

30 May 2024



Good Afternoon,

My contribution here is on the issue of faster deployment of Smart Meters here in Australian states is based on the health issues of Electromagnetic Sensitivity that is a recognised health condition in five countries now including Sweden, Norway, Canada , Russia and Israel. There have also been several legal case on EM Sensitivity in Australia. The condition revolves around excessive health reactions (which are outlined below) to the exposure of prolonged EMF and EM Radiation of people who are overly sensitive, beyond the heat spectrum, and actually are sensitive to the vibrational frequencies of various electromagnetic devices or powered by Eectromagnetics such as Mobile phones, WiFi Routers, Power boxes(on entry to homes), smart meters and other devices emitting EM fields.

MMY approach in making the submission is based on the fact we have a daughter in her mid forties who cannot now go out into any built-up area - we live in the countryside - away from many power sources and Mobil phone towers - and she is so extremely sensitive she can't be near any devices without suffering serious health problems such as headaches, shortness fo breath, and heart palpitations. Any design to imply the new Smart Meter here would endanger her immediate health. For this reason we are opposed to further upgrades of the power meter equipment here.

We wish there to be a provision for people who are assessed as EM Sensitives to be able to refuse the newer Smart Meter devices at any property where they live. That is on our property, and I'm sure there are many others in Australia. Below here the health issues are outlined.

Thank You,

Yours sincerely, Richard Giles

ELECTROMAGNETIC RADIATION IS LINKED TO AUTOIMMUNE PROBLEMS, CANCER and IMMUNE DYSFUNCTION.

Richard Giles. 

We have always been exposed to negligibly weak microwaves in the form of cosmic radiation from outer space, the natural light display that is the aurora borealis, and weather events such as thunderstorms; however, human innovations such as WiFi, cell phones, television, and other handheld devices have magnified our exposure to manmade sources of EMF within the microwave frequency bands. The photonics energy of anti-collision vehicle radars and WiGig are, in fact, 1000-fold higher in photonic energy relative to human exposures prior to the 1950s (2).

EMFs are everywhere, and besides those within the visible spectrum, are largely invisible to the naked eye. And magnetic fields as low as one millionth of a Tesla--the unit used to measure the magnetic component of EMF--have been shown to generate biological effects (1). By sitting in proximity to a cell phone, for comparison, you are exposed to magnetic pulses peaking at several tens of microTesla, orders of magnitude higher (1). Because these wireless gadgets, like mobile phones, are those we most frequently employ, their use warrants the

most caution. One paper published in *Immunologic Research* by Marshall and Heil cites a quote from NASA that encapsulates how all-encompassing our exposure is to this "electrosmog".

EMFs and Cancer

On May 31, 2011, the World Health Organization (WHO) International Agency for Research on Cancer (IARC) classified Radiofrequency electromagnetic fields (RF-EMFs) from mobile phones and other devices that emit non-ionising electromagnetic fields as a "possible," or Group 2B, human **carcinogen**. Whether EMFs are associated with enhanced risk of cancer, however, has remained a source of contention.

We can glean insights, though, from one meta-analysis, the highest quality form of evidence--which resides at the pinnacle of the pyramid of the hierarchy of evidence. In this meta-analysis published in *Pathophysiology*, researchers assimilated the results of 42 studies entailing 13,259 cases and 100,882 controls in order to shed clarity on the issue. Overall, researchers concluded that ELF-EMFs are associated with cancer risk, primarily in the United States and in residential exposed populations (3). Another publication in *Environmental Health* showed an almost doubling of the risk of head tumors with long-term cell phone use (4).

Another study in the *International Journal of Environmental Research and Public Health* also reinforces that EMFs elicit carcinogenic effects. It found decreased survival of glioma patients with astrocytoma grade IV (glioblastoma multiforme) associated with long-term use of mobile and cordless phones, leading the researchers to conclude that "RF-EMF should be regarded as human carcinogen requiring urgent revision of current exposure guidelines" (5).

A relatively recent review paper published in *Pathophysiology* by Swedish researcher Olle Johansson, entitled "Disturbance of

the immune system by electromagnetic fields--A potentially underlying cause for cellular damage and tissue repair reduction which could lead to disease and impairment," presents ideas that merit all of our collective attention (1). In this paper, he emphasizes that our immune system was designed, or evolved, with basic defense strategies to deal with known enemies, a category under which ever-increasing electromagnetic signals does not fall (1).

Electrohypersensitivity

In the early 1980s, a syndrome known as the Functional Impairment Electrohypersensitivity (EHS) was defined to encompass individuals who experienced reproducible symptoms upon exposure to electromagnetic devices such as mobile phones and WiFi equipment (1). Although this condition is not on the radar of the allopathic medical establishment, EHS is a condition acknowledged by the WHO, which has reported that remediating exposure to EMF may ameliorate symptoms of chronic fatigue that appear in this syndrome.

The WHO, in fact, in their acknowledgement of the potential health effects of EMF, went so far as to add radio frequency fields to their research agenda over a decade ago (1). Direct quotes from the WHO discuss how EHS individuals may exhibit hyperactivity in the central nervous system as well as autonomic nervous system imbalances, meaning disharmony or disequilibrium between the sympathetic "fight or flight" and the parasympathetic "rest and digest" arms where activity in one branch or the other deviates from the norm (1).

The EHS syndrome has been reported in various countries, including Belgium, Denmark, Italy, Germany, The Netherlands, Norway, Switzerland, Sweden, and the United States. Prevalence rates of EHS have varied considerably, however, with 3.1% of the population in Sweden claiming hypersensitivity to EMF versus 5% in Switzerland and 8% in

Germany, illuminating that further research is required to discern the true number afflicted (1).

According to Johannson, the symptoms of EHS oftentimes include rhinitis, eye irritation, olfactory impairment, coughing, a hoarse, dry throat, a "heaviness" in the head, cognitive issues, disrupted sleep, gastrointestinal upset, dizziness, cardiac symptoms, and facial skin symptoms including burning, itching, stinging, redness, and rosacea (1). In a phone survey of 2072 Californians, the strongest predictor of self-reporting EHS was diagnosis with environmental illness or multiple chemical sensitivity (MCS), illuminating that environmentally sensitive individuals are likely most vulnerable (6).

In a presentation by Cox at the World Health Organization International Workshop on EMF Hypersensitivity, he discusses that 36% of individuals report sensitivity to DECT cordless phones, 27% to visual display terminals (VDTs), 18% to fluorescent lights, 12% to television, and 6% to landline phones (7). The following percentages of individuals in the United Kingdom reported various symptoms of EHS associated with use of cell phones (7)

- **Headaches:** 85%
- **Dizziness:** 27%
- **Fatigue:** 24%
- **Nausea:** 15%
- **Itching:** 15%
- **Redness:** 9%
- **Burning:** 61%

Because these symptoms are so are non-specific, generalised, system-wide, and diffuse, they are likely to be misdiagnosed as

manifestations of other disorders or branded as psychosomatic. However, validity is conferred to this diagnosis by a recent prospective study in *International Journal of Molecular Medicine* that examined **oxidative stress** (inflammation) and antioxidative capacity in individuals claiming to be afflicted by EHS. For the first time, it was shown that approximately 80% of self-reported EHS patients present with one, two, or three detectable biomarkers of oxidative stress in their peripheral blood, "meaning that these patients-as is the case for cancer, Alzheimer's disease or other pathological conditions-present with a true objective new pathological disorder" (8).

EMFs and Hypersensitivity Reactions

EMFs may be capable of triggering hypersensitivity reactions, wherein the immune system reacts in an excessive fashion, triggering both local and systemic tissue damage. Although hypersensitivity reactions can be invoked by self-antigens (parts of our own bodies) and foreign entities (infectious agents), they are also known to be incited by environmental disturbances, a category under which EMFs fall.

For environmental threats to induce a hypersensitivity reaction, they must be small enough to gain access to the immune system. For example, dust is sufficiently small to navigate into the small bronchioles of the lungs, which can trigger an adaptive immune response that generates immune hypersensitivity, manifesting in allergic symptoms such as rhinitis or asthma. The permeation of small molecules, such as the metal nickel, across the skin barrier can also trigger delayed hypersensitivity by acting as a hapten, producing a reaction known as contact dermatitis. Johansson notes, in his discussion, that EMFs fulfill this basic criteria as they penetrate every single part of the body--our bodies are effectively translucent to EMFs (1).

Unproven Safety, Untested Outcomes

Worse yet, existing standards are incredibly lax, established based upon the immediate heating of cells and tissues, oftentimes in safety testing models that used fluid-filled plastic dolls rather than live, breathing, animated human beings. Recommended safe exposure levels do not take into account long-term effects or non-thermal effects elicited before heating is detected (1). The review in the journal *Pathophysiology* that examined the effects of EMFs on the immune system concluded,

Based on this review, as well as the reviews in the recent Bioinitiative Report, it must be concluded that the existing public safety limits are inadequate to protect public health, and that new public safety limits, as well as limits on further deployment of untested technologies, are warranted" (1).

It is urgent that biologically based exposure limits be established that are entirely protective against both extremely low frequency and radio frequency fields. We must ascertain the exposure standards which do not interfere with normal biological processes as well as systematically assess the bioeffects and adverse health consequences of chronic EMF exposure (1).

Thank You, Richard Giles.

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