

**Universal Periodic Review:
stakeholders' written submissions (Rev 17/03/2015)**

OHCHR Submission

By

Electrosensitivity UK (ES-UK)

<http://www.es-uk.info/>

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Electrosensitivity UK (ES-UK) is a not for profit charity founded in 2003. It has five trustees from the UK, and also international medical and scientific advisers. It has two aims:

- 1) to support people who suffer from electromagnetic sensitivity
- 2) to inform the general public of the health effects of electromagnetic exposure.

To achieve these aims it seeks to provide:

- a) a telephone helpline
- b) a newsletter
- c) a website (<http://www.es-uk.info/>)
- d) occasional meetings and conferences
- e) information, leaflets and books on Electrosensitivity.

It is in contact with many hundreds of people in the UK and also around the world.



SECTIONS:

- 1 Electromagnetic Sensitivity and Electromagnetic Hyper-Sensitivity (EHS)*
- 2 Electromagnetic Sensitivity and EHS as a functional impairment with socio-economic and human rights implications*
- 3 Human rights legal framework for electromagnetic exposure in the UK*
- 4 Elimination or reduction in electromagnetic exposure as the key factor in protecting the human rights of people with Electromagnetic Sensitivity*
- 5 Human rights implications for the growing number of people suffering from Electromagnetic Sensitivity*

1. Electromagnetic Sensitivity and Electromagnetic Hyper-Sensitivity (EHS)

This condition was first described medically in 1932 in Germany.

It was analysed in detail and accepted in eastern Europe, especially the USSR and Poland, in the 1960s.

It has been accepted by the majority of involved medical practitioners in the west since about 2008.

A useful review of its history, current methods of diagnosis and appropriate safety levels for man-made electromagnetic exposure can be found in [Rev Environ. Health](#) (2015).

It is also known as, for example, Radio Wave Sickness, Microwave Illness, EI-Allergy, Electromagnetic Intolerance, or IEI-EMF (Idiopathic Environmental Intolerance attributed to Electromagnetic Fields).

Electromagnetic Sensitivity has been shown in peer-reviewed studies to be distinct from Electrophobia or the Nocebo effect, with which some organisations still confuse it.

Electromagnetic Sensitivity from natural geomagnetic events is also well established.

Electromagnetic Sensitivity is the basis of much modern electronic warfare and much of the protective material used by people with Electromagnetic Sensitivity is made for military purposes.

Electromagnetic Sensitivity is also well established at non-thermal levels in plants and animals.

For further medical scientific information see:

[Selected Studies on Electromagnetic Sensitivity and EHS](#) (2016)

2. Electromagnetic Sensitivity and EHS as a functional impairment with socio-economic and human rights implications

Our charity, ES-UK, is increasingly being contacted by people who are unable to continue living normal lives, despite this expectation under human rights legislation. People with Electromagnetic Sensitivity are frequently forced into unacceptable situations and denied their basic human rights by the invasive actions of others and the failure of governments to protect basic human rights.

People with Electromagnetic Sensitivity are often forced into the following situations, which appear to deny them their human rights.

- (a) Abandoning their job, if the employer refuses to make the workplace suitable.
- (b) Abandoning their home, if the neighbours have WiFi or use mobile or cordless phones, or if there is a phone mast or other wireless transmitter or power-cables or transformer nearby.
- (c) Abandoning their family if the family is unable to live without wireless radiation or some types of electric power where relevant.
- (d) Abandoning attending hospitals, health centres, dentists, opticians, etc, if there is no provision for their needs.
- (e) Abandoning even their country, if they cannot find a suitable area free of radiation in which to live.
- (f) Abandoning their right to public education and university education. Children with Electromagnetic Sensitivity are increasingly having to be home-educated, with severe family and economic implications.

Further information:

- Gibson PR et al.: "Unmet health care needs for persons with environmental sensitivity" *J Multidiscip Healthc.* (2015) [PMID: 25670904](#).
- Johansson O: "Electrohypersensitivity: a functional impairment due to an inaccessible environment" *Rev Environ Health* (2015) [PMID: 26613327](#); [pdf](#).
- Johansson O.: "[Electrohypersensitivity; State-of-the-Art of a Functional Impairment](#)" *El Biol & Med.* (2006) [PMID: 17178584](#).
- Kato Y et al.: "Reported functional impairments of electrohypersensitive Japanese: A questionnaire survey" *Pathophysiology.* (2012) [PMID: 22458999](#).

3. Human rights legal framework for electromagnetic exposure in the UK

(a) United Nations:

- United Nations: ["Convention on the Rights of Persons with Disabilities"](#) (2006)
- United Nations: ["The Standard Rules on the Equalization of Opportunities for Persons with Disabilities"](#) (1993)
- United Nations: ["The Universal Declaration of Human Rights"](#) (1948)

(b) UK

- UK: [Equality Act \(2010\)](#)
- UK: Health & Safety Executive's Guide : [Control of Electromagnetic Fields at Work Regulations 2016](#): 'Employees at particular risk': pages 17-22.

Although the UK's Equality Act should provide people with Electromagnetic Sensitivity protection in public areas and at work, as for people with other functional impairments, in practice this has not been the case in most instances of which our charity has been aware. This is because at present the UK government's Department of Health and its agency Public Health England denies the established link between electromagnetic exposure and Electromagnetic Sensitivity, as opposed to Electrophobia.

This scientifically invalid viewpoint from Public Health England and the Department of Health means that people with Electromagnetic Sensitivity lack protection from the man-made electromagnetic exposure which harms them. This can result in people who suffer from Electromagnetic Sensitivity having to leave their jobs, their homes, their families and even their country, all in contravention of basic human rights and equality discrimination rights. This failure by Public Health England and the Department of Health has led directly to deaths by suicide of a number of people known to our charity. The most recent case involved a school pupil where the school preferred to believe the assurance of no harm from Public Health England and the Department of Health rather than the pupil's own parents and the medical and scientific evidence supplied by the parents to the school's headteacher.

The transposition of the EC Directive on Electromagnetic Fields on 1 July 2016 provides for employees 'at special risk', which seems to include employees who suffer from Electromagnetic Sensitivity at non-thermal levels below the heating limits proposed by ICNIRP. Employers, when notified, then have to conduct a risk assessment and take special consideration, but the nature of this special consideration is not specified in detail. Some employers then hide behind the denials of Public Health England and the Department of Health and do little or nothing to ensure that people functionally disabled by electromagnetic exposure can continue in employment or be employed within their organisation. Because this legislation applies only to employees, those not employed, including school pupils with Electromagnetic Sensitivity, still lack any provision to ensure their human rights under such legislation.

Better examples of provision for people who suffer from Electromagnetic Sensitivity are found in countries which specifically accept the condition as a functional impairment, such as Sweden since 2000, Canada and the USA, In addition a growing number of countries have awarded disability and financial compensation for people with Electromagnetic Sensitivity. See some examples in: [Legal Cases](#).

In fact Electromagnetic Sensitivity has been given international recognition medically since the year 2000: Nordic Council of Ministers: ["The Nordic Adaptation of Classification of Occupationally Related Disorders \(Diseases and Symptoms\) to ICD-10"](#) (2000)

In contrast the attitude of governments like the UK and Public Health England and the Department of Health have been regarded as unethical under international treaties preventing the exposure of the general population without consent to what is categorized by the World Health Organization's IARC as a 2B carcinogen and which the leading experts say should, on existing scientific evidence, be reclassified as class 2A or as a class 1 certain carcinogen. Others have argued that involuntary exposure of the general population to carcinogenic radiation is in contravention of the Nuremberg Code: *"Enforced introduction of wireless smart meters is a clear contravention of the Nuremberg Code which forbids the performance of experiments on human beings without their consent. Insofar as the long-term safety of continual irradiation from these devices has never been tested and many people (including many eminent scientists) believe that it is potentially harmful, the whole nation is being made a part of an uncontrolled experiment on their electromagnetic safety."* (Dr Andrew Goldsworthy: [Letter](#), November 14 2010)

Even the ICNIRP, which the UK government claims to follow, has instructed governments to set non-thermal limits, unlike its own heating-only limits, for children, the elderly and the sick ("General approach to protection against non-ionizing radiation" *Health Phys.* (2002) [PMID: 11906144](#)): *"Different groups in a population may have differences in their ability to tolerate a particular Non-Ionizing Radiation (NIR) exposure. For example, children, the elderly, and some chronically ill people might have a lower tolerance for one or more forms of NIR exposure than the rest of the population. Under such circumstances, it may be useful or necessary to develop separate guideline levels for different groups within the general population, but it may be more effective to adjust the guidelines for the general population to include such groups."* Since this was published in 2002 it would seem that governments have had sufficient time to implement non-thermal safety limits such as those of Salzburg 2002, Seletun 2010, BioInitiative 2012, or EUROPAEM 2016. Typical values for sensitive people are in the region of 10 nanoTesla (magnetic fields, 50 Hz), 0.006 Volts/metre (peak electric fields, microwave frequencies), 1 Volt/metre (electric fields, 50 Hz). (Power Flux Density and SAR are heating metrics, not directly relevant to non-thermal ES/EHS.)

- [BioInitiative Report](#): "A Rationale for Biologically-based Public Exposure Standards for Electromagnetic Fields (ELF and RF)" (2012).
- Building Biology: [Guidelines](#) (2008).
- [EUROPAEM EMF Guidelines](#) (ELF and RF) (2016).
- Fragopoulou A et al.: "Scientific panel on electromagnetic field health risks: consensus points, recommendations, and rationales" *Rev Environ Health.* (2010) [PMID: 21268443](#).
- Salzburg: ["Precautionary limits"](#) (2002).

The concern of the great majority of involved medical scientists in this area is evident from the [The International Electromagnetic Field Scientist Appeal](#), submitted on May 11 2015 to His Excellency Ban Ki-moon, Secretary-General of the United Nations; Honorable Dr. Margaret Chan, Director-General of the World Health Organization; Honorable Achim Steiner, Executive Director of the U.N. Environmental Programme; and U.N. Member Nations.

At present the regulators in some countries are dominated by a small clique of like-minded activists who hold views similar to those of the pro-wireless industry and governments. These still try to deny adverse effects from electromagnetic exposure, despite the overwhelming weight of evidence to the contrary, based on consistent and convincing evidence of human adverse effects at non-thermal levels of electromagnetic exposure. These regulators and governments thereby deny a growing number of people their basic human rights to live an ordinary life unimpeded by the health effects of man-made electromagnetic radiation and fields.

4. Elimination or reduction in electromagnetic exposure as the key factor in protecting the human rights of people with Electromagnetic Sensitivity

Since the 1960s it has been established that the only effective treatment for people with Electromagnetic Sensitivity is to eliminate or significantly reduce their man-made electromagnetic exposure.

See, for example:

- Belyaev I et al.: "EUROPAEM EMF Guideline 2016 for the prevention, diagnosis and treatment of EMF-related health problems and illnesses" *Rev Environ Health*. (2016) [pdf](#).
- Austrian Medical Association: "*Guideline of the Austrian Medical Association for the diagnosis and treatment of EMF related health problems and illnesses (EMF syndrome)*" (2012) [pdf](#).

This key requirement of eliminating or reducing electromagnetic exposure can be achieved by some simple procedures, as follows.

(a) The workplace

The following accommodation ideas for individuals with electromagnetic sensitivity have been proposed by the Job Accommodation Network (JAN), the US Department of Labor: the Office for Disability Employment Policy (ODEP):

[\(Accommodation Ideas for Electromagnetic Sensitivity\)](#)

- Allow communication via typewriter or handwritten notes rather than via computer or cover the computer with Plexiglas or other shielding material
- Provide headset/handset extenders or alternate headsets to lengthen the distance between devices that trigger symptoms and the employee's body
- Change the employee's shift to allow for less exposure to others' devices
- Relocate workplace away from areas where symptoms are triggered. This may include limiting certain types of devices in the vicinity of the employee's workstation
- Allow telework (Note: regarding work at home, unless the employee wants to work at home, other options should be explored first to keep the employee in the workplace)
- Allow the employee to meet with others in areas where triggers are minimized or allow remote access to meetings or activities that must take place in areas that trigger symptoms.
- Provide wired telephones and network connections
- Provide building-wide and/or workspace shielding of equipment and devices, for example add filters to fluorescent lights and tape electrical cords

(b) Schools

Pupils with Electromagnetic Sensitivity should be provided with areas of the school without WiFi and without mobile or cordless phones. Many health experts now argue that schools should be free of wireless radiation from WiFi and mobile phones since children and teenagers absorb more radiation than adults and their nervous system and its myelination is still developing. In 2013 the president of the 60,000 paediatric specialists in the American Academy of Pediatrics wrote in support of biological safety limits for all children, instead of existing ICNIRP heating limits ([letter](#)).

(c) Hospitals and health centres

As in countries like Sweden, hospitals, opticians, dentists and health centres should have consultation, examination and operation rooms without any electromagnetic exposure.

(d) Public spaces, shops, libraries, transport etc

As already in some countries, there should be areas without any man-made electromagnetic exposure to enable people with Electromagnetic Sensitivity to live normal lives. If, as the WHO documents suggest, 3.1-3.8% of the population is affected significantly by Electromagnetic Sensitivity, then a similar proportion of housing should also be totally free of electromagnetic exposure. If, as the latest research suggests, this electromagnetic exposure fosters chronic inflammation in some 40% of adults, then the areas will need to be larger.

5. Human rights implications for the growing number of people suffering from Electromagnetic Sensitivity

Many governments need to become better informed on the human rights implications and health effects of environmental pollution and especially electromagnetic exposure. This environmental exposure is increasing rapidly in modern society in ways not envisaged when basic human rights legislation was introduced seven decades ago.

- (a) **There is an increasing range of impacts on the human rights of people with Electromagnetic Sensitivity** in terms of functional impairment and socio-economic effects, as listed above. These are likely to increase substantially as the proposed 'Internet of Things' is expanded, making many areas of human habitation uninhabitable for people with Electromagnetic Sensitivity. There is now a class of people with Electromagnetic Sensitivity forced by the increasing spread of wireless technology to seek refuge in the decreasing number of spaces left on Earth without electromagnetic exposure. Some people have been so severely sensitised that, even if they can find a remote area free from terrestrial radiation, wireless transmissions from a satellite or aircraft overhead can make even this life as an environmental refugee unpleasant or impossible. For many with Electromagnetic Sensitivity it is now impossible or unpleasant to stay in hotels with WiFi or visit their children in schools with WiFi or walk down a shopping street or enter a shop or restaurant with mobile phones or WiFi.
- (b) **This impact on basic human rights is affecting a growing number of people.** Our charity has seen numbers contacting us increase by over 300% in under a decade. In particular, the cumulative and non-linear effects of radiation exposure need to be considered carefully for the rising generations who, from the start of their lives, are exposed to about a million billion times more radiation than in the natural environment. For such children, current ICNIRP heating limits are irrelevant as regards the established non-thermal effects, such as neurological and cancer outcomes, including the possibility, depending on genetic phenotype, of developing Electromagnetic Sensitivity.
- (c) People affected by environmental electromagnetic exposure leading to the development of Electromagnetic Sensitivity include increasing numbers of two categories: (i) people in early or mid-life suffering from **environmental electromagnetic 'overload'**, from continued exposure to WiFi, masts, mobile or cordless phone and iPad usage etc.; and (ii) people, including children, **genetically susceptible to electromagnetic exposure**, where people with Electromagnetic Sensitivity have been shown in studies to have an almost ten-times likelihood of a particular genetic make-up which is also associated with susceptibility to some cancers. This genetic element means that Electromagnetic Sensitivity can sometimes run in families.

People with Electromagnetic Sensitivity look to the United Nations and similar bodies, along with their own governments and regulators to uphold their basic human rights. Environmental protection should be included in all inter-governmental protocols to ensure the protection of human rights of all people, including those with Electromagnetic Sensitivity.