I am writing as the caregiver for my mother who has developed increasing electrical sensitivity over the last decade or so.

3)

She first showed signs of electrosensitivity (aka Electromagnetic Hypersensitivity [EHS]) in late 2015 when she got a new pair of hearing aids. Unbeknownst to us, they had some sort of wireless capacity (they must have, since the hearing aid specialist could adjust them remotely based on how my mom changed the volume settings). My mom's hearing did improve when she wore them, but she stopped wearing them much after a few months because they made her head feel "funny." At the time, we did not understand or give much credence to that statement, but later on when I myself developed severe Electromagnetic Hypersensitivity (EHS), I was pretty sure I understood what she meant, and I had more empathy for why she had been so reluctant to continue wear the hearing aids. She was 80 years old at the time and in quite good shape, with no serious health issues to speak of (taking no prescription medication and fully mobile, still driving, with all her marbles).

Fast forward four years to 2019, and the EHS symptoms start to come on in other ways, more debilitating, with ever clearer connections between onset of pain and other symptoms and EMF exposure events (mostly radiofrequency radiation [RFR] , but not exclusively so). In 2019, my mom got a new PCP. At her first visit with her (and last, for reasons which will become apparent), the doctor used her laptop with the WiFi on, holding it right near my Mom for the whole time (over an hour). The next day, awful back pain in her mid back (thoracic) hit her, out of the blue. Or maybe not so out of the blue, it occurred to me when I thought about it more. She had been felled by this mysterious debilitating back pain many times up to then, but this was the first time, I got an inkling of what might be triggering it. Since then, I have seen confirmation of the link between high, prolonged RFR exposure, and, emerging a couple of hours to half a day, the onset of the thoracic back pain. For many years, we feared that the pain was cardio-related, because it was on the heart side, and my mom had a heart attack in 2011. But then it would occasionally occur on the right side of her back, which indicated it involved her nervous system, rather than her heart. When she got Lyme Disease in 2021, the thoracic back pain was unrelenting and lingered for over a month. It switched back and forth from one side to other at least once, until the last day of her course of doxycycline antibiotics, when the back pain vanished. It is possible that my mom has had Chronic Lyme disease for many years and the RFR simply flares it up, along with the back pain that accompanied Lyme Disease the time we knew for sure she had it (thanks to the large bulls eye rash on her ankle). It is well known in the Lyme Disease community and among those who have EHS that Lyme Disease makes people more sensitive to WiFi and RFR. Lyme-literate doctors often recommend that their Lyme Disease patients turn off their WiFi at night.

What is certain is that higher-than-usual lengthy exposure to RFR triggers awful pain in my mom. In the last few years, recurring intense pain triggered by RFR has

moved to her neck. Ever since April 2024, when she had a failed root canal requiring extraction of the tooth, she has been prone to terrible neck pain on the same side as the extracted tooth. If the pain has subsided for a few days or more, it will flare up and then stick around for days and weeks after a particularly high RFR exposure, such as after sitting for an hour on a pew a few feet away from someone whose smartphone is charging in their handbag, or after going to a doctor's office that has a cell antenna out in front, or after someone visits the house for an hour who has an EV parked down the street (all three of which have happened). The visitor's EV car key communicated with the car, which could find it if the key ever got lost. We live far from cell antennas, in an area with low reception, so cell signals are particularly high here.

I should clarify that my mom has never had a cell phone of her own and has rarely used one, period. Furthermore, she has never learned how to use a computer (she was out of the formal workforce when they became de rigueur for most people). I hate to think what shape she would be in now, or if she would even still be living, had she been a regular cell phone or computer user. She did, however, get quite a bit of RFR exposure until 2019 when her house got rewired to reduce EMF exposure for another family member living there. They had a SmartMeter from 2010 through mid 2017, cordless phone starting in 2011 and an Xfinity WiFi router from 2015 till mid 2017.

My mom and I have lived together for over two decades (and also, for the first 20 years of my life), so I have had the chance to observe at close quarters her health journey and the emergence of various health issues that seemed to arise out of nowhere, but in hindsight could very well have been caused by various forms and sources of RFR.

In Fall 2025, my mom fell in the yard after being subjected to several hours of livestreaming from my computer. I rarely ever livestream because it affects me quite negatively. After that event, I also refrain from livestreaming unless it is absolutely necessary, because it affects her even more seriously, by making her prone to falling. My mom rarely falls and when she does, it is always after exposure to livestreaming or to the Blue Angel stunt airplanes in action (more on that later in this comment) It affects her nervous system somehow.

On two occasions, we have had to go to the ER after such a fall (due to a head impact). They run her through all sorts of cardio and imaging tests and nothing comes up abnormal. One test they did on her after a fall had a clear and negative impact on her nervous system. She wore a Zio patch on her upper left chest for 14 days (which had no wireless connectivity, since we had to mail it in at the end for them to analyze it). While wearing the patch, she started to exhibit a tremor-like behavior that has stayed with her ever since (and gets exacerbated by high RFR exposure): her jaw chatters of its own accord, and sometimes her tongue does a constant dance in her mouth as well. The cardiologist, of course, as well as the Zio patch manufacturer dismissed the possibility that the Zio patch could have caused

these involuntary ticks, but conventional medicine world rarely acknowledges how much their diagnostic devices involving EMFs can affect some people negatively.

A biological dentist examined my mom and confirmed that her bite had been destabilized by the molar extraction, causing her nervous system and her energy field to be less stable. If she weren't over 90 years old, she probably would benefit from wearing a customized appliance to restore stability to her bite.

High RFR also exacerbates her already poor hearing (she becomes nearly stone deaf, briefly), and sometimes causes itchiness on her body (probably due to higher than usual histamine levels, which studies have shown that RFR increases).

In hindsight, I even wonder whether my mom's 2011 heart attack, which hit her "out of the blue" early one morning at 3am, might have been caused in part by the SmartMeter that was installed on our home and throughout our neighborhood a year earlier. Thankfully, the meter was not on her bedroom wall, which would explain why it could have taken a little over a year for it to affect her.

The most astounding link I have observed between RFR exposure and my Mom's condition is the effect of the Blue Angels (stunt planes representing the U.S. Navy and Marine Corps that perform every October in our skies). Starting after her bout of Lyme Disease in Spring 2021, the Blue Angels appear to affect her nervous system quite negatively. In October 2021, the morning after an afternoon when we'd spent a long time watching the Blue Angels perform from our bay window, she fell going out to pick up the newspaper in front of the house (requiring surgery and a two week stay in a skilled nursing facility for rehab). Since then, I have made sure we no longer watch the Blue Angels do their stunts. Despite my efforts, this year, on two mornings during their three-day stay here, she fell getting out of bed (this time with less severe consequences, no head impact). She had has never done that before. It is hard not to draw the conclusion that the Blue Angels are a prime suspect, especially given that they likely use frequencies in or near 5G range to do their stunts. That's why airports fought the rollout of 5G so fiercely back in 2020. As I understand it, some of the frequency ranges of 5G are dangerously close to the ones commercial airplanes use(d?) to come in for landing, and the airports were afraid that the 5G could cause interference and compromise the safety of their planes as they landed. (See "Aviation and 5G" at https://www.iata.org/en/programs/ops-infra/air-traffic-management/5g/ and https://www.congress.gov/crs_external_products/IF/PDF/IF12028/IF12028.4.pdf) If commercial planes use radar altimeters to land, the Blue Angels very likely use similar technology to orient themselves as they do their amazing formations, likely spewing very potent radar-level RFR out in all directions as they do flips and other amazing feats of daring without crashing.

It is not surprising that my mother is so incredibly sensitive to EMFs. She has always been extremely medically sensitive (with allergies to multiple common medicines) and prone to unexplained pains occasionally putting her in bed for

several days or more. In hindsight, it is also inviting to see a potential causal link between her first bout of Benign Paroxysmal Positional Vertigo (BPPV) when I was about eight years old and the recent activation of an FAA radar on a mountain across the bay from where we live. Since then, the FAA radar shoots RFR through our home every 12-15 seconds (we learned this when the first EMF consultant came to assess our home).

Similarly, the knowledge I now have about the harmful effects of another type of EMF, namely Dirty Electricity (DE), also known as Electromagnetic Interference (EMI) leads me to posit a link between the numerous daily presyncopal spells my mom suffered from July to October 2013, and the installation of the first set of solar panels on our street, about 5 houses up on the same side, in January of the same year (at some point I looked up when the permit got pulled online). Dirty Electricity produced by solar panels inverters gets out on the electrical grid and travels into other nearby homes (sort of like throwing your garbage in the street for others to drive through). It gets broadcast via the electric fields emitted by electrical wiring. (See pdf articles by EMF consultant Oram Miller on DE https://createhealthyhomes.com/education/dirty-electricity/ and his article on solar panels, https://createhealthyhomes.com/education/solar-panels/, both attached with this comment).

At the time, our home had all nob and tube wiring, so the electric fields radiated out far and wide from the wiring at high levels. Some days, she would get up to 40 presyncopal spells (though the average was more like 15 spells)! We still have the little notebook in which she kept track of them. The remedy ultimately was for her to take a quarter or a half a teaspoon of salt every morning, which brought her blood pressure up into safer levels. She had never had presyncopal spells before then, nor has she had them since then.

Another very strong correlation between RFR exposure and pain I observed was in the months leading up to the need for the failed root canal procedure. She would get pain in her tooth every time we neared a cell antenna as we drove along (I know where all the cell antennas are located, on streets one street over), and then the pain would subside as we got farther from them or when we'd go into the park where there were no cell antennas and zero cell phone reception. (Of course, we had to stay away from other people and their wireless devices, which emit stronger than usual cell signals when cell reception is low or nonexistent).

I also observed, to my horror, that my mom's right hand, which has slowly lost responsiveness and become semi-paralyzed over the last few years, got noticeably worse after we spent over four hours at an outdoor party located in an area with much higher ambient RFR than we are used to (all the guests had put their phones on airplane mode or powered them off for us). A finger on her hand that had till then still been responsive suddenly ceased to move for her and hasn't been mobile since then, alas.

She also notices that her vision gets worse in certain places (such as Trader Joe's and other areas that are higher in RFR). But then it will improve again when we get back home or leave that area for a lower-RFR environment.

RFR clearly affects a multitude of systems in my mom, likely via her nervous system: her hearing, her vision, her pain level, her muscle responsiveness (or neurons?) and her fall risk. Why would this be? Possibly because she has many metal fillings in her mouth, and since the heart attack in 2011 she has had a metal stent in one artery. Since 2021, she also has metal pins and a metal plate in the knee that required surgery when she fell and fractured it. Metal is conductive…

It's important to point out that my mom has no little to conscious awareness of her EMF environment and of how much RFR she is exposed to. As a result, there is no possibility that she is experiencing the nocebo effect. By now, she has very little short-term memory left (and even less than usual after high RFR exposure), so she would not remember where the cell antennas are located if she were even thinking about that (which she doesn't). She doesn't even remember that she is electrically sensitive… (when I remind her of that, it is always news to her). So in a way, she is the ideal test subject for proving that electrical sensitivity is real.

Additional Information on Electromagnetic Hypersensitivity (EHS)

6)

- Webinar – EMF Sensitivity Symptoms, Scientific Evidence and Patient Stories Dec 3, 2020 (with Dr. Stephanie McCarter and Magda Havas) https://vimeo.com/489250673 1h 25mns
- Electromagnetic Hypersensitivity: Fact or Fiction? Stephen J. Genius (2012) Much of the article (not all) is available on the Science Direct website: https://www.sciencedirect.com/science/article/abs/pii/S0048969711012733).
- Electromagnetic Hypersensitivity: Evidence for a Novel Neurological Syndrome by David E. McCarty (2011) https://www.emfanalysis.com/wp-content/uploads/2022/10/Electrical-Sensitivity-Double-Blind-Study.pdf

As EHS becomes more of a problem worldwide, industry (including often, the WHO, who is far from being objective when it comes to the biological effects and harms of RFR on all forms of life) has become incentivized to get "unbiased scientific" articles published that seek to debunk it as a real biological condition and to convince people it is merely a psychosomatic, psychological condition, not a physical condition. See, for instance, the 2024 article, "The effects of radiofrequency electromagnetic fields exposure on human self-reported symptoms: A systematic review of human experimental studies. Not surprisingly, this article IS available in full text on PubMed (https://pubmed.ncbi.nlm.nih.gov/38640611/) unlike many others cited above that come to the opposite conclusion.

Based on eight years of living with EHS myself, as well as observing my mom's very different flavor of EHS over the past decade or more, I would respectively beg to differ with the claim that EHS is purely psychosomatic, During that time, my mom and I have had countless exposure events whose RFR source we were unaware of until the symptoms emerged and only then could we identify a source of high RFR nearby.

For those who remain skeptical, I submit some hard evidence given by fMRIs done of the brain activity of people with EHS and of a control group: "Functional brain MRI in patients complaining of electrohypersensitivity after long term exposure to electromagnetic fields," published by Gunnar Heuser and Sylvia A. Heuser in July 2017 (not surprisingly, this article is unavailable in full pdf form on PubMed or on Science Direct, but thankfully, it is available in full elsewhere online): https://www.national-toxic-encephalopathy-foundation.org/wp-content/uploads/2012/01/functional-brain-mri-in-patients-complaining-ofehs.pdf

Furthermore, I highly recommend viewing a 15-minute talk given by Dr. Erica Mallery-Blythe at the ARPS (Australasian Radiation Protective Society) 2024 conference, on Electromagnetic Hypersensitivity and EMF Limits (not surprisingly, the YouTube video is no longer available, but it is still available elsewhere online: https://multerland.blog/2025/05/14/dr-erica-mallery-blythe-on-electromagnetic-hypersensitivity-and-emf-limits/)

Dr. Mallery-Blythe provides a clear and compelling explanation of the fatal methodological flaws that invalidate most EMF provocation studies done on people with EHS (which extend to reviews of the literature as well): a) people with EHS present a wide variation of symptoms and timing for triggering and for symptom subsidence, but most studies do not account for this variation; b) many times the "sham" EMF is not pure and the person continues to be exposed to a low level of EMF when they are supposedly free of exposure; c) studies often fail to use life-like signals, thus invalidating their results; and d) most studies fail to provide sufficient time for a complete reset (i.e., for a person's EHS symptoms to fully dissipate) from one session to the next.

In this talk, Dr. Mallery-Blythe also presents four compelling problems with the nocebo explanation of EHS:

1. Most EHS people had no EMF concerns prior to symptoms (*i.e., they were technophiles and in many cases continued to try to use the technology even after EHS emerged*)
2. Some EHS people react under double-blinded conditions
3. Both animal and plant studies demonstrate EMF effects (*including avoidance behaviors in animals*)
4. Biological effects are proven (*such as that RFR causes oxidative stress*)

Thank you for solliciting input on this most important subject from the public.

Constance Anderson