

## Chapter 16

### A crisis of epidemic proportions: the evidence

Once upon a time... the Earth was flat. Smoking was good for you. Thalidomide was great for morning sickness. Asbestos made for excellent insulation. Nuclear power was the way to go. GMO crops were a godsend to farmers everywhere. And hydrogenated oils were a cost-effective choice. Now, we have WiFi and mobile networks, connecting us with everyone, everywhere, every second of every day... and creating a pervasive, virtually inescapable, unprecedented, unchecked, uncontrolled and rapidly escalating proliferation of radiation in our environment. But don't worry: the wireless telecommunications industry and our friendly health-conscious governments say it's safe!<sup>i</sup>

Like so many of those ill-founded claims, WiFi is now being promoted as a safe and beneficial technology in industry-sponsored studies and PR. Consequently, the media have featured many misleading, inaccurate and incomplete reports about WiFi radiation, claiming that there is *no apparent causal relationship* and that there is *zero evidence* supporting the experiences of those with EHS.<sup>ii</sup> Such claims merely reveal the reporters' ignorance of the latest research—and perhaps their own addictive love affair with their cell phone. Some have claimed that reactions to electromagnetic radiation are *psychosomatic*, which is an insult to the countless individuals who had no idea that EMR was causing their ill-health and only discovered the very clear *causal relationship* after years of research, functional impairment, huge expense and misdiagnosis.

Nonetheless, such theories are likely to be very reassuring to those who are unaware of the facts and to the many others who really don't want to know about the dangers.

**Instantly penetrating cement, metal, plastic, clothing, cars, bone, muscles, tissue and skin, radio-frequency/microwave radiation affects us all, all the time, within minutes of being exposed.**

#### **BOX: Evidence of harmful effects: quick facts\***

- There is now **10 billion times more radiation** in our environment than there was in the 1960s.
- In 2006, scientists estimated that, if current trends continued, **50% of the population** in Austria, England, Ireland, Germany, Sweden and the state of California would be feeling the effects of electromagnetic radiation by 2017 (see <http://bit.ly/2CmsBLM>). Canada would be no different.
- Swisscom, the Swiss telecommunications company, says non-thermal wireless radiation “**has a genotoxic effect**”, causing “**clear damage to hereditary material [DNA]**” and an “**increased cancer risk**”.
- Insurance companies, such as Lloyds of London, now refuse to provide coverage for health-related damages resulting from the radiation from wireless devices.<sup>iii</sup>
- **EMR adversely affects the blood cells of ALL individuals**, whether they feel the effects or not.
- **EMR damages cell membranes**, causing them to **leak calcium** and create many health issues, such as **altered brain function, autism, infertility, electromagnetic hypersensitivity, hypocalcaemia, DNA damage, thyroid problems, osteoporosis, endocrine imbalances, early dementia, asthma, neurological disorders and multiple chemical sensitivities**.
- **Autism in children is doubling every five years**, paralleling the rise of EMR, and there is now a **1-in-50 chance** of a child developing or being born with autism in North America.

• **Almost every grade in every elementary school** in North America has **at least one child with autism**—a disorder that was nearly unheard of a generation ago (see <http://usat.ly/NZXMI1>).

• Electromagnetic radiation **breaks down the all-important blood–brain barrier**, causing leakage of toxins into the brain and the death of neurons, which can result in **early dementia** and **Alzheimer’s disease**.

• Just 5 minutes of exposure to microwave radiation from WiFi can cause **cell mutation, oxidation and rouleaux**—all of which are associated with **illness and disease**.

• The average cumulative whole-body exposure from a smart meter at a distance of 3 feet is about 100 times more than that from a cell phone (see <https://goo.gl/Po9e6K>, at minute 2.17).

\* The information in this box is taken from my *No Safe Place* document. See elsewhere in this chapter and in the document itself (<https://olgasheean.com/no-safe-place/>) for additional references to the studies/data mentioned.

#### **END BOX**

While the physical effects of electromagnetic radiation are numerous and widely reported, the effects on mental health have received less attention. They are no less real, however, and no less disturbing.

#### **Are we losing our minds?**

German psychiatrist Dr Christine Aschermann reports an “increased occurrence of cognitive and psychological disorders with exposure to telecommunications”.<sup>iv</sup> Personality disorders, short-term memory loss, inability to concentrate, amnesic aphasia (difficulty finding words) and apraxia (carrying out inappropriate actions), as well as irritability, mood swings, physical weakness, sleep disturbances, chronic exhaustion, agitation and lack of motivation are other common symptoms that she has seen as a result of radiation exposure from the increasing use of wireless devices. There is also a loss of ethical values, empathy and sound judgement, as well as an increase in aggression and violence.

An increase in suicides has also been linked to wireless radiation, says Aschermann. “[In 2009], it was reported that a great number of France Telecom employees had committed suicide. Recently, the electronics firm Foxconn in China was affected by 10 suicides during the first five months of the year. Following the introduction of TETRA into the Israeli army, a series of young conscripted soldiers self-harmed. At the Siemens office in Munich, where the DECT telephone was developed years ago, there were reports of people committing suicide by falling from a height.”

Furthermore, she says: “We know from the research carried out since the 1950s by the Russian and US American military that specific moods can be evoked and manipulated. Thus, depressive states, fear, mania, pain, lack of motivation, and hallucinations are possible responses, depending on the frequency, wave-forms and other characteristics of the radiation.”

#### **Scientific fact versus political spin and misinformation**

It’s no wonder that most people are confused, ambivalent or dismissive of the dangers of EMFs, given the vast amount of political spin and misinformation promoted by the telecoms industry and industry-friendly governments ...not to mention the complete lack of public-awareness campaigns. Below are some of the claims that governments and industry-funded scientists have made in an attempt to convince consumers that they need not worry about adverse health effects and can continue to enjoy their wireless devices ...while supporting the multi-billion-dollar industry and the governments that benefit from billions of dollars in licensing fees every year.

***SPIN: Non-ionizing (microwave) radiation does not generate enough heat to do damage and, therefore, this non-thermal form of radiation is not harmful to humans.***

**FACT: Scientific studies—and the telecommunications industry itself—confirm that non-thermal radiation *is* harmful to the human body.<sup>v</sup>**

- “Weak non-ionizing electromagnetic radiation in the environment can be linked to more ‘modern illnesses’ than even the pessimists thought possible,” says Dr Andrew Goldsworthy. “Modern science can now begin to explain how.” It is not a heating effect, he explains, but an electrical effect on the fine structure of the delicate electrically charged cell membranes upon which all living cells depend. (See: <http://bit.ly/1taEDi3>.)
- The American Academy of Environmental Medicine reports that: “Epidemiological studies demonstrate that **significant harmful biological effects** occur from nonthermal RF exposure” (<http://bit.ly/24XtlpS>).
- A **Swisscom patent** application clearly states that **non-thermal wireless radiation “has a genotoxic effect [...] elicited via a non-thermal pathway”** and that “when human blood cells are irradiated with electromagnetic fields, clear **damage to hereditary material [DNA]** has been demonstrated [with] indications of an **increased cancer risk.**” The international patent (see: <http://bit.ly/1OQbG4V>), filed in 2003, was for technology to reduce the ‘electrosmog’ from wireless local networks, intended to reduce the cancer risks associated with non-thermal exposure to microwave radiation. (For more details, see: <http://bit.ly/1BCVa0W>.)
- A **British epidemiological study (confirmed by Swedish, Japanese and Italian findings) shows an association between long-term use of a cell phone and acoustic neuromas** (see: <http://microwavenews.com/uk-study-points-acoustic-neuroma>). Although acoustic neuromas (which grow on the eighth cranial/auditory nerve) are ‘benign’, rather than malignant, they can still kill you if they grow large enough to affect the brain stem and restrict breathing.

***SPIN: Extremely low frequency (ELF) radiation has no significant health effects.***

**FACT: The electromagnetic fields that are most harmful to humans are those in the ELF range and also the radio frequencies that are pulsed or amplitude-modulated by ELF** (see <http://bit.ly/1PIASJZ> for the following three points).

- ELF radiation has been scientifically proven to **damage cell membranes**, causing them to leak calcium and create many health issues, such as **altered brain function, autism, infertility, EHS, hypocalcaemia, DNA damage, early dementia, asthma and multiple chemical sensitivities.**
- Electromagnetic radiation can damage the **all-important blood–brain barrier**, causing leakage of toxins into the brain and the death of neurons, which can result in **early dementia and Alzheimer’s disease.**
- Gland cells are particularly sensitive to radiation, which can **damage the thyroid and endocrine system, disrupting the metabolism.** Even short-term exposure to radiation from a cell phone tower has been shown to **increase cortisol levels**, with long-term exposure resulting in **permanently elevated adrenaline.**
- EMFs disrupt the production of melatonin, the body’s only antioxidant, resulting in high levels of damaging **free radicals/oxidative stress and accelerated aging.**<sup>vi</sup>
- Inward calcium leakage in the neurons of the brain stimulates hyperactivity and makes the brain less able to concentrate on tasks, resulting in **Attention Deficit Hyperactivity Disorder (ADHD).**<sup>vii</sup>

**“The time to deal with the harmful biological and health effects is long overdue. We must reduce exposure by establishing more protective guidelines.”<sup>viii</sup>**

***SPIN: There is no demonstrable medical proof of harm being caused by WiFi or smart meters.***

**FACT:** The damaging effects of microwave radiation from cell phones, WiFi and smart meters can now be medically demonstrated.

- The damage done to red blood cells from brief exposure to RF radiation can be seen via live-blood-cell (dark-field microscopy) analysis, which reveals cell mutation, **oxidation and rouleaux** (aggregation of red blood cells) (see <https://youtube/y4JDEspdx58>).
- Just 5 minutes of exposure to WiFi radiation results in cellular damage associated with **pathological processes** (see: <https://vimeo.com/100623585>, at minute 4.48).
- According to the *BioInitiative Report*,<sup>ix</sup> bioeffects occur within minutes and at very low levels of exposure to EMFs and RF radiation—similar to those from cell and cordless phone use, as well as exposure to mobile phone masts (cell towers), WiFi and wireless utility smart meters that produce whole-body exposure. Chronic base-station-level exposures have also been shown to result in illness (<http://bit.ly/1Xn4ZIV>).

***SPIN: Only vulnerable, hypersensitive or weak individuals are affected.***

**FACT:** The damaging effects of EMR have been medically proven to occur in every human body.

- Dr Erica Mallery-Blythe, a former accident-and-emergency doctor now specializing in EHS, says these **effects occur even in those not experiencing symptoms**, and many of us may be electro-hypersensitive and not realize it. “Everybody has the potential to become electro-hypersensitive,” she says, “[since] **every cell in our body, in our brain or nervous system is dependent on electrical signals**” (see: <http://www.dailymail.co.uk/femail/article-2331369>).
- Many other doctors (such as Dr Dietrich Klinghardt<sup>x</sup> and Dr Andrew Goldsworthy) confirm that **EMR affects the blood cells of all individuals**, ultimately damaging their nervous systems, brains, reproductive organs and physical health.

***SPIN: The supposed effects of EMR are intangible and cannot be objectively measured.***

**FACT:** Medical doctors and researchers have identified biomarkers of EMF intolerance—biological indicators of EMR damage, found in everyone suffering from EMF sensitivity, as well as in those who had no idea that such a thing existed or that it could be making them ill.

- Exposure has been found to have a **damaging impact on melatonin, serotonin, dopamine, adrenaline, cortisol, testosterone, progesterone, T3 and T4 thyroid hormones and plasma ACTH** (which regulates cortisol) (see <http://bit.ly/1rXJUcC> and <http://www.magdahavas.com/>), among many others.
- Dr Dietrich Klinghardt<sup>xi</sup> tests for particular biomarkers in those affected by EMF pollution: an **increase in inflammation markers** (TGF-Beta 1, MMP-9 and copper, which shows chronic inflammation, **hormone abnormalization and neurotransmitter abnormalization**) (see <http://bit.ly/1Sc8I8G>).
- Other medical tests for detecting the effects of EMR include live-blood-cell analysis, brain and nervous system analysis, and cardiac analysis (see <https://www.emfanalysis.com/ehsbiomarkers/>).

***SPIN:*** When those with EHS were asked to detect the presence of cell phone radiation, from behind a curtain or closed door, they often couldn't tell when the radiation was present, or they reacted even though the cell phone hadn't been switched on—which proves that it's all in their heads.

**FACT:** This approach has since been invalidated, for several reasons. Many individuals with EHS can physically feel RF/microwave radiation, although they often don't know that that's what they're feeling. Even those who feel nothing, however, are still being affected at the cellular level.

- Most people feel nothing, since the effect occurs at the cellular level, beyond their conscious awareness. Only in those with sensitized nervous systems, or those for whom the strength/duration of exposure has created physical symptoms, will the effects be felt.

- To claim that people react physically to the mere suggestion of EMF exposure reveals an **ignorance**—not just of **how EMFs affect the human body at the cellular level**, but of human nature itself. If you have a fear of spiders, heights or small spaces, and you're told that you might be given a tarantula, placed on a cliff or locked in a closet, you would instinctively experience anxiety, sweating and other physiological stress responses, whether those threats materialized or not. Yet the danger posed by EMR is very real and a fear of it is well founded.

- As Dr Mallery-Blythe points out: “Electromagnetic hypersensitivity is a **physiological issue, not a psychological one** [and] it can be seen as either a sickness or a supersense, depending on the environment of the individual, although it is essentially both” (see <https://vimeo.com/100623585>).

- French oncologist Dr Dominique Belpomme concurs: “**We know with certainty that electromagnetic hypersensitivity is not psychosomatic.**”

***SPIN:*** Service-providers claim that WiFi/cell phone/smart meter radiation is safe, and the media haven't reported anything conclusive, so there's no need to worry.

**FACT:** Thousands of scientific studies attest to the damage caused by RF/microwave and other forms of electromagnetic radiation.

- The results of many of these studies have been published in reputable medical and scientific journals such as *The Lancet*, *the International Journal of Neuroscience*, *the Journal of Applied Sciences Research*, *Electromagnetic Biology and Medicine* and *NeuroToxicology*, among others (see [www.emf-portal.org](http://www.emf-portal.org) and <http://nutritionalbalancing.org/center/environment/articles/emf-emr-health-effects#ref>).

- Studies find adverse biological effects from WiFi frequencies (2.4 or 5GHz), with exposures of <16V/m (such as those from a WiFi-enabled device): <http://bit.ly/1jsIPUp>.

- A \$25m study by the National Toxicology Program of the NIH found that cell phone radio frequency radiation caused two types of tumours: glioma and schwannoma (acoustic neuromas).<sup>xii</sup> Twenty years ago, these tumours were rare. Now, they are increasingly common.

- “EMFs provoke major effects in the brain,” says oncologist Dr Dominique Belpomme. “The most important of these is the opening of the blood–brain barrier. This allows mercury, organochlorines and other pollutants to enter the brain, where they cause various neurodegenerative diseases.”<sup>xiii</sup>

- While some reports in the media claim that EMR doesn't harm us, doctors and specialists around the world are quietly helping those whose lives have been torn apart by the very real and devastating phenomenon of electromagnetic hypersensitivity. For a timeline of growing awareness of/landmark rulings regarding EHS, see: <http://www.emfwise.com/awareness.php>.

## Is this getting on your nerves?

The incidence of chronic neurological illnesses is rapidly increasing, with autism in children *doubling every five years*, according to Dr Dietrich Klinghardt.<sup>xiv</sup> And he knows why. “The only thing that parallels the exponential increase in chronic neurological illness is the increased exposure to man-made electromagnetic fields—largely in the high-frequency range from cell phone radiation, the Tetra network [...] smart meters...” With credentials, expertise and medical specializations too extensive to list, Dr Klinghardt is a recognized authority on EHS and the many diseases (ALS, Parkinson’s, MS, autism etc) exploding out of control, partly due to the widespread proliferation of radiation. He has identified the biomarkers of EHS, adding considerably to the research carried out over the past 80 years—most of it showing biological damage being done by EMR. “As a scientist, you don’t have to look very far,” he says.<sup>xv</sup>

*Dr Martha Herbert, PhD, MD<sup>xvi</sup> is an expert in neuro-developmental disorders—particularly Autism Spectrum Disorders (ASD). She has published papers in brain-imaging research, physiological abnormalities in ASD, and environmental influences on neuro-developmental disorders such as autism as well as on brain development and function. She also carried out a review literature on the potential link between ASD and electromagnetic fields (EMFs) and radiofrequency radiation, and found such an extensive body of literature that she ended up producing a 60-page paper with over 550 citations.<sup>xvii</sup> There are now thousands of scientific, peer-reviewed papers on the adverse health and neurological impacts of EMFs. Children are more vulnerable than adults, and those with neuro-developmental disabilities are even more so.*

*Although current wireless technologies were designed and promulgated without taking into account biological non-thermal impacts, we now know that significant adverse effects occur without the heating of tissue. “The claim from WiFi proponents that the only concern is thermal impacts is now definitively outdated scientifically,” says Dr Herbert, whose findings are confirmed by thousands of scientists worldwide.*

The evidence is now so vast and compelling that it would be hard for any diligent researcher not to be daunted by the sheer volume of data. Wireless telecom service-providers and politicians who ignore this crucial evidence do a huge disservice to humanity, often vilifying, patronizing and insulting those with EHS, who are the early indicators that something is seriously wrong. With government health agencies turning a blind eye to the proven adverse biological effects, consumers tend to do the same ...unless they have personally experienced the effects of the radiation, done their own research and realized what a massive cover-up is underway.

<sup>i</sup> See <http://bit.ly/1svnHmQ> for more compelling evidence to the contrary.

<sup>ii</sup> See, for example, <http://bit.ly/1RNGwe0>.

<sup>iii</sup> See <http://bit.ly/2ESB8Du>.

<sup>iv</sup> See the article by Dr Christine Aschermann in *Umwelt-Medizin-Gesellschaft* (UMG 2010, 3).

<sup>v</sup> Dr Andrew Goldsworthy has produced compelling, comprehensive accounts of the multiple effects of EMFs, referencing over

70 scientific studies), the dangers of electromagnetic smog, and why the body is affected the way it is (see <http://bit.ly/1PIASJZ> and <http://bit.ly/28ltGL9>).

<sup>vi</sup> See Henshaw, DL and Reiter, RJ (2005). Do magnetic fields cause increased risk of childhood leukemia via melatonin disruption? *Bioelectromagnetics Supplement 7*: S86–S97.

<sup>vii</sup> See Beason and Semm, 2002; Krey and Dolmetsch, 2007, Volkow et al, 2011.

<sup>viii</sup> From the International EMF Scientist Appeal, which urgently calls upon the United Nations and its sub-organizations, WHO and UNEP, and all UN Member States, for greater health protection on EMF exposure. See <http://www.emfscientist.org> and <http://goo.gl/sLi7Uu>.

<sup>ix</sup> The 2012 *BioInitiative Report* was prepared by 29 authors (including 10 MDs, 21 PhDs, 3 MsCs, MAs or MPHs) from 10 countries (Austria, Canada, Denmark, Greece, India, Italy, Russia, the Slovak Republic, Sweden and the USA). Among the authors is the Chair of the Russian National Committee on Non-Ionizing Radiation, and a Senior Advisor to the European Environmental Agency.

<sup>x</sup> Dr Dietrich Klinghardt, MD, PhD, is Founder of the Klinghardt Academy (USA), the American Academy of Neural Therapy, Medical Director of the Institute of Neurobiology, and lead clinician at the Sophia Health Institute (Washington State). He is also Founder and Chairman of the Institute for Neurobiology (in Germany & Switzerland). See <https://youtu.be/PktaaxPI7RI> and <http://www.klinghardtacademy.com/>.

<sup>xi</sup> See <https://youtu.be/PktaaxPI7RI> and <http://www.klinghardtacademy.com/>.

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<sup>xii</sup> See <http://bit.ly/2ESderU>.

<sup>xiii</sup> See <http://goo.gl/RCiYLa>.

<sup>xiv</sup> See <https://youtu.be/PktaaxPI7RI>.

<sup>xv</sup> See also the excellent work of pediatric neurologist and brain development researcher, Dr Martha Herbert:  
<http://www.marthaherbert.org/>.

<sup>xvi</sup> Dr Herbert is a paediatric neurologist and neuroscientist at Harvard Medical School and on staff at Massachusetts General Hospital. Board-Certified in Neurology, she specializes in Child Neurology and Neuro-developmental Disorders.

<sup>xvii</sup> See <http://bit.ly/1JXLfnr>.