Public Health Threatened By Rapidly Increasing Exposure To High Frequency Electromagnetic Radiation

The Issues:

1) <u>Radically increasing everyday exposure to radiofrequency radiation, including the very high frequency radiowaves known as microwaves.</u>

- The increased exposure comes from two unrelated sources.
 - o One: transmitted radiofrequency radiation from devices such as WiFi, cellphones, wireless baby monitors, DECT cordless phones, and cell towers, none of which were present in the 1970's and are unavoidable today.
 - o Two: high frequencies, or electrical pollution, into the radiofrequency range present on building wiring from poorly engineered electronics and energy efficient lighting which only began widespread use in the late 1970's.

2) Lack of adequate safety standards.

- EPA does not protect the public health.(1,2) There is no true safety standard due to political pressure from an industry group in the 1990's.
 - o Radiofrequency radiation threatens human health and our bee, bat and bird populations and the EPA does nothing. (3,4,5,6,7,8,9,10,11,12,13,14,15,16,17)
- There are no comprehensive conservative safety standards designed to safeguard the public health during the continuous exposures to radiofrequency radiation experienced in daily life. (1,2)
 - Our current FCC "safety" standards are designed solely to protect a 6 ft 185 lb man from tissue heating during a short (6 minute) exposure.
 - Our current FCC "safety" standards are not designed to protect even a 6 ft man from biological effects during a continuous exposure.
 - None of the transmitter technology has been subjected to rigorous health studies as is required for drugs, in spite of its use resulting in involuntary exposure for an uninformed non-consenting population.
 - o Nor has any post-marketing public health surveillance been implemented.
- There are <u>NO safety standards</u> to safeguard the public health from exposure to high frequencies on building wiring, resulting in widespread availability of dangerous consumer products including:
 - o Compact fluorescent light bulbs and other fluorescent lights with electronic ballasts.
 - o Dimmer switches, variable speed motors, etc.
 - o Inverters, including those on wind turbines and solar systems.
- Safe electrical devices could be engineered if the proper standards were in place.

3) Everyday exposures to radiofrequency radiation threaten our public health.

- Since the 1970's many disease rates have skyrocketed, including rates of Alzheimer's Disease, multiple sclerosis, asthma, diabetes, and autism. Studies show a relationship to radiofrequency exposures.(6,11,12,13,14)
- Overexposure to radiofrequency radiation can cause radiofrequency sickness (aka radiowave or microwave sickness) in susceptible people. It has very real and disabling health effects.(3,4,5)

- o Information about radiofrequency sickness can be found at <u>www.electricalpollution.com</u>.
- Exposure to radiofrequency radiation has very real and threatening health effects in the long-term for a majority of the population.
 - o More information can be found at <u>www.bioinitiative.org</u>, a report by leading researchers.
 - O Detrimental biological effects, distinct from tissue heating effects, have been extensively documented in studies at a range of different frequencies and at levels far below the current United States safety standard and provide a mechanistic basis for health effects.(6)
 - o A recent Swedish public health study suggests a link between the decline in public health and cellphones.(7)
- High frequency signals on power lines also cause illness. See www.electricalpollution.com.
 - o Milham and Morgan found a dose-response relationship between high frequencies present on building wiring and cancer.(9) Recent analysis of historical epidemiological data indicates a relationship to cancer, diabetes, heart disease, and suicide.(10)
 - o Removing high frequencies on building wiring has improved MS symptoms, blood sugar levels, asthma, sleep quality, teacher health, headaches, ADD, and numerous other health problems.(11,12,13)
 - o Technical papers provide a solid electrical and biomolecular basis for these effects. (18,19)
 - Transients and communications signals on wires induce much stronger current density levels in the human body than does the powerline 60Hz signal.
 - The induced currents disturb normal intercellular communications, causing harmful long-term and short-term effects.
 - Technical information necessary to properly measure the electrical pollution levels on building wiring can be found on the Technical page at www.electricalpollution.com.
 - A simple meter is also available that can provide accurate measurements in most situations.

4) Our civil rights trampled

- For the last 13 years, sensitive people like ourselves have had no protection in public places, essentially restricting us to our homes, even forcing us to move from them in a quest for a safe haven, and preventing us from using public libraries, public schools, and attending public events. Those concerned about long-term health effects have also had no recourse.
- The 1996 Telecommunications Act preempts the right to free speech and has stopped all consideration of the safety and environmental consequences of exposure to transmitted radiofrequency radiation, including the pulsed microwave radiation used in modern communications, in siting transmitting towers and in the court of law. Therefore, the silence outside of and inside of court is not a measure of the safety of the technology, but rather the tightness of the gag.

Ecology House is a perfect example of how this law has unfairly restricted the right to free speech time after time, resulting in involuntary exposure to a dangerous pollutant for millions. http://www.marinij.com/marinnews/ci 12880530

- **Increasing involuntary exposure.** Transmitting utility meters will soon be installed on all homes nationwide and wireless broadband will be everywhere, in spite of the risks.
 - o Most transmitting meters and wireless broadband transmit continuously.
 - o This will cause great disability for the increasing population of individuals with radiofrequency sickness. The long-term threat to the public health is nationwide.
 - Utilities refuse to offer meaningful alternatives to having a transmitting meter for those with radiofrequency sickness.

- And utilities refuse to remove transmitting meters for those being made ill.
- And communities are not protecting those with radiofrequency sickness from wireless broadband.
- There is no more basic civil right than the right to health and safety in our homes. Without that, what is there?

The Solutions

- **Briefing of congressional committees with jurisdiction** by Norbert Hankin of the Radiation Division of the EPA on the history of the development of current US radiofrequency radiation safety policy that has resulted in the inadequacy of current safety standards to protect public health of the general population during continuous exposures.
- Hearing on the public health threat posed to the general public by exposure to transmitted radiofrequency radiation and high frequency electrical pollution on all electrical wiring.
 - o Consult The EMR Policy Institute (802-426-3035) to ensure that all relevant researchers are invited to testify.
- Require fiber optic and other wired infrastructure for the "National Broadband Plan for Our Future."
- Reverse Section 704 of the 1996 Telecommunications Act [found at 47 U.S.C.Section 332 Subsection (7)(B)] which has deprived citizens of their First Amendment Rights by preventing discussion of health and environmental threats posed by wireless technologies.
- Reverse the ban on incandescent light bulbs until safe alternatives exist. (New Zealand has already done this.)
- Reform proceedures at the EPA to limit industry influence.
- Require the EPA to write a conservative standard to establish safe levels of exposure for the general population during the continuous daily exposures we now experience.
 - o See NAS report: **Identification of Research Needs Relating to Potential Biological or Adverse Health Effects of Wireless Communication** (2008) pp.13-18.
 - The non-ionizing radiation standard should be protective from the non-thermal effects of exposure to radiofrequency radiation, both transmitted and on building wiring.
 - o Radiation emitting and electrically polluting devices should require rigorous health testing prior to approval.
 - o Rigorous surveillance must be required to document whether the new standard is sufficiently protective.
 - o Continuously transmitting devices should be banned. (The Israeli Environmental Ministry has done this, citing the precautionary principle.)
 - o Compliance with the new safety standard should be required for all consumer products and all other governmental agencies.
- Require the Children's Health Study to include assessment of both transmitted radiofrequency radiation exposure levels and electrical pollution levels in its study design.
- Ban cellphone use, including texting, while driving.

- O Collection and tracking of data from cellphone providers should be required as part of accident reports, including whether the phone was on, off, texting, or calling.
- Require a warning label on cellphones and cordless phones.
 - o It should state "Due to significantly increased health risks pregnant women and children under 21 should strictly limit use. Others should use sparingly." (8,14,15)
- Require the Surgeon General to educate the public about wireless radation exposure health risks, e.g. the increased cancer risk for children, the risks to unborn children (ADHD, heart abnormalities) and the increased risks for adults (brain tumors, other health risks such as neurodegenerative diseases, compromise of immune function, negative effects on sleep and cognitive function). (3,4,5,6,7,8,9,10,11,12,13,14,15)

Congress Must Act Now

Dangerously high exposures to high frequencies, both transmitted and on building wiring, are contributing to deteriorating public health, causing healthcare costs to skyrocket.

Remember, X-rays were once regarded as harmless and used as entertainment at garden parties and to size children's shoes.

References:

- 1) A letter from Norbert Hankin, Center for Science and Risk Assessment, Radiation Protection Division, EPA, regarding the limitations and purpose of the FCC exposure standards. http://www.emrpolicy.org/litigation/case_law/docs/noi_epa_response.pdf
- Identification of Research Needs Relating to Potential Biological or Adverse Health Effects of Wireless Communication, 2008, National Academy of Science.
- Johnson Liakouris AG. Radiofrequency (RF) sickness in the Lilienfeld study: An effect of modulated microwaves Archives of Environmental Health; May/Jun 1998; 53, 3.
- 4) Santinirl R, Santini P, Le Ruz P, DanzeJM, and Seignel M. Survey Study of People Living in the Vicinity of Cellular Fhone Base Stations. Electromagnetic Biology and Medicine Vol. 22, No. 1, pp. 4149, 2003
- 5) Hyland GJ. Physics and biology of mobile telephony. THELANCET Vol 356 November 25, 2000
- Cherry, N. 2000 Criticism of the Health Assessment in the ICNIRP Guidelines for Radiofrequency and Microwave Radiation (100 kHz-300 GHz)
- 7) O. Hallberg, O. Johansson, Apparent decreases in Swedish public health indicators after 1997 Are they due to improved diagnostics or to environmental factors? Pathophysiology (2009)
- 8) Sage C, Carpenter DO. 2009. Public health implications of wireless technologies, Pathophysiology Aug;16(2-3):233-46
- 9) Milham S, Morgan L. 2008 A New Electromagnetic Exposure Metric: High Frequency Voltage Transients Associated With Increased Cancer Incidence in Teachers in a California School. American Journal of Industrial Medicine.
- 10) Milham S. Historical evidence that electrification caused the 20th century epidemic of "diseases of civilization". Medical Hypotheses DOI: 10.1016/j.mehy.2009.08.032
- 11) Havas M, Olstad A. 2008. Power quality affects teacher wellbeing and student behavior in three Minnesota Schools, Science of the Total Environment, July.
- 12) Havas M. 2006. Electromagnetic hypersensitivity: biological effects of dirty electricity with emphasis on diabetes and multiple sclerosis. Electromagnetic Biology Medicine 25(4):259-68.
- 13) Havas M. 2008. Dirty Electricity Elevates Blood Sugar Among Electrically Sensitive Diabetics and May Explain Brittle Diabetes. Electromagnetic Biology and Medicine, 27:135-146. http://www.informaworld.com/smpp/content~db=all?content=10.1080/15368370802072075
- 14) Divan HA, Kheifets L, Obel C, Olsen J. Prenatal and Postnatal Exposure to Cell Phone Use and Behavioral Problems in Children. Epidemiology, Volume 19, Number 4, July 2008.
- 15) Hardell L, and Carlsberg M. Mobile phones, cordless phones and the risk for brain tumours International Journal of Oncology 35: 5-17,
- 16) The Birds, the Bees and Electromagnetic Pollution by Dr. Andrew Goldsworthy May 2009. http://www.mastsanity.org/index.php?option=com_content&task=view&id=269&Itemid=136
- 17) Nicholls, B. and P.A. Racey. 2009. The aversive effect of electromagnetic radiation on foraging bats a possible means of discouraging bats from approaching wind turbines. *PLoS ONE* DOI: 10.1371/journal.pone.0006246
- 18) Ozen, S. 2007. Low-frequency Transient Electric and Magnetic Fields Coupling to Child Body, Radiation Protection Dosimetry (2007), pp. 1–6. http://rpd.oxfordjournals.org/cgi/content/full/ncm315
- 19) Vignati, M. and L. Giuliani, 1997. Radiofrequency exposure near high-voltage lines. Environ Health Perspect 105(Suppl 6):1569-1573 (1997) http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1469914