

# The lack of international and national health policies to protect persons with self-declared electromagnetic hypersensitivity (EHS)

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EXPANDING THE SCOPE OF RADIATION PROTECTION

# My expertise

My opinions presented here are based on my education and experience in EMF research:

- Two doctorates, in molecular biology and biochemistry
- Research Professor and Head of the Radiation Biology Laboratory at the Finnish Radiation and Nuclear Safety Authority (STUK)

Visiting professorships at

- Harvard Medical School
- Zhejiang Medical School
- Swinburne University of Technology

Testified before (examples)

- US Senate Committee
- Canadian Parliament Committee
- Health Minister of India

Member of the IARC 2011 working group that classified RF-EMF as a possible carcinogen

# Individual Sensitivity

- Individual sensitivity to physical and chemical agents is a universal property of all humans
- There is individual sensitivity to UV, gamma-rays, and ultrasound... why EMF/RF-EMF used in wireless communication, would be so unique that there would not be a sensitive subgroup?
- Individual sensitivity of humans to EMF/RF-EMF exists, but our thus far used research methods were inadequate to detect causality link between EHS and EMF/RF-EMF exposures
  - EHS is a form of individual sensitivity to EMF/RF-EMF

# Review of EHS studies

DE GRUYTER

Rev Environ Health 2022; 37(3): 423–450



## Review Article

Dariusz Leszczynski\*

# Review of the scientific evidence on the individual sensitivity to electromagnetic fields (EHS)

<https://doi.org/10.1515/reveh-2021-0038>

Received March 18, 2021; accepted June 11, 2021;  
published online July 6, 2021

**Abstract:** Part of the population considers themselves as sensitive to the man-made electromagnetic radiation (EMF) emitted by powerlines, electric wiring, electric home

objective data, detecting molecular level biochemical responses of human body to EMF.

**Keywords:** electromagnetic hyper-sensitivity; ELF-EMF; RF-EMF; survey studies; provocation studies.

# Review of EHS studies

Review based on 263 studies has shown a number of drawbacks:

- **Drawback #1:** It is not known who has EHS
- **Drawback #2:** Selection bias by excluding persons
- **Drawback #3:** Psychological methods of inquiry, used in provocation studies, were not examined and not proven for their suitability to detect EHS
- **Drawback #4:** Conclusions of the provocation studies performed using psychology methods are affected and/or even invalidated because of the existence of the placebo and nocebo phenomena

# Claims that EHS is not caused by EMF/RF-EMF

- No difference in development of EHS symptoms by self-declared EHS person when exposed to real RF-EMF or to sham RF-EMF - *considers only acute effects but not delayed effects and does not consider 'experimental' stress*
- Considered as *important, if not ultimate* proof - self-declared EHS persons are unable to determine when they are exposed to radiation - EHS persons don't feel radiation (!)
- **Data collected in the psychological provocation studies is insufficient to prove, or disprove, causality link between EHS and EMF/RF-EMF**

# Review of EHS public health policies

DE GRUYTER

Rev Environ Health 2022; aop



## Review

Dariusz Leszczynski\*

## The lack of international and national health policies to protect persons with self-declared electromagnetic hypersensitivity

<https://doi.org/10.1515/reveh-2022-0108>

Received July 8, 2022; accepted October 12, 2022;  
published online October 26, 2022

**Abstract:** Electromagnetic hypersensitivity (EHS), known also as an idiopathic environmental intolerance attributed to electromagnetic fields (IEI-EMF) or a microwave sickness, is

Furthermore, WHO, ICNIRP and IEEE-ICES should be advocating and supporting research that would generate a reliable scientific evidence on what are the possible cause(s) of EHS. Without such research there is not possible to develop diagnostic methods as well as any possible mitigation approaches. There is an urgent need for the WHO to advocate for the national governments to urgently develop a

# Symptoms experienced by self-declared EHS

- Symptoms last for years and are debilitating
  - Headache
  - Fatigue
  - Stress
  - Sleep disturbances
  - Skin symptoms like prickling, burning sensations and rashes
  - Pain and ache in muscles
  - ...and many others
  
- WHO agrees on symptoms but not on the cause of these



# WHO definition of health

The Constitution of the World Health Organization says:

- *“Health is a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity*
- *The health of all peoples is fundamental to the attainment of peace and security and is dependent on the fullest co-operation of individuals and States*
- *Governments have a responsibility for the health of their peoples which can be fulfilled only by the provision of adequate health and social measures”*

The symptoms experienced by the self-declared EHS persons are ‘*health effects*’ as per WHO Constitution, and WHO agrees...

# Review of EHS public health policies

It is the first comprehensive collection of information about EHS health policies of different organizations and countries.

Analyzed opinions on EHS by:

- WHO
- NGOs - ICNIRP, IEEE-ICES, EUROPAEM, ICEMS, BioInitiative (ICBE-EMF did not exist yet)
- Telecom umbrella organizations - GSMA & MWF
- European Union (Commission)
- Nordic Countries (collaborating agencies)
- 17 countries: Australia, Belgium, Canada, Finland, France, Germany, Iceland, India, Italy, Japan, Netherlands, New Zealand, Poland, Russia, Switzerland, UK, USA

# Review of EHS public health policies

- General agreement that the symptoms reported by self-declared EHS persons are real and can seriously affect personal and professional life
- Cause of the symptoms considered as either unknown or by EMF exposures
- No action in public health arena by the majority of analyzed organizations and governments
  - Some organizations that consider EMF as proven cause of EHS call for a variety of preventive measures

# Review of EHS public health policies

Important reliability issue:

A lack/scarcity of medical professionals, physicians, in organizations crucial to developing EMF radiation safety limits to protect health of the population.


The possibility of health effects is decided by physicists and engineers and a few epidemiologists (!)

- The WHO EMF Project that world-widely recommends use of ICNIRP safety guidelines, is an office consisting of the Head of the EMF Project and an assistant. The head of the WHO EMF Project is an electrical engineer
- On the ICNIRP Main Commission there is currently one medical doctor (physician) but this person has joined ICNIRP only after the 2020 guidelines were developed
- On the IEEE-ICES membership there is only one medical doctor (physician)


# Review of EHS public health policies

There are no indications by the WHO, ICNIRP or IEEE-ICES and governments of the willingness to pursue molecular level research on the individual sensitivity to EMF/RF-EMF in general and specifically of EHS.

# Are current safety guidelines correct?

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SPECIALTY SECTION

## Call for consensus debate on mobile phone radiation and health: Are current safety guidelines sufficient to protect everyone's health?

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# Are current safety guidelines correct?

There is general consensus that the majority of the studies on EMF/RF-EMF and human health, including EHS related research, are of poor quality, have small sample size and provide in vitro/animal evidence that has not been confirmed to occur in living humans

However, this poor quality scientific evidence is used to back-up claims of human health safety

# Are current safety guidelines correct?

In a situation, when scientific studies on EMF/RF-EMF and health are of known and proven insufficient quality, what is the *scientific, ethical,* and *moral* responsibility of scientists when they claim that human health safety is already assured by the currently available poor quality research?



# Are current safety guidelines correct?

There are two opposing views on the same EMF research evidence

Groups of scientists with the 'opposing' views don't want to agree to debate to find a consensus - they consider the other side as 'unworthy' to debate with

Without the consensus debate we don't know whether the safety guidelines set by '*one-side-of-the-debate*' are correct and sufficient to protect humans and environment for long time ahead

# ...for more information

...see my posters #11 and #12

...and my published articles:

- Leszczynski D. Review of the scientific evidence on the individual sensitivity to electromagnetic fields (EHS). *Rev Environ Health*. 2021; 37(3):423-450
- Leszczynski D. The lack of international and national health policies to protect persons with self-declared electromagnetic hypersensitivity. *Rev Environ Health*. 2022; doi: 10.1515/reveh-2022-0108
- Leszczynski D. Physiological effects of millimeter-waves on skin and skin cells: an overview of the to-date published studies. *Rev Environ Health*. 2020; 35(4):493-515
- Leszczynski D. Call for consensus debate on mobile phone radiation and health: Are current safety guidelines sufficient to protect everyone's health? *Front Public Health*. 2022; doi: 10.3389/fpubh.2022.1085821
- Leszczynski D. Editorial: Experts' opinions in radiation and health: Emerging issues in the field. *Front Public Health*. 2023; doi: 10.3389/fpubh.2023.1168971

# CONCLUSIONS

Individual sensitivity to EMF/RF-EMF exists but was not yet examined with correct methods and sufficient scientific stringency

EHS, a claimed form of individual sensitivity to EMF/RF-EMF, should be examined with combination of psychological provocation studies (subjective data) and studies examining physiological end points, preferably using proteomics (objective data)

WHO and governments should develop policies that would help self-declared EHS persons to cope with their health symptoms

Scientists on both sides of the debate need to get together and find consensus opinion on health effects of EMF/RF-EMF exposures

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- Slides of this presentation as well as posters are available on my website:
- BRHP – Between a Rock and a Hard Place  
(<https://betweenrockandhardplace.wordpress.com/>)