

This abstract is for a presentation made an international conference entitled “The Precautionary EMF Approach: Rationale, Legislation and Implementation”, convened by the International Commission for Electromagnetic Safety and hosted by the City of Benevento, Italy, in February 2006

My presentation is in memory and with thanks to my good friend, and wonderful researcher, Neil Cherry who unfortunately died much too early in June 2003.

Electromagnetic radiation is a carcinogenic, neurogenerative, genotoxic immunodepressive: EMR poses a grave danger to human health. Let’s not activate new antennas. Let’s minimize use of cell phones

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“The results of cellular experiments, animal experiments and human studies form a consistent and coherent set of evidence that RF/MW is causally associated with reproductive and cancer effects, as well as altering and impairing brain function, reaction times, sleep and learning and impairment of the immune system. There is compelling and consistent evidence of cancer, especially leukaemia.¹”

Cherry observes that epidemiology currently identifies the Lowest Observed Adverse Effect Level for RF/MW as 0,48 V/m for cancer and reproductive effects and as 0.04 V/m for sleep disruption, learning impairment and immune system suppression: this signifies that the Italian standard, that limits the chronic exposure to RF/MW by the population to 6 V/m is completely insufficient to protect the public health.

Based on the knowledge already available in 1999, we can then affirm on science and consciousness that human exposure to low and high frequency EMR is increasingly at dangerous levels, that we do not know a threshold for adverse health effects², and therefore continuous daily exposure for years to mobile phone antennas should be considered a serious danger for human health (potentially causing cancerous tumors; neurogenerative diseases, such as Alzheimer’s and Parkinson’s; genotoxic and immunodepressive effects, insomnia and depression.)

These conclusions reached by Cherry in 1999 are confirmed by an important recent study by Swedish researchers at Stockholm’s Karolinka Institute³. A long term research study on the incidence of acoustic neuroma among the Swedish population of 3.1 million people, found there was a major incidence rate of 3.9 %, among the population studied, for persons who used cellular phones regularly (at least once a week or more during 6 months or more) compared to persons who had not used cell phones regularly during ten years of ownership. This study shows that cell phone

users are at risk of developing an acoustic neuroma four times more than non-cell phone users (posing a health threat to 25% of the world's population!) Other recently published studies confirm the cancer risk for cell-phone users^{4 5 6 7} In conclusion, we consider that our actual knowledge to date, based on epidemiological and biological studies are more than sufficient to consider serious dangers for human health from exposure to a variety of sources of EMF, from mobile communication antenna installations to cellular phone use as well as power lines. Electrical power transmission lines, which emit 50/60 hertz electromagnetic fields was determined to be a possible human carcinogen by the International Commission on Research on Cancer (IARC) in 2002 based on double the amount of risk of developing childhood leukemia for populations exposed to magnetic induction levels higher than 0,4 uT.⁸

Finding:

In light of such evidence, we can then affirm that the threshold for adverse health effects is zero.

Proposal:

In this situation, we propose a policy of progressive reduction of electrosmog, authorizing only those antenna installations emitting EMF in low and high frequency that reduces exposure for at least one person without increasing exposure for other people. This means, for example, that we can authorize a new antenna in a zone only if we shut down other antennas that irradiate in this coverage zone so that at least one person in the coverage zone has reduced exposure and no other person in the same coverage zone has increased exposure.

Actually there are interesting results that indicate the possibility of communications between human cells that may also be occurring at the intracellular level with different ranges of EM waves⁹ and also a cellular metabolism using ionizing radiation¹⁰.

At the same time there are important results that suggest a theory to explain the adverse health effects produced by exposure to EM fields^{11 12 13 14 15 16 17}. In light of these results I propose to ICEMS a research program to determine, if possible, the characteristics of EMF that cause these adverse health effects with the obvious objective to use EMF more safely than actually. A second very important objective of the research should be, I advise, to determine the natural channel of EM communication at cellular and intracellular level with the aim of identifying the eventual failure of the communication link that interrupts essential cellular functions, as for example, the apoptosis of modified cells of precancerous types.

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