-center/unified-theory-magnetic-field-action

Posted On 09/03/2017

nao3425

another case of the IGNORED DR. MERCOLA... In the words of Dr. Kruze... "There are many forces at play to keep this information from you. If you were to understand its full power the economy of the world would likely collapse." September 27, 2012 Last updated August 12, 2013 Paul Héroux has a problem. He believes he has identified a way to control the growth of cancer cells, but he can't get his ideas into print. "We think we have the Rosetta Stone that will allow us to unravel the intricacies of cancer physiology," says Héroux, a professor at McGill University in Montreal. Yet, one scientific journal

after another has refused to publish what he has found.

Part of Héroux's problem is that his argument is based on an even more controversial proposition than a possible cure for cancer: That extremely weak magnetic fields can bring about major changes in DNA. That is a tough sell. Héroux ups the ante another notch by claiming to show that those changes are so easy to spot that you don't need hi-tech instruments to see them, just a standard issue microscope. All you have to do is count chromosomes, admittedly with close attention to detail. And that's not all. Héroux says he has pinpointed where and how the magnetic field acts on the cell. Héroux is in McGill's Department of Epidemiology, Biostatistics and Occupational Health and runs the InVitroPlus Lab at the Royal Victoria Hospital in Montreal.

Dr. Kruze original article www.jackkruse.com/emf-5-what-are-the-biologic-effects-of-emf
microwavenews.com/news-center/unified-theory-magnetic-field-action

Posted On 09/03/2017

Morgan98

Thank you for all your doing. Bless you for making this problem known

Posted On 09/03/2017

happyveggie

RF save corporation carries wonderful products. I have their phone case for my iPhone. It's important not to put the battery toward your body if it ever is in your pocket. it is recommended that The front of the phone where the shielding is be toward your body if it is in your pocket.

They also have air tube headsets. But best to keep it on speakerphone away from the body when using. People sometimes use the safe headsets with the phone in their pocket which defeats the purpose. Radiation is still by internal and reproductive organs. Different phone brands and models have very different levels of radiation. iPhone 6 almost passed the level of allowable radiation. Several Samsung models are much lower. It's easy to check out.

Posted On 09/03/2017

CaddyB

Don't laugh, but I have a question: All of my teeshirts have tiny holes in them right where I used to rest

my iPad when I was relaxing on the couch. Since I'm pretty sure I'm not emitting sparks from my navel, could these holes be caused by EMFs from my iPad?!

Posted On 09/03/2017

iamblessdiam

Think in terms of "structure" [material science] - from that perspective and from personal observation what the "wave form" of wi-fi signals does to plants - it slowly destroy's them - it wouldn't surprise me one bit your t-shirts could be effected - especially if they contain any amount of synthetic fibers. The thing few people consider are the "ions" generated from the materials used in "media devices" when they are energized - ON - think rare earth minerals, gold, palladium, other heavy metals. It's been well researched the not-so-good effects heavy metal ions has on DNA:

[www.ncbi.nlm.nih.gov/.../PMC4144270] and:

[scholar.google.com/scholar?q=metal+ions+effect+on+health&hl=en&..]. Ions effect the structure of everything - for the better or worse. Glad to read two words - "used to" - in your comment! Be well!
LBP!

Posted On 09/03/2017

Norisnita

Excellent article Dr. Mercola, as always. WOW! the participants said all, so nothing to add. except be well everyone.Norisnita

Posted On 09/03/2017

Robertrr1

Why Mercola don't talk about simply so called Body Voltage - Electric Body Pulsation iduced by home power line electricity 115 VAC - USA or 230 VAC. It is very simply to measure by electronic multimeter - AC voltage between body and earth in socket. In my home I found that I had 10 VAC in some places were beds were standing - I couldn't have a good sleep in this places. I removed 230 VAC lines from some places and replace them with 12 VDC or 24 VDC. Now I have less than 0,3 VAC in all places were people live. 115 or 230 VAC makes electric field from L line which change its voltage 50 times per secon from - 330 V to + 330 V (or from -165 to +165 V). It is 24 ours per day and 7 days a week no matter if you consume some energy from it. Cancer and heart diseases start to increase from the beginnig of XX century just like home electricity occurs.

Posted On 09/03/2017

squeaky123

Here in London there is talk of allowing the use of mobile phones on the tube. Would that put me, a non-mobile phone user, in danger when standing or sitting near someone (probably shouting!) on theirs?

Posted On 09/03/2017

hal7295

Great work Dr. Mercola. Thanks for all you do. Maybe you could shed some more light on the benefits of grounding, the EMF blocking sleeping both and any other devices to help us block EMF signals.

Posted On 09/03/2017

carolat_203

this is so True More Brain Cancer is on the up rise

Posted On 09/03/2017

bianca11jubii.dk

Here in Copenhagen, Denmark there aren't huge cell towers with a lot of receptors on it every say 300 meters. Instead there are 1,2,3 receptors on a building every 40-50 meters. There is NO escaping it in this city. I just hope that when I'm out and about I will come across some areas with lower tower radiation because in my home there is are those smaller towers around at probably 50 meters. I will see if some kind of shielding can work in my apt.

Posted On 09/03/2017

orgorg

Maybe someday the shielding will convert the dangerous energy into energy that will charge your cell phone.

Posted On 09/03/2017

DudleyD

Grounding (also known as earthing) is a process of connecting directly to the earth for health and vitality. It also acts to shield a person from harmful EMF. Check out the numerous YouTube videos on grounding for more information.

Posted On 09/03/2017

cos7180

I use my iPhone every day to get your daily information and also to order your products,as this article states, I am risking my life doing so due to bad emfs,so I will have to stop reading or purchasing from u,i do not have a computer only iPhone and iPad ,i did enjoy your daily updates and purchasing many healthy products from u,but seeing it's bad,goodbye

Posted On 09/03/2017

orgorg

You might as well throw the phone away and get something that you can hook a cable up to. Maybe you can use some kind of a shield to protect you from the signal. If not, you are probably spending your time on another website instead of the mercola website. You are probably soaking up the radiation on another website.

Posted On 09/03/2017

Pet Rock

Just get an old fashioned phone, with a cord. Not cordless. Then, attach your computer with an ethernet cable, and turn your wifi off. Have to measure, because sometimes the internet company is running their wifi through it as well, so they will tell you yours is off, and it will look off, but there will still be radiation coming from it.

Posted On 09/03/2017

Norisnita

Cos 7180 It is not correct what you said. stop to be aggressive. If you don't like reading the Dr.Mercola's articles, which are without any doubt very interesting and instructive for many people. you would stop of read and participate in this forum. and you would go away in keeping your ideas.. Try to be well. with yourself and with the world! ,

Posted On 09/03/2017

stanleybecker

if you find it uninformative "out there" - come back and learn something here - you might find that dumbing down damages your health

Posted On 09/03/2017

stoic

the ravages of dumbing up ~ babel towerling inferno ~ are often even worse, stano. two sides, one coin. the edge is the place to be. www.youtube.com/watch

Posted On 09/03/2017

grulla

Just curious for my/our own information, but are there smart phones that have the capability to tether large desktop LED screens and keyboards to them via a USB port??? Also, external antenna co-ax ports on cell phones have been getting harder to find, largely due to the internal fractal antenna designs of most all cell/smart phones. Those hand held cell phone fractal antenna EMFs must be exhilarating. :-(

www.theoracleslibrary.com/2015/05/19/sacred-geometry-how-cell-phones-w..

Posted On 09/03/2017
