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Grassroots Education and Advocacy

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Inadequate Regulation of Electronic Product Radiation by FDA Causes Electrosensitivity a.k.a Radiofrequency/Microwave Sickness

The U.S. Food and Drug Administration (FDA) has a clear obligation to regulate <u>electronic product radiation</u> in a manner that is "<u>designed to protect the public health and safety from electronic product radiation</u>". The Federal Communications Commission (FCC) also regulates electronic product radiation and states "<u>Almost all electronic-electrical products (devices) are capable of emitting radio frequency energy.</u>"

The FDA has neglected its duty to regulate most radiofrequency/microwave (RF/MW) consumer electronic product radiation, only promulgating thermally-based standards for microwave ovens.

Numerous experts question the protectiveness of thermally-based radiofrequency and microwave exposure limits, including The Environmental Protection Agency (EPA) which is concerned current FCC guidelines do not protect our diverse population from harmful biological effects in the face of the chronic exposures they now experience, "The FCC's exposure guideline is considered protective of effects arising from a thermal mechanism but not from all possible mechanisms. Therefore, the generalization by many that the guidelines protect human beings from harm by any or all mechanisms is not justified." and The Department of Interior, "the electromagnetic radiation standards used by the Federal Communications Commission (FCC) continue to be based on thermal heating, a criterion now nearly 30 [now 36] years out of date and inapplicable today."

Two hundred and forty-four scientists signed an <u>Appeal to the United Nations</u> stating "ICNIRP guidelines do not cover long-term exposure and low-intensity effects, they are insufficient to protect public health".

The FDA should have established biologically-based population-protective radiofrequency/microwave exposure limits for all classes of electronic products. While wireless devices are an obvious culprit, devices classified by the FCC as Incidental Radiators e.g. "AC and DC motors, mechanical light switches, basic electrical power tools (that do not contain digital logic)" and Unintentional Radiators e.g. "coffee pots, wrist watches, cash registers, personal computers, printers, telephones, garage door receivers, wireless temperature probe receiver, RF universal remote control and thousands of other types of common electronic-electrical equipment that rely on digital technology" can also result in biologically-significant exposures. The radiation emitted by many electronic devices is substantial and is readily detected using a simple AM/FM radio. It is also often readily reduced using simple capacitive filters. (Please see Mitigating Electronic Product Radiation a.k.a. Radio Frequency Interference (RFI), a demonstration video at www.electricalpollution.com/video/RFI-BiologicallyHazardous.m4v)

Electrosensitivity is a lay designation for Radiofrequency/Microwave Sickness. Radiofrequency/Microwave Sickness is the topic of numerous Soviet and U.S. military papers. It's existence is also acknowledged by U.S. National Institute of Building Sciences (NIBS) IEQ Indoor Environmental Quality Final Report, Job Accommodation Network (JAN), American Academy of Environmental Medicine, European Academy for Environmental Medicine (EUROPAEM), and The Austrian Medical Association. Despite this, FDA whose regulatory negligence plays a direct role in the increasing incidence now denies the existence of electrosensitivity.

While having engineers calculate thermally-based guidelines to prevent gross thermal damage, the basis of the current FDA and FCC guidelines, may have made sense initially before biologically-based studies were available, there is now an extensive peer-reviewed literature base documenting biological effects, many of them clearly adverse biological effects, at levels far below FDA and FCC thermally-based guidelines (www.BioInitiative.org). Many of the effects found -- DNA breakage, oxidative damage, inappropriate activation of voltage-gated ion channels, and direct effects on receptors and enzymes -- are widely considered to be detrimental and, in a rigorous toxicological evaluation, would lead to minimizing exposure among the general population.

The FCC Dockets evaluating the efficacy and adequacy of their radiofrequency/microwave exposure guidelines contains comments from numerous individuals reporting injury after exposure to common wireless technology, electronic products, and an electrical grid polluted by "dirty" electricity (a source of RF/MW exposure) caused by electronic products. In fact, submissions by experts offering evidence highlighting the inadequacy of the FCC RF exposure guidelines and of concerned or injured individuals far outnumber submissions supporting the adequacy of the FCC's thermally-based guidelines, a fact that the FDA in their advisory role to the FCC should be acquainted with.

<u>Julian Gehman</u>, a telecommunications lawyer, warns of serious thermal problems related to 5G "Put simplistically, a burn is a burn. Prolonged human exposure to the SAR of four to 300 w/kg, that is projected by Nasim & Kim, would result in serious injury and possibly death. It does not matter to the victim whether the EMF energy comes from frequencies below or above 6 GHz."

Both the <u>Environmental Health Trust</u> and the <u>Children's Health Defense</u> are suing the FCC for violating administrative procedure when it closed the dockets evaluating FCC radiofrequency/microwave exposure guidelines without making substantive changes to protect the public.

Quotes from FCC Docket ET 13-84:

<u>Paul Dart MD FCA</u> "It would be indefensible at this time for the FCC to take any actions that may increase exposure of the population to EMR from cell phones, base stations, Wi-Fi, Smart Meters and other RF or ELF-emitting devices. The current levels of exposure need to be reduced rather than increased further."

Martin Blank, PhD Department of Physiology and Cellular Biophysics Columbia University Cellular damage occurs in response to RF exposures even in the absence of a thermal response.

Odessa R. - Approximately a year ago Edison started installing Smart Meters in Santa Monica. I have never been particularly sensitive to radiation but this was so significant I noticed the difference right away. I was getting headaches and feeling very tired. My friends started having symptoms like headaches and chronic fatigue as well. I moved out of my house one month after the installation and I started feeling better right away.

Max F. - I work at a computer for most of the day, and I used to work in environments where Wi- Fi networks were actively in use. I gradually began to develop headaches when remaining in these environments for sustained periods of time. I also had cordless phones, wireless keyboards and mice, and a Wi-Fi router at home. I had no idea of the risks posed by these devices to my health. When I measured the EMR emitted by these devices, the readings were greater than 2,000 microwatts/m2 for each of these devices. As soon as we turned these devices off, I began to feel better.