

Is Technology Killing Us?

We exist in an age of amazing technological advances in electronics, photonics, and chemistry, but are we paying a price that we do not yet fully realize the implications of? Are we going down a path where these new technologies become indispensable economically and politically? For instance, what about the logarithmically increasing non-ionizing radiation that we are being exposed to from wireless systems, cell phones, satellite transmissions, electricity transmission, and so on. Any detrimental biological effect will be difficult to differentiate from other causes as the effects may take decades to manifest within a population. But we may get a clue from studying situations where the radiation is more intense and localized such as in cell phones and power lines.

High power electrical distribution lines have been implicated as possibly increasing the incidence of certain cancers. Even the hard to excite EPA (Environmental Protection Agency) has said, "In conclusion, the several studies showing leukemia, lymphoma and cancer of the nervous system in children exposed to magnetic fields from residential 60 Hz electrical power distribution systems, supported by similar findings in adults in several occupational studies also involving electrical power frequency exposures, show a consistent pattern of response that suggests, but does not prove, a causal link. Frequency components higher than 60 Hz cannot be ruled out as contributing factors. Evidence from a large number of biological test systems shows that these fields induce biological effects that are consistent with several possible mechanisms of carcinogenesis." [1]

The issue of cell phones and brain cancer is a more recent association for which there has been much controversy but there is enough evidence to make one wonder. In a Medscape review article they conclude "Taken together, the WTR research findings are not conclusive with respect to an increased risk of brain cancer or benign tumors associated with wireless phone usage. Indeed, these findings could be chance occurrences and should be confirmed. Alternatively, these findings could be early indications of a serious public health problem; thus, an immediate and focused follow-up is clearly necessary." [2] To get an idea of just how complex this issue of the health effects of non-ionizing radiation is, just take a look at <http://www.microwavenews.com/headlines.html> which is only a summary for the current month.

What about food additives, pesticides, and the other chemical advances that we have also become so dependent on that have been implicated in lower sperm counts, certain cancers, hormonal alterations in human physiology, and more? Though we need better facts in order to make intelligent judgments as a society (risk vs. benefit), we need to proceed with some caution when a new technology/advancement theoretically could have a detrimental health effect on the exposed population. I don't mean we should investigate any crackpot theory but rather those theories which are logical and are based upon known science. For instance, the theory that using bovine growth hormone may lower the age of puberty, not only physiologically makes sense but with the age of puberty decreasing may be validated through epidemiologic studies comparing the age of puberty of lactose-intolerant children to those of BGH-milk drinking children. Or comparing the brain cancer rates of cell phone users vs. non-cell phone users over a period of decades. What about the sensitization of humans to certain plant products after being exposed to genetically modified versions of the plant (such as has occurred with corn recently). The list can go on.

With each new technological advance, Theoretics should be applied. This would mean looking at what logically derived health implications could occur based upon what science currently knows and then designing studies which could yield the answers; yielding them sooner rather than later, or even worse...too late.

Dr. Siepmann, Editor
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1. Environmental Protection Agency's (EPA) draft report, An Evaluation of the Potential Carcinogenicity of Electromagnetic Fields (EMFs) dated June 1990.
2. Medscape review article "[Scientific Progress - Wireless Phones and Brain Cancer: Current State of the Science](#)", June 31, 2000.

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