I am an individual consumer

Types of RF/EMF sources involved:

1. Mobile phones
2. Wi-Fi
3. Bluetooth
4. Smart meters
5. Class D audio amplifiers
6. Cordless phones

Nature, duration, frequency, and timing of reported

These are the effects noticed when I use categories of devices named below.

Mobile phones: I was first exposed to a cell phone in 2001 when a coworker first showed me her new phone. I immediately became dizzy. For the record, as I have gone through various generations of flip phones to three generations of Samsung Galaxy smartphones, I have been less likely to experience dizziness. This may also be because I use the phone differently. It is not held close to my head. I think proximity and better design are important. It may also be a degree of desensitization.

Wi-Fi: Because of exposure out of my control from Wi-Fi not only from my own equipment but also from many neighbors, this radiation is unavoidable. It is proximity based, the farther away from a source, the better. I use a Safe Living Technologies meter, and the radiation is negligible, a foot or so from my phone. I have measured many phones at a local Verizon store and radiation varies from model to model. I can also detect the Wi-Fi radiation from multiple neighbors with phone apps. This radiation is unavoidable.

Bluetooth: I use a glucometer with Bluetooth capabilities. I have found that when I transmit the readings from my glucometer to my phone, I become dizzy. When the transmission has finished and I turn off Bluetooth, the dizziness goes away. Yet, I have no trouble with the connection of Bluetooth in my car to my phone or Bluetooth in my phone to wireless earphones. The issues seem to be device-specific.

Smart meters: When my smart meter owned by what is now called Ohio Power was first installed I was constantly dizzy. I attempted to mitigate the radiation by using a mesh shield. Bad idea. It reflected the majority of the energy back into the house, which made things worse. I removed the shield.

Now, I can only feel things when the meter transmits its readings back to the power company.

Class D Audio Amplifiers: As a lifelong audiophile, I wanted to improve the sound of my home theater. I purchased a pair of Class D audio amplifiers from a small Ohio company. Immediately when I switched the amplifiers on, I became dizzy. I tried integrating the amplifiers into my system. The results were always the same and after a few minutes I had to turn the amplfiers off and remove them from the system. Here is what I wrote to the manufacturer in 2021:

> Now for the bad news. I am having a physical reaction that means I need to return the amplifier under the 30 day trial program. I am very sensitive to electronic radiation. As background, we do not use Wi-Fi in our house, I could not tolerate the radiation from a Roku and when I was looking for a new TV could not consider an LG or Samsung model as the Bluetooth features could not be defeated.
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> When I turned on the amp I immediately became dizzy. I tried using it off and on to give it a shot but I could not tolerate it. I am very distraught as the amp both looked and sounded beautiful. It looks like Class D amplifiers and those using switching power supplies like the new Emotiva are out as well so I'm looking at an older design Class AB with heavy transformers.

Cordless phones

From time to time, I have tried to use DECT 6.0 technology cordless phones. I immediately became dizzy. They were either returned or given to charity.

Potential adverse health effects experienced

Dizziness, lightheadedness, confusion for the duration of exposure and often for a while until I recover.

When potential adverse health effects first appeared relative to when exposure began and whether any changes in exposure coincided with potential adverse health effects.

The effects are usually instantaneous upon exposure to a device.
Whether medical evaluation or treatment was sought, including any diagnoses received

I have mentioned this issue to my primary care physician, a neurologist, and to my brother the doctor. All thought at the time that these health effects were my imagination. My brother described my effects in my more colorful terms. This was years ago. I believe people will take my complaints seriously today.

Whether steps to reduce or eliminate exposure were taken and, if so, whether any subsequent changes in potential adverse health effects were observed

1. I went through the Herculean task of reducing Wi-Fi usage by hard wiring Category 6a Ethernet throughout my house. Pulling wiring through my crawl space is no picnic for a senior citizen, or anyone for that matter. It was necessary to reduce exposure. It was helpful that I was in IT before I retired and am comfortable working with network wiring and switches.
2. I only transmit information from my glucometer to my phone once a week.
3. I do not use cordless phones with my landline. All phones are wired in the old-fashioned way with twisted pair, although the signal comes through VOIP via my cable company.
4. I turn my cell phone off when I go to bed.

What existing national and international exposure standards, guidelines, or regulatory frameworks should federal health agencies consider when evaluating the potential adverse health effects of human exposure to RF/EMF?

I believe our national standards lag behind those of other countries. The primary object should be to protect all of our citizens regardless of vulnerabilities.

Protecting industries should be a secondary consideration.

Is additional research needed to develop, test, and evaluate the effectiveness of procedures and techniques for minimizing exposure to electronic product radiation?

The short answer, yes. We do not know what the consequences of exposure to these radiations to all forms of animal and plant life, us included, will be long-term. These could be manifested in forms of cancer, neurological disorders, infertility, and who knows what else. I do not believe we can put the

genie back into the bottle. But we need to know the consequences to the world from being bombarded by man-made radiations of all sorts. We must develop effective mitigation for that radiation and its consequences. Cost should not be a consideration.

How, if at all, should a classification system account for exposure-related characteristics, including operating frequency, power density, specific absorption rate (SAR), electric- and magnetic-field strength, modulation and pulse characteristics, duty cycle, beamforming, simultaneous exposure to multiple frequencies, duration of exposure, distance from the source, proximity to the body, and cumulative exposure over time?

A simple rating system should be developed that is understandable to consumers with a rating for each appliance/device. The rating system that is developed by the scientific community should not take the cost of mitigation or the possible negative effect on a company or industry into account. It should show the results in an easy to comprehend scale, with a rating bar in a continuum of safety, from most safe to least safe, with one bar for each radiation category mentioned in the question.

Should exposure assessment or risk evaluation differ for sensitive populations such as those noted below for an older adult

Yes, and the air quality index is a great model, using the line “Unhealthy for sensitive groups” or suggesting dangers for a woman and unborn child during pregnancy.

Please identify any additional scientific evidence, technical information, data, or recommendations that federal health agencies should consider when evaluating potential adverse health effects associated with RF/EMF radiation exposure.

Throw arrogance to the door and survey what other nations are doing to measure each form of man-made radiation. Then borrow from the best and most stringent legislation developed by the rest of the world to protect all Americans.