

New Aspects on Prevention, International Policies and Actions for Public Health of Electro Magnetic Field (EMF) Related Health Problems

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1. Introduction

New wireless technologies have been introduced to mankind without any certainty about potentially adverse effects, raising new challenges for medicine, public health and society.

Meanwhile in almost every area of life, EMF exposure occurs. Thus, in many countries, the fifth generation cellular network technology (5G) that provides broadband access is to be expanded in many countries. Due to the massive spread of the new antenna technology, very high radiation densities are to be expected.

2. Study Situation and Observations

Various studies, empirical observations and patient reports clearly indicate interactions between EMF exposure and health problems. There is strong evidence that particularly long-term exposure to certain EMFs is a risk factor for diseases. So all exposed persons are therefore clearly and compulsory participants in an experiment with a still uncertain outcome.

Similarly, mobile communication-associated diseases, like addiction and orthopedic disorders increase in frequency and severity over time.

3. Benefits and Risks

A question is always the benefit of a technology. In relation to 5G autonomous driving and the “Internet of Things” are mentioned here. The question arises as to whether motorists want to give up their freedom and submit to a computer? Could the autonomy be guaranteed also by a chauffeur service? Do I need a refrigerator that tells me via radio waves, what is the expiry date of my milk, or which quantity of orange juice I have left in my fridge? The fact is that smart applications without a 5G network are possible - including autonomous driving, as recently confirmed by the European Parliament.

4. Largely Unknown Facts

Our thinking processes can be inspired by diverse, largely unknown facts.

Thus, there is a disclaimer of the insurance companies for the mobile technology. Furthermore the electromagnetic fields produced by mobile phones are classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans.

An unverified mass and permanent use of wireless technologies is therefore to be regarded as negligent. Evidence of safety must be provided.

5. Precautionary Principle and Funds

Therefore, it is important to carry out adequate assessments and to establish correct parameters for diagnosis. Prior to treatment we should mainly focus on prevention or reduction of EMF exposure in everyday life.

This requires also a reversal of the burden of proof where industry and the state prove the safety of wireless technologies and accept liability for negative effects on humans, animals and nature. Regarding the implementation of new technologies with a potential health risk, the precautionary principle has to be applied and respected.

It also recommends setting up a fund to sponsor industry-independent scientific research and cover claims for damages.

6. Conclusion and Perspectives

Restoring a world without wireless communication is an illusion. It is a matter of propagating, precautions and rules for prudent handling and encouraging and motivating people to use these technologies as a tool, that is, only when really needed. Furthermore, potentially harmful technologies can be replaced by the implementation of other technologies without loss of comfort. Such are, for example Fiber optic cables, which are faster, more data-secure and not potentially harmful to health. Their installation even creates new jobs.

Last but not least, the simplest and easiest strategy is to implement EMF-free zones and periods.

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