

Electromagnetic Radiation Exposure

A growing global concern

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Electromagnetic radiation emitting devices (EMR), like cell phones and diagnostic instruments, are widely used in healthcare and bring many benefits to patients. However, the impact of the use of these technologies on the health of nurses has received very little coverage.

According to the *Journal of the National Cancer Institute*, there has been a significant increase in the risk of breast cancer among women who frequently did not sleep during the period of the night, about 1:30 a.m., when melatonin levels are typically at their highest. There was increased risk among women sleeping in the brightest bedrooms. Moreover, women who had worked 30 and more years on rotating night shifts had a 36 per cent greater risk of breast cancer compared with workers who had never worked nights. So we can extrapolate from this data that nurses who work night shifts have more risk of breast cancer than those on day shifts.

Noted Australian Neurosurgeon, Dr. Vini Khurana, the recipient of many awards over his career for his outstanding medical contributions, recently was quoted in an article by the UK's foremost health journalist, Geoffrey Lean of the *Independent*, stating that "mobile phones could kill far more people than smoking or asbestos." His assessment is partly based on the fact that over three billion people now use the phones worldwide, three times as many as smoke. Smoking kills some five million worldwide each year, and exposure to asbestos is responsible for as many deaths in Britain as road accidents. This was based on having reviewed more than 100 studies on the effects of mobile phones. Additionally, studies have shown that people who have used cell phones for over 10 years have double the risk of getting brain cancer.

On October 8, 2008, the first intermediate results of the International Interphone Study for the International Research Centre on Cancer, confirmed the increase of tumors and cancer cases due to the use of mobile phones. The data was gathered from 13 participating countries including Germany, Australia, Canada, Denmark, Japan, the UK and New Zealand. They were looking for a possible relationship between tumors and hyper frequency microwave radiation. Overall the risk results confirmed increased tumors mainly acoustic neuromas, parotid gland tumors, gliomas on the side of the head where the mobile phone was used for 10 years or more.

During October, 2008, French Minister for Health, Mrs. Roselyne Bachelot has issued twelve proposals and twelve basic caution advices in a way to limit the user's exposure to mobile phone radiations. His recommendations can be found at www.next-up.org. On this same site, there is an International Petition supporting the results of the *BioInitiative Report*, entitled: *Protect your Health from Electromagnetic Radiation*. The aim is to disseminate the findings of this report to call on substantial reduction of EMF

exposure and a goal of protecting our children. The *BioInitiative Report* is a compilation of findings of 14 international scientist as well as many peer reviewers.

The International Commission for Electromagnetic Safety, a scientific organization composed of concerned scientists worldwide, are issuing an urgent call for more health and safety protections against EMF hazards. The *Venice Resolution* was initially signed by forty-seven scientists, each who are in the forefront of their respective professional disciplines in conducting research on electromagnetic fields and health. The scientists state that "recent epidemiological evidence on adverse effects of EMF is stronger than before" and, they "take exception to the claim of the wireless communication industry that there is no credible scientific evidence to conclude there a risk".

The Department of Public Health in Toronto, Canada, recently advised teenagers and young children to limit their use of cell phones to avoid potential health risks. The advisory, believed to be the first of its kind in Canada, warns that because of possible side effects from radio frequencies, children under eight should only use a cell phone in emergencies and teenagers should limit calls to less than 10 minutes.

This past September, at a recent U.S. Congressional Hearing entitled "Tumors and Cell Phone Use: What the Science Says," held in Washington, DC, Dr. David Carpenter, Dean of School of Public Health, University of Albany and co-editor, *BioInitiative Report*, and Dr. Ronald B. Herberman, Director of the University of Pittsburgh Cancer Institute, were among the people who testified.

Dr. Carpenter stated that the evidence strongly suggests the danger of brain cancer with prolonged cell phone use and he was concerned especially about the vulnerability of children that are being exposed to EMR in this increasingly wireless world. He also cited examples of scientific studies done in Scandinavia whose citizen have been using cell phones since 1980. In studies of more that 10 years of cell phone use, there were increases in brain tumors, acoustic neuromas and cancer of the parotid gland. He noted that in South Korea there have been increased rates of leukemia in children that may be due to high exposure to EMR, and he also spoke of the eminent oncologist Dr. Leonard Hardell of Sweden, who at a recent meeting in London, cited that in Scandinavian countries, teenagers who use cell phones, have a 5 times more risk of developing brain tumors by age 29.

Dr. Herberman recently issued an advisory regarding the use of cell phones to all 3500 staff at the University of Pittsburgh Cancer Institute. He also cited examples of where warning delays led to cancer, for example, with tobacco and he was therefore committed to getting the warning out even before the evidence was 100% conclusive. He was especially concerned about children as their skulls are thinner and experience a much deeper penetration of radiation than adults. He added that there's an immediate need for more independent studies as the future of our children and grandchildren depend on this and his motto, in issuing his warning now, was that it was "better to be safe than sorry."

In coming articles, the Nightingale Initiative for Global Health (NIGH) will look at a variety of issues including the specific ways nurses and other caregivers can become more aware of the issues of EMR exposure both for their own safety and that of their patients and clients. New protocols need to be established to rule in and take account of the possible ways that prolonged cell phone usage and EMR exposure from many other devices, may be affecting many of our hormonal and organ systems and overall longevity.

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More Information:

http://www.powerwatch.org.uk/news/20081113_blood_brain_barrier.asp

<http://www.independent.co.uk/life-style/gadgets-and-tech/news/french-government-bans-advertising-of-mobiles-to-children-1299673.html>

http://yle.fi/uutiset/news/2009/01/authority_recommends_restricting_childrens_use_of_mobiles_466353.html

<http://www.radiationresearch.org>