

Environmental Protection Group, a Washington D.C.-based non-profit organization with a mission to protect public health and the environment, performed a 10-month investigation of health risks associated with cell phone radiation in more than 200 peer-reviewed scientific studies, industry documents and government advisories throughout the world (2009). For a full report, click on the link below:

<http://www.ewg.org/cellphoneradiation/fullreport>

1. Cell Phones and Brain Cancer

There has been a vigorous debate among scientists, industry and public health officials about increased risk of brain cancer associated with cell phone use (Kundi 2009; Hardell 2009, American Cancer Society 2008; IARC 2008). This is not surprising because it takes many years, perhaps decades, for cancer to develop. Since cell phones first came to the market in mid- 1980s after FCC approved the first mobile phone in 1983 and have been in common use for a little over a decade, short-term studies did not find increased risk of brain cancer (Ahlhorn 2009; Croft 2008, FDA 2003).¹ However, longer-term data among people who have used cell phone for over ten years showed increased risk of developing two types of brain tumors (glioma and acoustic neuroma) on the side of the brain where cell phone is usually held (Takebayashi 2008; Hours 2007; Lakhola 2007; Schuz 2006; Lonn 2005).

EWP report emphasizes the following recent studies regarding health risks pertaining to cell phone radiation: put the following paragraphs as a block quote in the middle of the page because it is a big quote)

“Brain cancer: Two analyses of 25 original publications identified a 50 to 90 percent increase in risk for two types of brain tumors: glioma and acoustic neuroma. (Hardell 2009, Kundi 2009).

Salivary gland tumors: An Israeli study found an increased risk of 50 to 60 percent for salivary gland tumors among people with highest cell phone use (Sadetzki 2008).

Behavioral problems: A study of 13,159 Danish children showed 80 percent elevated risk for emotional and hyperactivity problems among young children who use cell phones and whose mothers also used cell phones during pregnancy (Divan 2008).

Migraines and vertigo: A study of 420,095 Danish adults showed that long-term cell phone users were 10 to 20 percent more likely to be hospitalized for migraines and vertigo than people who took up cell phones more recently. (Schuz 2009).”

2. Cellphones and Brain Tumors

15 Reasons for Concern

Science, Spin and the Truth Behind Interphone, August 25, 2009

http://radiationresearch.org/pdfs/reasons_us.pdf

“Studies, independent of industry, consistently show there is a “significant” risk of brain tumors from cellphone use.

1. Significant as used throughout this document, is a shorthand term-of-art for “statistically significant” which means there is a 95% or greater probability that the finding is not due to a chance finding. Conversely, “nonsignificant” is shorthand for “statistically non-significant” meaning that there is less than a 95% confidence that the finding is due to chance. Also see the footnote in Concern 2.

The electromagnetic field (EMF) exposure limits advocated by industry and used by governments are based on a false premise that a cellphone’s electromagnetic radiation has no biological effects except for heating. There are thousands of studies showing biological effects from electromagnetic radiation at exposure levels far below where heating occurs (non-thermal effects). The BioInitiative Report provides extensive documentation of studies that show that there are non-thermal effects. We urge readers to review this report. It can be found online at

The names of the persons responsible for these Interphone study design flaws have not been made public so they could be questioned about why these design choices were made. In no profession, and in particular for a public health matter, are the responsible people not held accountable for the product of their work. In aggregate, the Interphone study's design flaws substantially reduce the reported risk of brain tumors from cellphone use. These flaws are discussed in detail in Appendix 1. The flaws that result in an underestimation of the risk of brain tumors include:

o selection bias

o treating study subjects who used a cordless phone as “unexposed” to microwaveradiation

o insufficient latency time to expect a tumor diagnosis

o unrealistic definition of a “regular” cellphone user

o exclusion of children and young adults from the study

o exclusion of many types of brain tumors, and

o exclusion of people who had died, or were too ill to be interviewed, as a consequence of their brain tumor. In the interest of truth in science, and fair reporting, this document has been prepared to provide journalists and government officials access to additional information, independent of industry, in order to enable a better understanding and balanced reporting of all sides of this important topic.”

Endorsements

We the undersigned believe it is essential that governments and the media understand the independent science regarding cellphone use and brain tumors, as well as the design flaws of the 13 country Interphone study. The widespread nature of wireless telecommunication systems requires that society understand any potential risks, and that this understanding be as current as possible with the latest evidence-based science. We endorse both the message and urgency of this report.

Initial Endorsers (from 14 countries):

USA Martin Blank, PhD, Associate Professor of Physiology and Cellular Biophysics, Columbia University

USA David O. Carpenter, MD, Director, Institute for Health and the Environment, University at Albany

USA Ronald B. Herberman, MD, Director Emeritus, University of Pittsburgh Cancer Institute

USA Elizabeth A. Kelley, MA, Environmental and Public Policy Consultant

USA Henry Lai, PhD, Research Professor, Dept. of Bioengineering, University of Washington

USA Jerry L. Phillips, PhD, Director, Science Learning Center, University of Colorado at Colorado Springs

USA Lawrence A. Plumlee, MD, Editor, The Environmental Physician, American Academy of Environmental Medicine

USA Paul J. Rosch, MD, FACP, Clinical Professor of Medicine and Psychiatry, New York Medical College; President, The American Institute of Stress; Emeritus, Member, The Bioelectromagnetics Society

USA Bert Schou, PhD, CEO, ACRES Research

USA Narendra P. Singh, Research Associate Professor, Department of Bioengineering, University of Washington

USA Morton M. Teich, MD, Physician, New York, NY, Past President, American Academy of Environmental Medicine

Australia Vini G. Khurana, MBBS, BSc (Med), PhD, FRACS, Associate Professor of Neurosurgery, Australian Capital Territory

Australia Don Maisch, PhD (Cand.), Researcher, EMF Facts Consultancy

Australia Dr Charles Teo, MBBS, FRACS, Neurosurgeon, Director of The Centre for Minimally Invasive Neurosurgery, New South Wales.

Austria Gerd Oberfeld, MD, Public Health Department, State Government Salzburg and Speaker for Environmental Medicine for the Austrian Medical Association, Vienna Cellphone and Brain Tumors - 15 Reasons for Concern

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Brazil Alvaro Augusto A. de Salles, PhD, Professor, Federal University of Rio Grande do Sul- UFRGS

Canada Jennifer Armstrong, MD, Member, American Academy of Environmental Medicine; CEO, Ottawa Environmental Health Clinic

Canada Joe Foster, 29 year member of the International Association of Fire Fighters

Finland Mikko Ahonen, MSc, Researcher, University of Tampere

Finland Osmo Hänninen, PhD, Professor in Physiology (Emer.), University of Kuopio

France Daniel Oberhausen, Physicist, Association PRIARTÉM

Germany Prof. Franz Adlkofer, Dr.med., Executive Director and Member of the Board of the VerUm Foundation, Foundation for Behaviour and Environment; Germany

Germany Christine Aschermann, Dr. med., Psychiatry, Psychotherapy. Originator of Doctors' Appeal (2002 Freiburg Appeal)

Germany Horst Eger, Dr med., Bavarian Ärztekammer Medical Quality No. 65143: “Elektromagnetische Felder in der Medizin - Diagnostik, Therapie, Umwelt”

Germany Cornelia Waldmann-Selsam, Dr.med, General Practitioner; Initiator of the Bamberg Appeal (2005)

Germany Ulrich Warnke, Dr. rer. nat., Academic High Councilor, Biosciences, University of Saarland

Greece Adamantia Fragopoulou, MSc, Medical Biology, PhD (cand.), Electromagnetic Biology Research Group, Athens University

Greece Lukas H. Margaritis, PhD, Professor of Cell Biology and Radiobiology, Dept. of Cell Biology and Biophysics Faculty of Biology, University of Athens

Greece Stelios A Zinelis, MD, Hellenic Cancer Society

Ireland Con Colbert, Association Secretary, Irish Doctors Environmental Association

Ireland Senator Mark Daly, National Parliament, Republic of Ireland

Russia Professor Yury Grigoriev, Chairman of Russian National Committee on Non-Ionizing Radiation Protection, a member of WHO International Advisory Committee on “EMF and Health”

Spain Alfonso Balmori, PhD, Biologist, Researcher on effects of electromagnetic fields on wildlife

Sweden Örjan Hallberg, MSEE, Hallberg Independent Research

UK Mike Bell, Lawyer, Trustee, Radiation Research Trust (RRT)

UK Ian Dring, PhD, Independent Consultant Scientist

UK Gill Evans, M.Phil, Member of European Parliament for Wales Plaid Cymru Cellphone and Brain Tumors - 15 Reasons for Concern

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UK Ian Gibson, PhD, biologist and geneticist, cancer researcher, ex-senior M.P. and Chair of Science and Technology Select Committee

UK Parliament

UK Andrew Goldsworthy, PhD, Imperial College London, Lecturer in Biology (rtd)

UK Mae-Wan Ho, PhD, FRSA, Founder and Director Institute of Science in Society

UK Caroline Lucas, PhD, Member European Parliament, UK Green Party Leader, Trustee of the Radiation Research Trust

UK Philip Parkin, General Secretary, Voice, union for education professionals

UK Chris Woollams, M.A. Biochemistry (Oxon), Editor, Integrated Cancer and Oncology News (icon magazine), CEO CANCERactive

3. Alzheimer's and EMF Connection?

December 05, 2008

<http://www.emf-health.com/blog/>

"A Switzerland University study reported a month ago that people living within 50 meters (about 50 yards) of a high-voltage power line were more likely to die with Alzheimer's disease. After 15 years of living near a 220-380 kV power line, the odds of dying with Alzheimer's were double the expected rate, according to the report.

This is not the first study making the connection between Alzheimer's and EMF exposure. Back in 1994, a joint U.S.-Finnish team has linked occupational EMF exposures to the disease, and the association appears to be quite strong. In a paper presented at the 4th International Conference on Alzheimer's Disease and Related Disorders in Minneapolis, Dr. Eugene Sobel of the University of Southern California (USC) School of Medicine in Los Angeles reported a series of significant relative risks that are, he said, higher than those reported for leukemia and other types of cancer. Seamstresses who use industrial sewing machines appeared to be particularly vulnerable. Dr. Sobel just last year concluded in a review for the Bioinitiative Report that there is "strong epidemiological evidence" that magnetic fields are a risk factor for Alzheimer's disease."

4. Three Possible Health Dangers of Long-Term Cell Phone Use

Natural News, November 14, 2008 by Reuben Chow

More and more people are owning and using cell phones today. On top of that, people are using them from a younger age. While the evidence of any health risks of cell phone use is far from clear-cut, some studies have suggested that it can increase cancer risk, cause behavioral problems in children as well as affect male fertility.

Health Danger 1 – Decreased Male Fertility

In 2007, research at the Cleveland Clinic found that men who used cell phones for more than four hours per day had markedly poorer sperm quality than their counterparts with lower cellphone usage.

Recently, the same team delved deeper. In a study published in *Fertility & Sterility*, they obtained sperm samples from 32 men and split them into 2 groups – control and test.

After being placed an inch from a 850-Mhz cell phone which was in 'talk' mode, the sperm in the test group samples had higher levels of harmful free radicals as well as lower levels of protective antioxidants as compared to the control group, i.e. the unexposed sperm. These resulted in a drop in the affected sperm's function, motility as well as overall health.

There was, however, no significant difference in DNA damage between the two groups.

This is a small, laboratory-based study, and more research is definitely still needed in this area. On top of that, sperm in men would actually be further away from cellphones, and also be protected by a few layers of human tissue. However, despite these factors, the findings of this study still offer cause for concern, and men, especially those planning to start a family, may want to keep their cell phones as far away from their reproductive parts as possible.

Health Danger 2 - Increased Cancer Risk

Much of the research done on the link between using cell phones and any possible increase in cancer risk has centered on brain cancer, largely because it is the organ in closest proximity to the gadget. And the evidence so far has been mixed.

"It's fair to say that the data aren't all in yet. There are a small number of epidemiological studies that have suggested a possible increase in cancer risk. But comparable studies in other populations haven't confirmed these findings," said Dr David L McCormick, who is the director of the Illinois Institute of Technology Research Institute in Chicago.

While cell phones do emit radiation, it is apparently of the type called non-ionizing radio frequency, and does not pose the dangers of ionizing radiation - X-ray machines are one source of such damaging radiation. According to Dr McCormick, the weak signals released by non-ionizing radio frequencies do not cause damage to DNA. For example, in animal studies, no evidence of DNA damage by low levels of radio frequency was found.

A number of studies have not shown up a link between cell phone use and increased cancer risk. However, one possible limitation of those studies is their limited timeframe. After all, cancer, especially brain cancer, takes years, even decades, to develop.

And, the thing is, there are studies which have shown increased cancer risk for frequent cell phone users.

For example, a piece of research led by Dr Siegal Sadetzki, an epidemiologist at Gertner Institute, Chaim Sheba Medical Center, Israel, found that

heavy cell phone users had a 50% higher risk of developing a parotid tumor. Such tumors arise in the salivary gland near the ears and the jaw, a position where cellphones are typically held, and they can be malignant or benign.

The findings of this study were important because it actually tracked the cellphone users for more than a decade. Significantly, a link was also found between tumor location and the side of the head whereby the users usually placed their cellphones.

Adverse Health Impact of Cell Phones on Children

Of graver concern is the effect of cell phone use on children. Many of our young ones are using cellphones today, sometimes for hours at a stretch. Some households do not even have a landline anymore, and cellphones are the main mode of teleconversation.

Earlier this year, market research and consulting firm Harris Interactive conducted a survey of more than 2,000 American teens. It found that 79% of teens, or 17 million of them, use cellphones, compared with only 36% in 2005. That is more than double.

And children are more susceptible to any potential dangers because their nervous systems are still in development. It is thus possible that the radio frequency emissions from the phones could cause other health issues in other parts of the body – for example, the central nervous system could be affected, thereby having a negative impact on learning or behavior, or cancers could result in organs other than the brain. These are points put forth by Dr Leeka Kheifets, a professor of epidemiology at UCLA's School of Public Health.

Then there is also the matter of head size. As described by Ronald Herberman, director of the University of Pittsburgh Cancer Institute, while radiation from a cell phone only travels about 2 inches into the brain of an adult, it goes beyond the center of a child's brain. That's deep impact.

Health Danger 3 - Behavioral Problems in Children

And there are studies which reveal the negative impact of cell phones on the health of the young ones.

For example, quite recently, Dr Kheifets and researchers in Denmark looked at over 13,000 Danish children born in 1997 and 1998. The children were part of a study called the Danish National Birth Cohort.

The study discovered that those children who used cell phones and whose mothers had used cellphones during their pregnancy had 80% higher incidence of behavioral issues.

These include emotional issues, hyperactivity, inattention and having problems with their peers. Even those children who themselves did not have cellphone exposure except during their mothers' pregnancies had 54% higher incidence of such problems. These figures are indeed worrying.

Cancer in Children

When we combine the "cancer" and "children" of cell phone use, the result is even more frightening and shocking.

A recent study conducted in Sweden revealed that children and teenagers who use cellphones have five times the risk of getting brain cancer.

Professor Lennart Hardell, leader of the study, said that "people who started mobile phone use before the age of 20" had more than five times the incidence of glioma, which is cancer of the glial cells that support the central nervous system.

In addition, these young cell phone users have five times the risk of getting acoustic neuroma, which is a disabling tumor of the auditory nerve that often causes deafness.

Further, the study revealed that cordless phones increased cancer risk greatly too – the corresponding increase in risk of glioma being four-fold instead of five.

The Worst May Be Yet To Come – More Research Is Needed

We already have some indications of the dangers of cell phone use, particularly in affecting children and teenagers as well as in raising cancer risk. The alarming thing is, the worst is probably yet to come.

Dr Vini Khurana, an Australian neurosurgeon, recently published a paper on the Internet which stated that phone use "has far broader public health ramifications than asbestos and smoking".

Having analyzed data from more than 100 different studies, he concluded that most of them did not cover timeframes long enough to measure the potential impact on brain cancer risk. In addition, he said that there is a lack of research on children. Dr Khurana actually appeared on the Larry King show, and his stance was described by Dr McCormick as being "rather extreme".

But he has a point, and it is clear more research is needed. This was echoed, to a certain extent, by Dr Sadetzki, who said that research carried out on children as well as long-term studies should provide better clarification on the possible health risks of cellphone use.

"Since many people are now using hands-free sets with their cell phones for various health and safety reasons, it's important that we continue studying this topic to gain a better understanding of the true impact these devices are having on every part of the body," added Dr Edmund Sabanegh, director of the Center for Male Fertility for the Glickman Urological and Kidney Institute at the Cleveland Clinic.

What Next For Us?

It is possible that short-term exposure to handphones is safe. "At this point, it looks unlikely that cell phones are causing brain tumors, particularly from short-term exposures," said Dr Kheifets.

The problem is, our exposure is hardly "short-term" anymore. So many people today are using cell phones. Not only that, we use them frequently and for long periods. The young ones have started using cellphones at a relatively tender age, too, where it is believed they will be more susceptible to any possible health risks.

With cell phone technology still rather new, and the overall lack of long-term research on its dangers to health, it is surely better to be safe rather than sorry.

As Dr Sadetzki said, "I believe that the cellphone technology has a lot of advantages and is here to stay. But we, as a society, need to decide how to use it. [...] I think that the precautionary principle advising the use of simple measures to lower exposure should be adopted and taken seriously." Dr Khurana, for example, himself uses hands-free cell phone devices. Let us take the necessary precautions and, in the meantime, hope that a worldwide brain cancer epidemic is not waiting to blow up in the next decade or two. That would truly be disastrous.

About the author:

Reuben Chow has a keen interest in the area of natural health and healing and carries out regular research on the topic. His website, All 4 Natural

Health, offers a basic guide on natural health information. It details simple, effective and natural ways, such as the use of nutrition, various herbs, herb remedies, supplements and other natural remedies, to deal with various health conditions as well as to attain good health.

5. Public Exposure: DNA, Democracy and the Wireless Revolution

A Must-See Documentary on the Dangers of Cell Phone Use

By Dr. Ben Kim on February 19, 2008

<http://drbenkim.com/cell-phone-dangers>

Approximately 60,000 to 70,000 cell phones are sold each day in the United States. Over 110 million Americans use cell phones. And worldwide, it is estimated that approximately 1 billion people use cell phones. As the number of cell phones, cell phone towers, and other wireless antennas increase rapidly in industrialized nations, should you be concerned about the effects that regular exposure to radio frequency radiation can have on your health?

If you're not concerned about the effect that wireless devices and broadcasting antennas can have on your health, I encourage you to view "Public Exposure: DNA, Democracy and the Wireless Revolution," a documentary that provides the best overall look at the connection between radio frequency radiation and human health that I have ever come across.

The full documentary can be viewed below in two parts, courtesy of Google video and In case you don't have time to view this documentary, here are some highlights that I jotted down during my first viewing:

- 1. Regular exposure to radio frequency radiation may interfere with the electrical fields of our cells. Common health challenges that have been linked to regular exposure to radio frequency radiation include:**
 - o **Abnormal cell growth and damage to cellular DNA**
 - o **Difficulty sleeping, depression, anxiety, and irritability**
 - o **Childhood and adult leukemia**
 - o **Eye cancer**
 - o **Immune system suppression**
 - o **Attention span deficit and memory loss**
 - o **Infertility**
- 2. Children are at much higher risk than adults of experiencing health problems related to regular exposure to radio frequency radiation; thinner and smaller skulls translate to greater absorption of radio frequency.**
- 3. From the early 1950's to the mid 1970's, the U.S. embassy in Moscow was purposefully bombarded by radio frequency radiation 24 hours a day. The U.S. embassy workers experienced what the perpetrators identified as "Radio Frequency Sickness Syndrome." After some time of concentrated radio frequency radiation exposure, the American ambassador developed leukemia. The next American ambassador also developed leukemia. Blood tests performed on embassy staff members showed irreversible DNA damage.**
- 4. Dr. Jerry Phillips, a biochemist researcher, began studying cell phone safety for Motorola more than a decade ago. When he started generating data that indicated that cell phones have negative effects on human health, Motorola took a number of steps to delay publication of Dr. Phillips' work. According to Dr. Phillips, Motorola's main concerns with his data were how to handle public relations and how to spin the results in a way that was favorable to the industry. Dr. Phillips also indicates that the only significant money that is available to do research on cell phone safety issues is industry money. This is why he has no faith in studies that are coming out.**
- 5. You can use a radio and microwave detector to measure the amount of harmful radiation that your living and work spaces are penetrated by. The detector used in the documentary is called the "Microalert Radio/Microwave Alarm." Silver mesh curtains and copper flat paint can block significant amounts of radio frequency radiation. If the information provided above has you concerned, I encourage you to view the full documentary here: Public Exposure: DNA, Democracy and the Wireless Revolution**

In our household, we own one cell phone - it's a pay-as-you-go phone that we carry with us for emergency purposes whenever we go out. Rather than put our faith in any of the products on the market that claim to provide protection against radio frequency radiation, we feel that it's prudent to stay away from cell phones whenever possible.

Unfortunately, many of us have little control over the location of cell phone towers and other broadcasting antennas that emit powerful radio frequency waves. If you know of or discover any resources that our readers can use to locate such towers and antennas in their local areas, please share this information in the comments section below.

By increasing public awareness of this issue, we stand a greater chance of having municipal, state/provincial, and federal governments do a better job of regulating the placement of cell phone towers and antennas. Governments in Austria, Switzerland, and many Eastern European countries have already created protective standards for human exposure to radio frequency radiation. In Scotland, towers are not allowed to be located near hospitals, schools, and homes.

Please consider sharing this documentary with family members and friends. Thank you.

<http://drbenkim.com/cell-phone-dangers> (two videos)

6. Researcher: Cell Phones 'More Dangerous Than Smoking'

Millions of deaths could result over the long term

By Mark Huffman

ConsumerAffairs.com

March 31, 2008

http://www.consumeraffairs.com/news04/2008/03/cells_danger.html

There have been a number of health warnings over the years about possible radiation risks associated with the use of mobile phones. In case anyone is not taking these warnings seriously, British health researcher Dr. Vini Khurana puts it in language designed to get your attention:

"Mobile phones could have health consequences far greater than asbestos and smoking," he said.

Khurana – a neurosurgeon who has published more than 30 scientific papers – reviewed more than 100 studies on the effects of mobile phones.

He has written a paper based on the research, which is currently being peer-reviewed for publication in a scientific journal.

Is he exaggerating? Khurana says the numbers bear him out. He points out that three billion people around the world now use a cell phone. That's three times the number of people who smoke, and smoking amounts for some five million worldwide deaths each year.

But are cell phones really a serious risk? Khurana expresses little doubt, saying "there is a significant and increasing body of evidence for a link between mobile phone usage and certain brain tumors."

The risks, he says, will become even more apparent in the years ahead.

Action needed

Khurana believes governments should act immediately, but stops short of saying exactly what they should do. Separating people from their cell phones, at this point, might be beyond the reach of any earthly power.

Meanwhile, the cell phone industry remains unconvinced. Britain's Mobile Operators Association dismissed his study as "a selective discussion of scientific literature by one individual."

In the U.S., exploration of a possible link between mobile phones and health is moving at a slower pace. In January the National Academy of Sciences reported on its review of scientific evidence, requested by the Food and Drug Administration, by identifying areas where more research is needed.

Among the research requested by the Academy are human population studies of children and pregnant women, including childhood cancers and brain cancer; and a study of adults in the general population, comparing them with a group with medium to high exposure to mobile phones.

Salivary gland

Last month, a study in the American Journal of Epidemiology, suggests that cell phone use contributes to at least some cancers.

The study found focused on cancer of the salivary gland, looking at 500 Israeli citizens who had developed the disease and 1,300 healthy subjects. Researchers concluded that those who had held a mobile handset against one side of their head for several hours a day were 50 percent more likely to have a tumor in the salivary gland.

Since cell phones were introduced in the 1980s, there has been speculation of a heightened risk of cancer, caused by holding an electronic device against the head. There have been a number of studies, but no conclusive evidence one way or the other.

This latest study is different because it has focused on long-term users. Also, researchers say, previous studies have looked for tumor formation exclusively in the brain, not other parts of the body.

Salivary gland

Cancer of the salivary gland, they point out, is very rare, and its location so close to where a handset is held makes the tumor-cell phone connection all the more intriguing.

The mobile communications industry has repeatedly questioned studies suggesting a cancer link. It argues cell phones have been shown to be safe, and should be considered so until they are conclusively shown to be unsafe.

Skeptics worry that radio-frequency radiation emitted from the devices might be harmful to human tissue, and might contribute to the formation of tumors. Dr. Siegal Sadetzki, who headed up the research team, notes that cancer risks appeared to be higher among rural cell phone users, because their mobile phones put off increased radiation to compensate for weaker signals.

But Sadetzki concedes her study is inconclusive and should be followed up with ongoing research. Even so, she says "precautions should be taken" in order to reduce risk, especially for children and young adults who use mobile phones.

WiFi too

Add to that worries about wireless computer networks. Last year, the British scientist who raised one of the early warnings about potential health hazards from cell phones has a new worry – wireless Internet, or WiFi.

Sir William Stewart, chairman of Britain's Health Protection Agency, is lobbying British authorities for an investigation into WiFi's possible health risks, according to Britain's The Independent.

Stewart is concerned because wireless Internet may become more prevalent than mobile telephones.

A few individuals are known to suffer from a heightened sensitivity to electromagnetic radiation, but in recent years more and more physicians have expressed concern that repeated and prolonged exposure might be harmful to the wider population.

A study conducted in Finland found that people who have used cell phones for ten years or more are 40 per cent more likely to get a brain tumor on the same side of the head as they hold their handset. Research done in Sweden puts the risk at almost four times greater.

Stewart is reportedly concerned because of the similarity of the radiation emitted by cell phones and WiFi systems. But whereas cell phone radiation exposes only the person using the handset, WiFi radiation could affect everyone in the general vicinity.

Much of the concern is directed at children, who are seen as more vulnerable than adults to the effects of radiation, and because they will likely be

exposed to increasing levels of radiation throughout their lives.

The Austrian Medical Association is pressing the government to ban the deployment of WiFi in schools.

Concerns about WiFi health effects have also been raised in the U.S.

In 2003, parents sued an Illinois school that installed a WiFi system, claiming the radiation was causing headaches and memory problems. Last year, Lakehead University in Thunder Bay, Ontario refused to install a campus WiFi system, citing possible health concerns

7. Cell Phones May Lead To Lower Fertility In Male

American Society for Reproductive Medicine, January, 2008.

[http://www.fertstert.org/article/S0015-0282\(07\)00332-9/abstract](http://www.fertstert.org/article/S0015-0282(07)00332-9/abstract)

“Use of cell phones decrease the semen quality in men by decreasing the sperm count, motility, viability, and normal morphology. The decrease in sperm parameters was dependent on the duration of daily exposure to cell phones and independent of the initial semen quality.”

CBS5, March 14, 2007

by Sue Kwon

8. Dr. George Carlo Explains Mechanism of Harm from RF Radiation September 26, 2007

www.emf-health.com/blog/2007/09/dr-george-carlo-explains-mechanism-of.html

Dr. George Carlo presents the latest findings that reveal how the information-carrying radio waves from cell phones and other wireless technology are causing biological harm. Dr. Carlo is head of the Safe Wireless Initiative formed to educate the public about the dangers of electromagnetic radiation (EMR). He is also the former chief scientist of the wireless industry's largest safety research project which ended in findings at odds with the industry's agenda.

The video below was taken during his talk to the Irish Doctors Environmental Association (IDEA) in Dublin, Ireland (Feb 2007). Dr. Carlo explains the initial difficulty in finding the correlation between the variety of symptoms experienced by people and wireless radiation, but that the mechanism has now been determined.

In a nutshell, the cells regard the information-carrying radio waves as unrecognizable foreign toxins. This causes the cell membranes to harden and shut down the transport channels between cells. As a result, nutrients don't get in and waste products don't get out. Among these waste products are free radicals that cause disruption of the cellular respiratory function. The cells become further energy-deficient, eventually triggering programmed cell death. The free radicals also interfere with DNA repair, a factor in the development of micronuclei and tumor formation. (Watch the video to get the full flavor.)

9. Electrosensitivity: Is it Real?

September 18, 2007

<http://www.emf-health.com/reports-wificostlife.htm>

“A unhealthy sensitivity (or sensitivities) to a particular source of electricity, for example mobile phones, computers, power lines or even minor electrical equipment. Symptoms are wide-ranging and can include skin problems, headaches, fatigue, fainting, light sensitivity, heart problems and much more. Electrical HyperSensitivity is a name given to those who are severely affected.”

“While governments and the medical establishment are slow to recognize this condition as real and not merely psychological, there are sufferers around the world whose lives have been devastated because they could not function in our highly technological world. Sunday Express in the UK recently published dramatic stories of such electrosensitive individuals in an article called “Using Wi-fi has Cost Me My Life.”

10. Cell Phone Radiation Hidden Dangers

September 12, 2007

<http://www.emf-health.com/blog/2007/09/cell-phone-radiation-hidden-dangers.html>

Life Extension magazine published an excellent in-depth article on “The Hidden Dangers of Cell Phone Radiation.” The article looks at why cell phones are dangerous and features Dr. George Carlo, the medical scientist who first headed the multimillion-dollar study on cell phone safety funded by the telecommunications industry. Dr. Carlo's research led to findings that weren't to the industry's liking, and for years has battled to bring the truth about cell phone dangers to the public. Along the way the industry has gone on its way to discredit him and his findings, as well as other scientists in the field.

For example, do you know that the cell phone was allowed to reach the market without pre-market testing? The FDA and other government regulatory agencies were pressured by the communications industry to do so based on the low microwave power of the cell phone. Today DNA damage, brain dysfunction, brain tumors, and other conditions such as sleep disorders and headaches are being linked to cell phone use. And experts such as Dr. Carlo reveal that there may not be any safe level of electromagnetic radiation exposure. Scary, considering there are over two

billion cell phone users worldwide daily getting exposed to this danger.

This is a proverbial David vs. Goliath story, as Dr. Carlo tackles the billion-dollar industry head on. Early on, threats to his career, character assassinations, and to top it all, his house mysteriously getting burned down, only made Dr. Carlo more resolved to warn the public. He wrote a book detailing his story and his findings. Based on the book, a number of lawsuits were brought against the industry, and insurance carriers began excluding cell phone-related health risks in their coverage.

Read more of this compelling article here: [The Hidden Dangers of Cell Phone Radiation](#). And if you want to listen/watch more interviews with Dr. Carlo, you can go to this page.

11. Cell Phone Tower Near You

June 14, 2007

<http://www.emf-health.com/blog/2007/06/cell-phone-tower-near-you.html>

Two studies included in the Institute of Science in Society report (05-24-07) gave clear indications that living close to a cell phone transmitter may lead to increased health risks. A German study found a threefold increase in cancer rates among population living within 400m (about 1300 feet) of a transmitter. And an Israeli study found a fourfold increase for people living within 350m (1148 feet). Women appeared to have been affected the most in both cases.

With the proliferation of the cell phone and wireless technology, it is becoming increasingly difficult to steer clear of the information-carrying radio waves. As previously posted in this blog, you can find out the location of cell phone towers and antennas in your area by visiting antennase-arch.com.

The best solution is always a multi-layered approach. You can learn more details about the studies and some suggested intervention solutions in our latest article: [Cell Phone Towers: How Far is Safe?](#)

12. New Cordless Phones Danger

News of the World, February 5, 2006

by Robbie Collin

Cordless handsets 100 times worse than mobiles, say experts.

Having a cordless phone in your house can be 100 times more of a health risk than using a mobile. The popular phones constantly blast out high levels of radiation - even when they are not in use. Landlines are widely thought a safer option than mobiles. But researchers in Sweden now warn cordless phones are far more likely to cause brain tumours than today's mobiles.

Emissions from a cordless phone's charger can be as high as six volts per metre - twice as strong as those found with a 100 metres of mobile masts. Two metres away from the charger the radiation is still as high as 2.5 volts per metre - that's 50 times what scientists regard as a safe level.

Powerful

At a metre away the danger is multiplied 120 times - and it only drops to a safe 0.05 volts per metre when you are 100 metres away from the phone. Because of the way cordless phones work, the charger constantly emits radiation at full strength even when the phone is not in use - and so does the handset when it is off the charger.

The most common cancers caused by such radiation are leukemias. But breast cancer, brain tumours, insomnia, headaches and erratic behaviour in kids have also been linked. Those with chargers close to their beds are subjected to radiation while they sleep.

Phone watchdog Powerwatch, using a testing device called the Sensory Perspective Electromog Detector, even found electromagnetic fields as strong as three volts per metre in a bedroom above a room holding a cordless phone.

The group's director, Alasdair Philips said: "As ill-health effects have been found at levels of only 0.06 volts per metre, this is very concerning. It's likely everyone in a house with a cordless phone will be constantly exposed to levels higher than this."

The shock Swedish report - by scientists Lennart Hardell, Michael Carlbery and Kjell Hansson Mild - is backed up by many medical experts who believe cordless phones are a health risk.

Harley Street practitioner Dr David Dowson said: "Having a cordless phone is like having a mobile mast in your house. I'd recommend anyone who has one to switch to a plug-in phone."

But BT's health advisor, John Collins, disagreed. He said: "There's no conclusive scientific evidence linking the radiation to any of the symptoms experienced. The evidence is that it doesn't do us any harm. We're a responsible company and abide by all the guidelines set down by recognised experts."

13. Cell Phone Radiation May Cause Visual Damage

IsraCast Technology News, July 29, 2005

by Iddo Genuth

In a recent scientific study conducted by a team of researchers from the Technion, a possible link between microwave radiation, similar to the type found in cellular phones, and different kinds of damage to the visual system was found. At least one kind of damage seems to accumulate over time and not heal, challenging the common view and leading the researchers to the assertion that the duration of exposure is not less important than the intensity of the irradiation. The researchers also emphasized that existing exposure guidelines for microwave radiation might have to change.

Microscope photographs of lenses incubated in organ culture conditions for 12 days. Right frame shows Control lens with no damage. Bottom frame demonstrates the effect of microwave radiation on bovine lens sutures for a total exposure of 192 cycles (1.1GHz, 2.22mW). Each cycle lasts 50min followed by 10 min pause. In the absence of microwave radiation, the bubbles are generated by temperature increase to 39.5 8C during 4 h; see left frame.

The effects of exposure to electromagnetic radiation have long been a subject for debate among scientists. The technological developments of the last twenty years such as cell and cordless phones, wireless communications, monitors and even high voltage lines have all been studied as potential risk factors for cancer and other diseases. Less known to the public, but still a matter of some extensive research, is the study of the effect of microwave radiation on the visual system and especially on the lens of the eye. The basic motivation for this research came after World War II when it was suspected that radar operators suffered a greater risk of developing cataracts (a condition characterized by clouding in the natural lens of the eye). Although these particular suspicions were eventually shown to be debatable, they were the trigger for the first guidelines for exposure to electromagnetic radiation. Moreover, the eye as our natural radiation detector is the obvious choice for investigating the effects of electromagnetic radiation upon the human body.

In more recent studies on animals the effects of microwave radiation as a risk factor for cataracts have been established and have helped determine the guidelines put forth by the International Commission on Non-Ionizing Radiation Protection (ICNIRP) in 1998. A common measure for microwave radiation is the Specific Absorption Rate (SAR) which is the average power density absorbed in a given volume per average weight density (Watt/Kg). This is the standard used by cell phone companies, among others, to measure levels of radiation. When microwave energy impinges upon body tissue, part of it is absorbed and converted to heat due to ionic conduction. This heat manifests itself as a temperature increase inside the tissue. Past studies in animals have shown that even a slight increase in temperature close to the lens (as low as 3 degrees Celsius) can increase the risk of developing a cataract. With a low enough SAR the local temperature in the lens might never increase to that level. A less common measure is called Specific Energy Absorption (SA), and is defined as the energy density absorbed in the tissue divided by its weight density. While SAR is the measure of the rate microwave radiation is absorbed by a tissue, SA is the measure of the total energy absorbed. This difference played a significant role in a recently published study on the effects of microwave radiation on the visual system.

In the study conducted by researchers in the Rappaport Faculty of Medicine at the Technion, and published in the journal *Bioelectromagnetics*, a new link has been found between microwave radiation and the development of cataracts. Eye lenses of one-year-old male calves obtained from a slaughterhouse were exposed to microwave radiation - one eye from each pair used for control. Each exposure session lasted about two weeks. Both control and exposed lens were kept in an incubator at a constant temperature. During this period each exposed lens had experienced up to 2mW of 1.1GHz radiation virtually around the clock, and each hour it was exposed for a 50 minute session followed by a 10 minute break. During one of these breaks, every 24 hours, it was tested optically and compared to the control lens. During the short (5 minutes) optical test, the lens was not exposed to radiation, but when exposed, its average temperature was maintained constant in an incubator. The experiment yielded a number of interesting results:

Good quality lens as demonstrated by the optical scanner. All rays passing Through the lens have similar focal length. The thick dashed line connects the points of the back vertex Distance for each ray passing through the lens. The thick solid line shows the relative intensity of each beam.

Exposed lens, showing considerable variability in the focal length of the beams passing through the lens.

- 1. Exposing the lens for a prolonged time to microwave radiation (in the frequency and intensity described above) caused macroscopic damage affecting the optical quality of the lens. This damage increased as the experiment and irradiation continued and reached a maximum level after a number of days. When the exposure stopped the optical damage began to heal gradually. Interestingly enough, a similar maximum level was observed when the irradiation intensity was reduced to one-half the original, except that it took twice the time.**
- 2. On the microscopic level a different kind of damage occurred. Tiny "bubbles" were created on the surface of the lens. The bubbles were formed by irradiation with microwave and were not the result of a heat created throughout the lens. The researchers have speculated that the mechanism responsible for the creation of the bubbles is microscopic friction between particular cells exposed to electromagnetic radiation. Contrary to the macroscopic damage, the microscopic damage did not show any signs of healing and continued to accumulate during the course of the experiment.**

Although the researchers are cautious about interpreting the results of the experiment and its possible implications to public health, it seems that prolonged exposure to microwave radiation similar to that used by cellular phones can lead to both macroscopic and microscopic damage to the lens and that at least part of this damage seems to accumulate over time and does not seem to heal. Professor Levi Schächter, who worked on the research, told IsraCast that attention should be paid not only to the Specific Absorption Rate (SAR) but also to the total energy absorbed by the tissue (SA), which is not currently under supervision by the appropriate regulative authorities. Implying that the duration of exposure is not less

important than the intensity of the irradiation.

15. Mobile Phone Radiation Harms DNA, New Study Finds

Mon Dec 20, 2004 04:38 PM GMT

<http://www.emfct.com/dna.htm>

"Radio waves from mobile phones harm body cells and damage DNA in laboratory conditions, according to a new study majority-funded by the European Union, researchers said on Monday. The so-called Reflex study, conducted by 12 research groups in seven European countries, did not prove that mobile phones are a risk to health but concluded that more research is needed to see if effects can also be found outside a lab."

16. Study Links Tumors to Cell Phone Use

Consumer Affairs, October 14, 2004

http://www.consumeraffairs.com/news04/study_cell_phone_tumor.html

"A study in the international journal Epidemiology finds that people who have used cell phones for at least 10 years may have an increased risk of developing a rare brain tumor."

17. Men and Mobiles: Calls to Take Caution

MSN.com June 28, 2004

<http://www.cellphone-health.com/press/menandmobiles.htm>

"Mobile phones bring convenience and peace of mind, but the benefit of always being contactable may have a downside. New research shows men who regularly carry their mobiles near the groin, on a belt or in a pocket could potentially have their sperm count reduced by as much as 30 percent, ACA reports."

18. Brain Tumours: the Silent Killer

MSN, June 7, 2004

<http://www.cellphone-health.com/press/braintumors.htm>

"Dr. Charlie Teo a pre-eminent neurosurgeon is at the cutting edge literally of a 21 per cent increase in children's brain tumours. He's curious about the effect mobile phones and Electro Magnetic Radiation [EMR] may be having on these statistics, and has issued a warning to parents to be aware."

19. Mobile Phones 'May Trigger Alzheimer's'

BBC News, February 5, 2003

http://dynamics.org/Altenberg/MED/CELL_PHONES/_SEARCH/BBC.2003-2-5.html

"Mobile phones damage key brain cells and could trigger the early onset of Alzheimer's disease, a study suggests.

Researchers in Sweden have found that radiation from mobile phone handsets damages areas of the brain associated with learning, memory and movement. The study, which was carried out on rats, is the latest twist in the long-running debate over whether mobile phones are a health risk. Scientists have yet to find any conclusive evidence that mobile phones damage the human brain.

This latest study was carried out by Professor Leif Salford and colleagues at Lund University in Malmo."

20. Scientists Link Eye Cancer to Mobile Phones

THE SUNDAY TIMES: NEWS, January 14 2001, BRITAIN

by Jonathan Leake, Science Editor

"MOBILE phones have been linked to human cancer in a scientific study for the first time. The research suggests there is a threefold increase in eye cancers among people who regularly use the devices. The results will cause concern within the mobile telecoms industry."

<http://www.cellphone-health.com/press/eyecancer.htm>

21. Hands-Free Mobile Phones "Emit More Radiation"

Yahoo.News (UK&Ireland), April, 2000

<http://www.emf-health.com/reports-handsfree.htm>

"Some hands-free kits for mobile phones can increase radiation exposure to the brain, according to new research. Consumer watchdogs found that the earpieces act like aerials, directing up to three times as much microwave radiation into the brain as a phone held next to the head. Some experts are now advising users to throw away the kits, millions of which have been bought by people believing they reduce the risk of cancerous brain tumours."

Scientific tests were ordered in the wake of medical studies in Britain and overseas suggesting that mobile phone radiation is linked to brain tumours, genetic damage and a range of illnesses, including Alzheimer's. The industry has consistently denied that there is any proof of danger, but many companies and individual users bought hands-free kits to cut exposure to radiation.

The tests for the CA's Which? magazine found that instead of offering protection, the two devices tested actually acted as aerials, and channelled three times as much radiation from the phones into the users' heads. The results from Which? - the trading arm of the CA - came from tests on hands-free kits for a Philips Savvy phone sold by BT Cellnet and for an Ericsson A101-8S sold at Carphone Warehouse.

While the watchdog did not have time to test other kits, it said it believed the results would be similar. Graeme Jacobs, Editor of Which? magazine said: "If you're worried about levels of radiation from your mobile phone, you shouldn't rely on a hands-free set. The two models we tested tripled the radiation to your brain..."

Cell Phone Dangers: How Electromagnetic Radiation Disrupts Nature's Design

"Electromagnetic pollution (EMF) may be the most significant form of pollution human activity has produced in this century, all the more dangerous because it is invisible and insensible."

~ Andrew Weil, M.D., author of Spontaneous Healing and 8 Weeks to Optimum Health

Up until 100 years ago, throughout billions of years of earth's evolution, organic life had been exposed only to the naturally occurring electromagnetic field of subtly low frequency range of about 7.8 Hz. And it had been in this subtle frequency range that living cells evolved and developed normal metabolism. However, today's modern technology has dramatically changed the environment and brutally introduced all living organisms to unnatural new high frequencies of electromagnetic radiation emitted by all electrical appliances.

With the explosion in radio and TV broadcasting stations, radio telephone networks, cordless phones and cell phones, the density of radio waves and microwaves around you is now many millions of times higher than natural levels. The same applies to Extreme Low Frequency (ELF) fields produced by the dozens of electrical appliances in households in the industrialized world and the power lines feeding those devices. Industrialized countries in North America, Western Europe and China emit so much ELF energy that it can be sensed by satellites in space. Scientists estimate that YOUR daily exposure to EMF radiation is 100 Million Times higher than it was in your Grandparents' time

Exponential growth in background EMF radiation.

With the enormous increase of electromagnetic and radio wave radiation, increasing numbers of illnesses such as allergies, neurodermatitis, fatigue, asthma, heart disease, brain cancer, depression, sleep disorders and ill temper are on the rise.

In 1994, Nobel prize winners Alfred Gilman and Martin Rodbell determined that the body's cells communicate with each other by subtle low electromagnetic signals. These signals carry all the vital information that, through the process of transduction, are translated into biochemical and physiological processes of the body. EMF can potentially distort and disrupt these cellular communication signals resulting in abnormal cellular metabolism and consequently illness.

- **In 1995, Dr. Henry Lai and Dr. Singh at Washington University proved that animals exposed to cell phone radiation resulted in double-strand breakage in DNA creating serious genetic alterations that can lead to cancer, cell death and mutagenic problems. (Verschaeve et al., Phillips et al. and Sakar confirmed Lai and Singh's finding.)**
- **Adelaide Hospital animal study found cancer cell proliferation and malignant tumors in animals exposed to electromagnetic radiation. (Siddmore and Baum, Szmigielski, Chou, and Cleary all confirmed that finding.)**
- **Hundreds of other studies on the negative effects of EMF to immune system, enzyme synthesis, nervous system, learning, mood and behavioral pattern have proved to be consistent and statistically significant. Electromagnetic radiation adversely affects organic life at the molecular, cellular, biochemical and physiological levels**
- **According to a study from the Neurological Hospital of the University of Freiburg in Germany, cellular telephones' high-frequency electromagnetic fields lead to a significant increase in blood pressure. Pulsed high-frequency fields, as used with cellular telephones, affect biological processes in the brain, which are measurable in electroencephalograms (EEG). It is beyond question that cellular telephones negatively influence the brain's bioelectric activity.**

"Numerous epidemiological studies, at least 50 on ELF exposures, and 5 on microwave exposures, do suggest that EMF is associated with an increased risk of disease. Most studies are focusing on cancer, but there are studies available suggesting an association of EMF and Alzheimer's disease. Even research funded by the CTIA (Cellular Telephone Industry Association) in USA found an association between cellular phone radiation and cancer."

~ Dr. Thomas Magnussen, PhD, EMX Corporation

[Click here for more clinical findings.](#)

Children are at GREATER RISK Because Their Skulls Have Not Completely Thickened

Exposure of young children to EMF may be more detrimental to their health, especially during the development and maturation of the central nervous system, immune system, and critical organs.

"Malignant brain tumors are the second leading cause of death in children [under age 15] and young adults [under the age of 34]*". In Australia, they're the NUMBER ONE. And experts are blaming it on increased EMF radiation exposure from the use of cell phones.

* Statistic provided by NeurologyChannel.com

Dr. George Carlo, a leading epidemiologist, was hired by the CTIA (Cellular Telephone Industry Association) in 1993 to head a \$28 million research program and prove that cell phones were safe – and HE FAILED!

What he did find and share in his book that exposed the wireless industry is that there is a significant health risk for people that use cell phones. In many cases doctors who perform surgery on brain tumors and lesions are able to tell which hand their patient uses to hold their cell phone. There is that much of a link!

Dr. George Carlo: Chief Scientist of the World's Largest Research Effort into Wireless Safety

"One by one, alarming signs appeared in Dr. Carlo's research: that cell phones interfere with pacemakers, that developing skulls of children are penetrated deeply by the energy emitted from a cell phone, that the blood brain barrier which prevents invasion of the brain from toxins can be compromised by the cell phone radiation and, most startling, that radio frequency radiation creates micronuclei in human blood cells, a type of genetic damage known to be a diagnostic marker for cancer."

~ from Cell Phones: Invisible Hazards in the Wireless Age by Dr. George Carlo and Martin Schram

"Dr. George Carlo... ran the cell phone industry's research program for 6 years until he quit in the pique of conscience. The industry – worth \$200 billion a year – wanted him to continue saying all was well. He couldn't."

Mitch Alborn, Author of TUESDAYS WITH MORRIE

From a Radio Commentary After Seeing Dr. George Carlo on ABC's 20/20

One thing is becoming clear: A one time exposure might not do much, but with cumulative stress resulting from repeated exposures, a tipping point is reached and your body's repair mechanism could start breaking down...

The harmful effects of exposure to EMF appear to take place slowly over time. The health cases that came to light in the 1990s most likely had their origin in the 1980s or before. The long-term effects of damage inflicted today won't be known for years to come.

The EMF problem has been categorized as a new form of pollution as consequential as air and water pollution. It has also been likened to the hazards of asbestos and cigarette smoking. In terms of its snowballing health effects, it's been compared to the slow process of lead poisoning. If the previous environmental issues involving tobacco, asbestos, and lead are any indication, it takes years and even decades to accumulate the amount of evidence that would convince the government to take action. In the case of cigarette smoking, it took two decades of study and 100 years of consumer use to gather enough data to meet research standards to demonstrate the need for the U.S. Surgeon General's warning label on cigarette packs. Some experts say that in the case of cell phones, it will not take that long as data are coming in at a faster pace. But at the present the authorities can only urge people to exercise caution.

Scientists estimate that our daily exposure to EMF radiation is 100 million times higher than it was in our grandparents' time. This has been referred to as the "largest biological experiment ever." The purpose of this blog is to report on the health consequences of this experiment as they are now being discovered by experts, and to offer viable solutions to protect you and your family from this ever-present, albeit invisible, presence in our environment.