

The Danger of Mobile 'Phones

Introduction

Modern society has a habit of exposing ordinary people to great danger and withholding information to help them avoid it. In a capitalist, free-market, often deregulated, world based upon money and ever-expanding profit margins, recent history has seen some of the most wicked developments. To make money, or to further a policy, citizens have been deliberately exposed to toxic agents that have injured and killed them. Today you can't trust the safety of the air you breathe, the water you drink, the appliances in your house, your modern cleaning products or the food you eat (unless you've grown it organically yourself).

The most obvious case is the use of weapons in various wars that have repeatedly led to illnesses far distant from the military zones. The biggest example is the atom bombs dropped on Japan. Brain cancer takes up to forty years to develop in the body and forty years after the bombs there was a massive surge in cancer development, over wide areas, as a result of the ionising radiation caused by the explosions. At regional level innocent civilians, notably children, in Southeast Asia developed serious conditions in the aftermath of the weapons used by America in the Vietnam War, especially Agent Orange. Children are suffering right now from the depleted uranium shells used by America in Iraq.

However, it is not just military applications that cause trouble; routinely, commercial companies sell products that do serious damage to customers, both in terms of medical applications (such as drugs and vaccines) or consumer goods (such as cigarettes). It is often the case that the dangerous effects of these goods are known but hidden by both the companies involved and the government. For instance, what government is warning people today about the well-known serious dangers of microwaved food?¹

This brings us to the specific example of mobile telephones. Repeatedly, customers have been assured that they are safe. In fact, it has been known since 2000 that they are exceedingly dangerous. This paper seeks to draw some of this growing data to your attention.

Chunks of this paper are extracted and collated from the reports of professionals because there is no better way of expressing the data. Therefore, lumps of this paper are not original but dependent (with thanks) upon the bibliography supplied. However, the design of the paper, the argumentation, the layout and expression, plus a great deal of original material, are mine.

Historical survey

The first thing to do is to convince sceptics that both governments and commercial interests do not care for your safety but want your money. In many cases they will peddle

¹ In simple and concise terms, such food is heated by the agitation of molecules within the food. This process actually changes the molecular structure of the food. For instance proteins are turned into prions – free radicals that damage the body. What goes in as healthy food comes out toxic. Worse still are the processed microwave meals that start out as unhealthy before they are cooked. Many scientists fear that microwave food causes various cancers. For this reason the Soviet Union originally banned microwave ovens for decades.

something that they know is harmful if it serves their vested interests. Yes, they are that callous. If you doubt this, then here are some well-known examples.

Big business will use deceit to make money, even if it means harming people

Do I really need to demonstrate this fact? Surely most people are aware that this happens over and over again. I will give just two examples of worldwide reaching effects.

Asbestos

Many people consider that the dangers of asbestos only became known in the 1960s; in fact as early as the 19th century there were reports of women dying from lung diseases after working in asbestos factories. Despite growing concerns, asbestos was used everywhere as an insulating material throughout the early to mid 20th century. Only when multiple cases of sickness and death became prevalent and undeniable, resulting in lawsuits, was any action taken to deal with the issue.

Despite the fact that scientists (and governments) knew that working with asbestos causes respiratory problems and possibly a lingering death, no one did anything significant for 60 years.

Tobacco

Most people presume that the dangers of smoking tobacco were only beginning to be understood in the 1950s. In fact the first case-control study on tobacco and lung cancer was actually done in Germany in 1939, and in the 1930s Argentina also had a national institute to study tobacco dangers. Despite this, many people in England were of the opinion in the 40s that smoking was actually healthy due to adverts suggesting this. In the 1940s and 50s hardly any leading man in a Hollywood movie failed to have a cigarette on the go. Millions of impressionable teenagers copied their heroes, despite the dangers being well known by this time.

In 1964 the US Surgeon General announced that tobacco causes cancer; but this was not really accepted until decades later. The tobacco companies repeatedly lied, using false research studies, claiming that smoking was safe and it was only after whistle-blowers² gave evidence at lawsuits that the situation was changed. Faced with millions of pounds of fines, the tobacco companies eventually yielded to public pressure.

To demonstrate how hard it can be to get to the truth and win a case against a commercial company injuring people, see the film *Erin Brockovich* (2000) starring Julia Roberts, regarding the true story of a California power company that polluted drinking water supplies.

Government agencies will allow citizens to be harmed if it makes money or serves a policy

I will only give one example of this, of many, to enable a fuller description of the process.

Fluoridation

Fluoride is highly toxic;³ it is a waste product of aluminium and steel manufacturing. So how stupid is it to put it into drinking water?

In 1943, the American Medical Association stated that fluoride was a powerful protoplasmic poison, and because of its occurrence in nature, toxic accumulation could be

² Some of these had their lives threatened. There is a Hollywood film (*The Insider*, 1999) depicting this story starring Russell Crowe.

³ When fluoride is produced it can eat through steel, glass, iron and aluminium.

a major problem if the water supplies were fluoridated. In 1944, the American Dental Association agreed on the danger from fluoridation noting that fluoride in concentrations as low as 1 part per million can cause osteosclerosis, spondylitis, osteoporosis and other problems. So how did it get put into water supplies?

The reason that fluoride was put into drinking water in the first place was a cynical combination of corporate greed and political manoeuvring using the tools of fraudulent marketing.

Independent study after study has effectively demonstrated that fluoride in water is toxic and ineffective in preventing tooth decay. Despite this, around 1930 an American called Dr. Cox proposed that in small amounts it could prevent dental cavities. There were no studies to prove this assertion. Cox was on the staff of the Mellon Institute, and the Mellon family owned the Alcoa aluminium company.

In the 1940s, the Aluminium Company of America (ALCOA) was polluting the atmosphere with fluoride waste and causing dental fluorosis (teeth browning), resulting in lawsuits. So it decided to capture the waste before it escaped into the atmosphere and dump the waste fluoride into the water supply. To do this it had to claim that it was beneficial to health. The only other option was the extremely expensive process of disposal.

Andrew Mellon, the founder of Alcoa, was also the US Treasury Secretary, and in 1930 the US Department of Public Health was under the direct control of the Treasury Secretary. Cox convinced a dentist, Dr. Frisch, to promote fluoridation of the water supply, which he treated as a personal crusade.

In 1944 Alcoa hired a prominent lawyer, Oscar Ewing, on a salary of \$750,000. Shortly afterwards he became the Federal Security Administrator that put him in charge of the US Public Health Service, where he campaigned to fluoridate the water supplies. The best PR firm, owned by the famous spin-doctor, Edward, L. Bernays, was hired to lobby and promote fluoridation. No scientific evidence was provided to suggest that the process was beneficial. Suddenly the ADA and AMA both decided to endorse fluoridation before an experiment in Michigan was completed in 1945. This study was full of flaws. Any dentist protesting the process was expelled from, or censored by, professional bodies. Through this corrupt process fluoridation began in America and the US government began to convince other countries to follow suit.

In 2000, the UK government commissioned York University to review the evidence of the last 50 years and determine if fluoride was beneficial. It concluded that: A) the evidence was sub-standard, open to bias and therefore it was not possible to conclude anything. B) Any beneficial effect came at the expense of an increase in fluorosis.

Since then, further independent studies have shown that fluoridation causes damage to neurons, notably reducing IQ.⁴ Fluoride was also found to induce apoptosis (like radiation, mercury and anti-cancer drugs) which results in genetic changes. Apoptosis is implicated in the development of neurological disorders such as autism, Alzheimer's, and schizophrenia.⁵ Further studies have shown links between fluoride and brain, bone, thyroid and kidney damage.⁶

⁴ 23 studies from four countries [Mexico, Iran, India and China] indicate that moderate exposure to fluoride lowers IQ in children.

⁵ *British Medical Journal*, 20 July 2001.

⁶ Dr. Paul Connett, *The Case Against Fluoride*.

In November 2006, the American Dental Association (ADA) sent an email to recommend parents to not use fluoridated tap water to make infant formula. A few days later, the CDC⁷ followed suit but neither of them informed the public.

Even if fluoridation was beneficial, it conflicts with a rule of medication that there should be no forced medication with no control over who gets a dose; it is a drug being prescribed willy-nilly to all. Furthermore, even the promoters of fluoride admit that any benefits are topical, that is, it works on the outside of the tooth not by swallowing it. Not only that but there is little difference in tooth decay between fluoridated and non-fluoridated countries, and no difference between US states that have a high or low percentage of their water fluoridated.

The combination of government and commercial interests led to making massive profits at the expense of public health with no significant benefits to teeth. If a country can support getting rid of toxic waste from a manufacturing process and putting it into the drinking supply, what else are they capable of?

Other examples of this sort of deception would include Wind Farms,⁸ tetra and telephone aerial masts and Genetically Modified Food, but we have no space to consider these here.

Panels of experts and doctors cannot be trusted

In America, year on year, the second or third top cause of death is the result of doctors. This includes negligence, mistakes, misdiagnosis, unnecessary treatments, bad medication and hospital acquired diseases. Despite having the richest hospital system and the most innovative equipment, America has the highest death rate pro rata. This means that poor people scraping a living on a mountain in rural Turkey live longer and healthier than US citizens. In fact the average age of death for an American doctor is 42. Something is clearly wrong.

One reason is the power that pharmaceutical companies ('Big Pharma') exert over American politics and medicine. The power of their combined resources is in the trillions of dollars, and this helps to sway governments. Big Pharma is founded upon money not altruism and so much evil results from this that it would take many large books to evaluate it all. One question is why the accounts of Big Pharma are not publicly accountable like other companies?

Take for instance the flu vaccine. In the past, batches were released into public exposure that were not properly tested and caused death and paralysis (Guillain Barre syndrome). Recent tests have shown that these drugs actually double your chances of getting flu.⁹ Not only that, the absolute best effect of a flu vaccine is to reduce your suffering by 24 hours. Despite this, many people partaking of the vaccine will be very ill, some will be severely affected for life and some will die as a result. However, these vaccines make millions of dollars every year and governments are complicit in getting people to take them up.

⁷ Centre for Disease Control in the USA.

⁸ Yes these do make people sick, even if some distance away, causing headaches and nausea amongst other symptoms. What is annoying is that the turbines are practically pointless, when the full costs are taken into account, and are only a government publicity stunt.

⁹ Researchers, led by Vancouver's Dr. Danuta Skowronski, an influenza expert at the B.C. Centre for Disease Control showed that people who got a flu shot for the 2008-09 winter seemed to be more likely to get infected with the pandemic virus than people who hadn't received a flu shot. Professor Collignon from the Australian National University said, '*when we looked at some of the data from Canada and Hong Kong in the last year is that people who have been vaccinated in 2008 with the seasonal or ordinary vaccine seemed to have twice the risk of getting swine flu compared to the people who hadn't received that vaccine.*'

Another question is why is it that, in the recent Whooping Cough [pertussis] epidemic in America, the areas with the most sickness were immunised and the areas with the least sickness were not?¹⁰ Recent outbreaks of measles in Britain have also occurred where the populations had a high take up of the MMR jab. A further point is that it has now been proved that the MMR jab does increase the chance of Autism,¹¹ despite all the vilifying of people for many years that testified to this.¹²

We will take just a few specific examples of drugs that were not properly tested (this happens all the time) that were released into the public to cause severe reactions, including death, before they were eventually outlawed.

Thalidomide

This is probably the most famous and the most obvious. A pill to alleviate morning sickness in pregnant women later caused birth abnormalities. The thousands who suffered from this mistake in Britain have only recently received a government apology after five decades, but have not received any compensation for ruined lives. Since this story is well known, we will not pursue it further.

Gardasil

This is an HPV vaccine that was licensed in the US in 2006 and is recommended as a routine vaccination for women between the ages of 9-26 to prevent cancer.

HPVs are human papillomaviruses, of which there are over 100 types; about 40 are sexually transmitted and 15 of these are associated with cervical cancer. They are very common amongst sexually active people. HPVs are not cancers but can lead to them; long term infection can cause vaginal, penile, anal and oropharyngeal cancers. However, only 3 in 100,000 American women die from cervical cancer. In comparison 11 people in 100,000 die from car accidents. Furthermore, it is foolish to vaccinate young girls to prevent an infection that is naturally eradicated within two years in healthy people. In any case, Gardasil can only prevent two of over 15 strains of HPV. There is also evidence that vaccinated immunity may wane after five years; it was not tested that long in the rush for profits.

This drug is made by Merck but they only tested the vaccine in less than 1,200 girls under 16 before it was hastily licensed. During testing and checks after licensing, serious side effects, including deaths, were dismissed as coincidence by the company and the government. After proclaiming that Gardasil would end cervical cancer (a lie), initial sales hit \$1.1 billion in the first nine months.¹³ Yet there is no evidence demonstrating that Gardasil protects against cancer. In fact, a Merck lead researcher, Dr Diane Harper, stated that Gardasil was effective against genital warts for only two years, let alone anything else.

¹⁰ 81% of 2010 California whooping cough cases in children under 18 occurred in those fully up to date on the whooping cough vaccine. Only eight percent of those stricken were unvaccinated.

¹¹ Just one example is that of a team from the Wake Forest University School of Medicine in North Carolina who are examining 275 children with regressive autism and bowel disease. Of the 82 tested so far, 70 prove positive for the measles virus. The team's leader, Dr Stephen Walker, said, 'Of the handful of results we have in so far, all are vaccine strain and none are wild measles.'

¹² Writing in the BMJ, research microbiologist David Lewis, of the National Whistleblowers Centre, explains that he reviewed histopathological grading sheets by two of Dr. Wakefield's co-authors, pathologists Amar Dhillon and Andrew Anthony, and concluded there was no fraud committed by Dr. Wakefield. His studies were replicated in Canada, the US, Venezuela, and Italy. In fact 28 studies from around the world support Dr. Wakefield's findings.

¹³ Some private doctors charge up to \$875 for three shots.

Despite this, in 2007 Texas Governor Rick Perry signed an executive order mandating sixth-grade girls to be vaccinated against HPV. His former chief of staff was then a Merck lobbyist. Fortunately, the Legislature subsequently overturned his order. In 2011, California Governor Jerry Brown signed a bill that allows minor children as young as 12 years old to be given Gardasil, Cervarix, hepatitis B vaccine and future vaccines for sexually transmitted diseases without a parent's knowledge or consent.

Between May 2009 and September 2010, 16 deaths arose from Gardasil vaccination, with 789 reports of serious adverse reactions; 213 cases of permanent disability; and 25 cases of Guillain Barre Syndrome (paralysis). By September 2010, the Vaccine Adverse Events Reporting System showed over 18,000 Gardasil-related adverse events including at least 65 deaths. Under the Freedom of Information Act, the FDA¹⁴ confirmed 26 deaths of previously healthy girls after following Gardasil vaccination, the next year.

Merck is the same company that paid billions in lawsuits to people damaged by Vioxx. Indeed it has recently had over \$5.5 billion in fines levied against it. Despite this, along with other companies, Merck is immune to civil lawsuits for vaccines like Gardasil. In 1986, Big Pharma blackmailed Congress into granting partial liability by claiming that otherwise they would abandon the child vaccine market. In February 2011 the US Supreme Court granted Pharma total immunity from lawsuits.

However, Australians have filed lawsuits from women who have suffered autoimmune and neurological health problems following administration of Gardasil. More and more girls are reporting multiple-sclerosis-like symptoms and neurological complications, including seizures, paralysis and speech problems.

Despite all this evidence, in 2012 the US CDC recommended Gardasil for males between the ages of 11 and 21.

As I was writing this section, a review of Gardasil was published by a Canadian team revealing that the drug has no proven benefits at all. They said,

We carried out a systematic review of HPV vaccine pre- and post-licensure trials to assess the evidence of their effectiveness and safety. We find that HPV vaccine clinical trials design, and data interpretation of both efficacy and safety outcomes, were largely inadequate. Additionally, we note evidence of selective reporting of results from clinical trials. Given this, the widespread optimism regarding HPV vaccines long-term benefits appears to rest on a number of unproven assumptions (or such which are at odd with factual evidence) and significant misinterpretation of available data. ... Likewise, the notion that HPV vaccines have an impressive safety profile is only supported by highly flawed design of safety trials and is contrary to accumulating evidence from vaccine safety surveillance databases and case reports which continue to link HPV vaccination to serious adverse outcomes (including death and permanent disabilities).¹⁵

As of 13 August 2012, more than 27,023 adverse event reports have been filed with the CDC's Vaccine Adverse Event Reporting System (VAERS), including 918 reports from boys and men between the ages of nine and 44, who were given HPV shots. VAERS has received 119 reports of death following HPV vaccination, as well as: 894 reports of disability, 517 life-threatening adverse events, 9,889 emergency room visits and 2,781 hospitalisations.¹⁶ Note that it is estimated that only 1 - 10% of serious events occurring after vaccination are

¹⁴ Food and Drug Administration.

¹⁵ *Current Pharmaceutical Design*; 2012 Sep 24.

¹⁶ MedAlerts.org. HPV vaccine adverse event report to VAERS as of Aug. 13, 2012. Accessed Oct. 9, 2012.

ever reported. Adverse events reported to VAERS post-HPV vaccination include: Bell's Palsy, Guillain-Barre Syndrome, seizures, paralysis, blindness, pancreatitis, speech problems, short term memory loss, ovarian cysts, blood clotting and heart problems, miscarriages and foetal abnormalities, cardiac arrest and sudden death.

VAERS research analyst Janny Stokvis also shows a dramatic and recent increase in abnormal pap smears, cervical dysplasia, and cervical cancer following HPV vaccination.¹⁷ This new data supports previous suspicions that the HPV vaccine might actually increase the risk of cervical cancer.

In January 2012, the *American Journal of Obstetrics and Gynecology* published the ATHENA HPV study¹⁸ announcing the results of a large cervical cancer screening trial, enrolling 47,208 women 21 years of age or older at 61 clinical sites throughout the United States. The authors reported that in a sub group of 12,852 young women, the HPV vaccine reduced HPV-16 infections only 0.6% in vaccinated women vs. unvaccinated women. Other high-risk HPV infections were diagnosed in vaccinated women 2.6% to 6.2% more frequently than unvaccinated women.

Having spent more time on this than planned, I will only refer to a few other drugs without discussion, such as Vioxx,¹⁸ and Avandia¹⁹. One company, Pfizer, was ordered to pay \$2.3 billion [3 months profits] to resolve criminal and civil allegations that the company illegally promoted uses of four of its drugs, the painkiller Bextra, the antipsychotic Geodon, the antibiotic Zyvox, and the anti-epileptic Lyrica. Only a few years earlier, Pfizer had paid \$430 million for illegally promoting uses of its seizure drug, Neurontin.

Drugs make big profits, not just for Big Pharma but also for the governments that receive the tax revenues. Each time there is a failure (and this is often) there is a trail of human misery as lives are wrecked and people suffer appalling symptoms and die. Each time it takes years for campaigners to get the drug stopped since governments protect the drug companies and fail to act to protect citizens. On many occasions the government is complicit in getting people on the drugs in the first place and some governments have been successfully sued.²⁰

Interim conclusion

The point, thus far, has been to show that commercial enterprises and national governments are not really concerned with the protection of citizens but are focused upon money. Business companies cannot be trusted, governments cannot be trusted, medical authorities cannot be trusted and panels of doctors cannot be trusted. All succumb to vested interests and successful marketing ploys; sometimes acting in sincerity, sometimes cynically.

¹⁷ Menstruationresearch.org June 26, 2012.

¹⁸ It was five years before Merck made its \$30 billion recall of Vioxx after people began to die from heart attacks, strokes, and blood clotting disorders.

¹⁹ GlaxoSmithKline paid \$3 billion to resolve criminal and civil liability charges related to illegal drug marketing and withholding information about health hazards associated with its diabetes drug Avandia.

²⁰ US President Gerald Ford persuaded the public to undergo a national swine-flu vaccination campaign. Pig farmers would not use the vaccines on their pigs, which had died from the drug (which included formaldehyde and mercury in its recipe of 80 substances), so Big Pharma gave the drug to people to save their investment. On April 15, 1976, Congress passed Public Law 94-266, which provided \$135 million of taxpayers' funds to pay for a national swine flu inoculation campaign. Immediately there were casualties. Soon, claims totalling \$1.3 billion had been filed by victims who had suffered paralysis from the swine flu vaccine. To counter this the authorities labelled the new epidemic, 'Guillain-Barre Syndrome.' Ford was defeated in the ensuing election.

A recent BMJ survey of retracted studies discovered that nearly 75% were attributed to scientific misconduct, including: data falsification or fabrication, questionable veracity, unethical author conduct or plagiarism. The highest number of incidents of misconduct occurred in the drug literature, as compared to general biomedical literature.²¹ The average lag time between publication and a retraction is 39 months, if they are ever caught.

All research by Big Pharma is not published and drug studies that reach negative conclusions will rarely appear. However, any favourable data will be highlighted. Fraud also appears in the marketing of a drug as well as the medical data. Johnson & Johnson's anti-psychotic Risperdal was heavily promoted for unproven off-label uses for more than a decade, despite warnings by the FDA. Two-thirds of prescriptions for Risperdal were for unapproved uses that had no scientific support. This occurred as a result of the teams of salespeople sent to GP's surgeries and other places, touting Risperdal as a miracle drug for mental illness.

Another fraudulent trick is to invent illnesses to create a market for recently developed drugs. These include: Premenstrual Dysphoric Disorder (moodiness or PMT); Hypoactive sexual desire disorder (lack of sex drive) or ADHD (actually the result of a lack of parental and educational training coupled with poor diet).

Therefore, why should anyone be surprised that governments, medical authorities and telephone companies have failed to sufficiently warn the population that using a mobile 'phone can cause cancer just as much as smoking a cigarette.

The case of sincere mistakes

Not all damaging inventions are the result of cynical ploys to make money, sometimes the case is that manufacturers did not know the dangers involved. I will give one example.

When I was growing up, in the fifties, getting a new pair of shoes in a big store was fun because there was a cool invention that made me feel part of the space age that was erupting around me. This was a 'shoe fitting fluoroscope', or an x-ray machine to you and me. You put your foot into the box and looked through an optic and saw an x-ray of your foot with all the details of bone structures. This enabled a chart to determine your exact shoe size requirement.

Invented in the 1920s, these machines were everywhere in stores and thought to be harmless, though even by the early 50s some professional bodies had issued warnings about continued use. However, eventually it was realised how dangerous x-rays can be and that they cause cancer. One shoe model received such a serious radiation burn from a shoe-fitting fluoroscope that her leg had to be amputated.²²

How many store assistants routinely sat next to this machine when a child was being examined? How many developed cancer as a result? Yet the storeowners were not to blame because the dangers of x-rays were not widely understood until the late 50s – early 60s.

²¹ Proceedings of the National Academy of Sciences; October 1, 2012. *Pharmacotherapy*; 2012 Jul; 32(7):586-95. doi: 10.1002/j.1875-9114.2012.01100.x. *Medical News Today*; January 16, 2012.

²² *Western Journal of Medicine* January, 1950; 72(1): 26–30 (The shoe-fitting fluoroscope as a radiation hazard).

However, most children were only exposed to this ionising radiation once or twice a year. Today children are being exposed to equally dangerous radiation put next to their brain many times a day.

The latest scientific information about mobile ‘phones based on unbiased research

People ought to understand that the media reports affirming that mobile ‘phone use is safe have nearly always come from studies financed by the telephone companies. This sort of strategy was evidenced before in the tobacco scandals where BAT paid for medical studies to state that smoking was not only safe but beneficial to health. They lied.

Mobile ‘phone growth

It took from 1984 to 2004 to reach the first billion mobile ‘phones. The second billion took 18 months, the third billion took nine months, and the fourth billion only six months. This exposure to EMF radiation does not include the effects of hands-free landline ‘phones, Wi-Fi routers, police Tetra masts and telephone broadcast aerials.

Problems associated with mobiles, as isolated by scientific studies, include: Alzheimer’s, senility and dementia, Parkinson’s, cancer, autism, fatigue, headaches, sleep disruptions, altered memory function, poor concentration and spatial awareness.

EMF

Mobile ‘phones work on the basis of EMF, an acronym for ‘electromagnetic frequency’ radiation. Electronic devices use a lower voltage than large electric appliances (such as a cooker), and this manipulation of current creates a complex electromagnetic field. This field not only radiates into the immediate environment but also can travel throughout the neighbourhood. Even people with no Wi-Fi will be subject to the EMF radiation from neighbour’s broadband routers or mobile ‘phone masts.

Cells in your body can react to EMFs as a harmful invader, just like they do to other environmental toxins. The human body is a complex communication device where cells react, to each other. This communication includes finely tuned bio-electrical transmitters and receivers. EMF radiation disturbs this fine-tuning in ways that are only recently beginning to be understood. The result is cell damage, leading to diseases.

Two biological impacts of this interference are: a) interruption to brain wave patterns, leading to changes in behaviour (e.g. depression, autism); b) interference to the body’s cell-communication system leading to abnormal neurological function (e.g. dementia, chronic fatigue syndrome, and fibromyalgia).²³

At a cellular level, your cell membrane receptors (the brain of the cell) recognise electromagnetic fields at very low levels of exposure producing a stress response similar to that produced by exposure to heavy metals or toxic chemicals.²⁴ This can cause the cell membrane to go from an active, or permeable, state where it allows nutrients in and toxins out, to an inactive state where the cell membrane is impermeable. As a result of environmental stress (such as EMF radiation) cell membranes are inactive; this is referred

²³ Oschman, James L. *Energy Medicine: The Scientific Basis*; Churchill Livingstone, (2006). p96, 131. Becker, Robert. MD. *Cross Current*; Penguin Group, (1990). p215.

²⁴ Lipton, Bruce, PhD. *The Biology of Belief*; Mountain of Love/Elite Books, Santa Rosa, CA. (2005). p83.

to as ‘oxidative stress’ as nutrients are able to enter into the cell, while toxins (free radicals) are not allowed to leave.

There is evidence (see later) that further damage can be done to the body’s DNA itself, which in turn can lead to cancer. In short, EMF radiation in large amounts is as toxic to the body as liquid poisons (like mercury) or diesel fumes. This is the basis of the problem with mobile ‘phones.

Damaging biological effects have been found at levels far below the industrial and governmental safety limits—1,000,000 times lower than those limits, in some cases. It is suggested that EMF signals even interfere with the secretion of insulin, drown out the call-and-response of the immune system, and cause physiological damage.

In 2011 A Council of Europe committee examined evidence that the cell phones and wireless internet connections have potentially harmful effects on humans, and decided that immediate action was required to protect children. They ruled that the technologies pose a health risk and should be banned from schools. They stated,

Non-ionizing frequencies, be they sourced from extremely low frequencies, power lines or certain high frequency waves used in the fields of radar, telecommunications and mobile telephony, appear to have more or less potentially harmful, non-thermal, biological effects on plants, insects and animals, as well as the human body when exposed to levels that are below the official threshold values.

One must respect the precautionary principle and revise the current threshold values; waiting for high levels of scientific and clinical proof can lead to very high health and economic costs, as was the case in the past with asbestos, leaded petrol and tobacco.²⁵

In 2008, Dr. Vini Gautam Khurana, a Mayo Clinic-trained neurosurgeon with an advanced neurosurgery fellowship in cerebral vascular and tumour microsurgery, concluded:

There is currently enough evidence and technology available to warrant industry and governments alike in taking immediate steps to reduce exposure of consumers to mobile phone-related electromagnetic radiation and to make consumers clearly aware of potential dangers and how to use this technology sensibly and safely.

EHS

Electromagnetic Hypersensitivity Syndrome (EHS) is gaining recognition as a very real and increasing problem. Sweden is a leading force in acknowledging and addressing this issue but work is also being done in Britain and Australia. *Electrosensitivity UK* publishes a primer explaining this condition containing over 800 scientific and medical references, written by Michael Bevington, Chairman of the Trustees of *Electrosensitivity UK*.

My own mother suffers from this syndrome and reacts with pain to electrical appliances. It is also interesting that it is since the local police station built a large Tetra mast that several of her neighbours have also succumbed to a rare disease that can react to electrical impulses.²⁶

When the Wishaw T-Mobile phone mast went up in a small English village, an estimated 77 percent of the residents within 500 meters became ill with a range of health problems from symptoms of electrosensitivity to infertility and cancer. Seven years later a cancer cluster was discovered in the village, after which the tower was forcefully removed. When

²⁵ *The Telegraph*; May 14, 2011. *Council of Europe Parliamentary Assembly*; May 6, 2011.

²⁶ Trigeminal Neuralgia.

the mast came down, the symptoms of electrosensitivity went away, and with few exceptions, cancers people were treated for never recurred.²⁷

In August 2007, after a long legal battle, Orange mobile phone company agreed to remove its mobile 'phone mast - dubbed the 'Tower of Doom' - from the top of a five-story London apartment building after seven of its residents got cancer. The mast, along with a second mast owned by Vodafone, was put up in 1994. Since then, residents have battled cancer, headaches and other health problems they say are caused by radiation from the masts. Three residents have died from cancer, while another four are still fighting the disease. The World Health Organisation and other agencies say there is no risk of radiation from cell phone masts, so the companies had no legal obligation to remove the masts. Vodafone has no plans to remove their mast from the building, and is working on securing a new long-term lease.²⁸

One symptom of electrohypersensitivity is altered sugar metabolism similar to diabetes. One 2010 finding showed that in diabetic patients who exercised by walking outdoors, blood sugar went down as expected, but in those who exercised on a treadmill, impacted by electromagnetic fields, the blood sugar went up. Dr. Magda Havas suggests there may not just be a type I diabetes and a type II diabetes, but also a new 'Type III' Diabetes related to external environmental factors. Another study has also provided unequivocal evidence that the radiation from a cordless (DECT) phone interferes with your heart.²⁹

According to Dr. Havas' study published in *Electromagnetic Biology and Medicine*, as many as 5 million to 60 million diabetics worldwide may be affected by transient electromagnetic fields, or 'dirty electricity', which typically comes from appliances, televisions, stereos and other electronic equipment.

Like Dr. Havas, Dr. Thomas Rau (medical director of the Paracelsus Clinic in Switzerland) says he is convinced electromagnetic loads lead to cancer, concentration problems, ADD, tinnitus, migraines, insomnia, arrhythmia, Parkinson's and even back pain.

Early warning

Margaret Thatcher's chief science advisor, William Stewart, issued a warning for the Royal College of Physicians, advising that teenagers not use mobile 'phones in 2000. He demanded that action be taken then since brain cancer takes decades to develop, having a forty-year latency in a population. No one listened to him. Note that the 10-year-old who starts using a mobile 'phone today may not realise the impact until he's diagnosed with a brain tumour at 40! However, some people develop cancer much quicker.

Children

Because children have thinner skulls than adults, and their nervous systems are still developing, they are particularly vulnerable to environmental damage and should not use mobile 'phones at all. Yet young children today are using them at an earlier age than any previous generation, thus their exposure will be far greater than previously.

Australia has already seen a 21% increase in paediatric brain cancers in one decade. This is consistent with studies showing a 40% brain tumour increase across the board in Europe

²⁷ See Eileen O'Connor, Director of the Radiation Research Trust in the U.K: *Commonwealth Club 11-18-10*, Panel I - from ElectromagneticHealth.Org on Vimeo.

²⁸ *This Is London*; August 6, 2007. If you want to know just how close you are to a cell phone tower or antenna, simply type your location into AntennaSearch.com.

²⁹ *Electromagnetic Health*; March 22, 2010. *Electromagnetic Biology and Medicine*; 2008; 27(2):135-46.

and the UK over the last 20 years. Brain cancer has also now surpassed leukaemia as the number one cancer killer in children.

Furthermore, the information-carrying radio waves from mobile 'phone base stations and 'phones make children's exposure to vaccines and heavy metals much more dangerous than they typically are. EMR can actually trap heavy metals inside your cells, causing cellular damage and hindering your body from detoxifying.

In Britain at least nine out of 10 16-year-olds, and 40% of primary schoolchildren, have their own cell phone. In 2005, the British-based National Radiological Protection Board suggested children younger than age 8 should not be given a mobile as it risks exposing them to harmful radiation.

Erik Huber, of the *Vienna Medical Association* stated that, '*Children under the age of 16 should never use a mobile phone. ... Scientists do not argue anymore whether mobile phones are harmful, but how harmful they are.*'

Another study in 2008 revealed that when the children began using mobiles, they were: 80% more likely to suffer from behavioural difficulties; 25% more at risk from emotional problems; 34% more likely to suffer from difficulties relating to their peers; 35% more likely to be hyperactive.

Damage to sperm

There is hard evidence that mobile 'phone radiation interferes with sperm production, quality and vitality.³⁰ Even the instructions for an Android 'phone warns pregnant women to keep the device 2.54 cm away from the abdomen. How many read this? The iPhone 4S instructions also warn people not to put it in their pocket.

World Health Organisation

The International Agency for Research on Cancer (IARC) declared that cell phones are possible cancer-causing agents, in the same category as diesel engine exhaust, some pesticides, and some heavy metals. It ruled that there was evidence that regular phone use increased the risk brain tumours (gliomas) and acoustic neuromas.

The type of energy involved

Telephone companies describe mobile 'phone radiation as 'radio-frequency energy'; this is misleading. Such devices do not produce energy; they emit radiation at the same frequency as a microwave oven. A mobile 'phone is effectively a two-way microwave radio. The microwave radiation is weaker than an oven but is pulsed and digital; this signal may account for its biological damage. In using a mobile you are holding a two-way microwave-radiating device next to your brain or reproductive organs.

The impact of the radiation

According to a University of Washington scientist: 70 to 80% of the energy emitted from the antenna of a mobile phone is absorbed in your head.

One assumption made is that the effect of microwave radiation on the brain causes a change in temperature; however, the brain doesn't feel pain or heat. By the time you feel heat in your ear, your brain is much hotter. Mobile 'phones have not been tested for other physiological impacts of the microwave radiation.

³⁰ *Environmental Health Trust, Cell Phone Fine Print Warnings.*

Nearly all the biological damage comes from the modulated signals that are carried on the carrier microwave. Recent studies³¹ have shown that the microwave pulse signals can alter tissue membranes, weaken membranes, and increase reactive oxygen species, which produce free radicals (which damage cells and cause cancer). The long term physiological damage that this will cause is unknown.

Microwave digital pulse signals

Allan Frey, from the Office of Naval Research, did pioneering research in the 1960s, which demonstrated that microwave radiation weakens membranes and especially weakened the blood-brain barrier. Holding a mobile 'phone by your ear will weaken the blood-brain barrier. Thus toxins in the blood will be absorbed by the brain and other cells.

Mobile 'phone radiation and cells

Scientists exposed 10 female volunteers to radiation at 900 megahertz from GSM phones to simulate an hour-long phone call. They then screened 580 different proteins in their skin cells – the numbers of two proteins had changed in all the volunteers. One increased by 89% the other decreased by 32%.³²

Thus the problem is not the generation of heat (as in SAR ratings) but damage from modulated signals on the carrier microwave and the carrier wave. The modulated radio waves resonate in biological frequencies, which stimulate cell receptors with pathological results.

Different type of mobile 'phones

Not all mobiles have the same level of danger, though all emit radiation. In the US, CDMA cell phones, such as those used by Sprint and Verizon, do not pulse their signals like the GSM phones used by AT&T and T-Mobile. According to Dr. Joel Moskowitz, Director of the Centre for Family and Community Health at the University of California, Berkeley, '*GSM phones emit about 28 times more radiation on average compared to CDMA phones according to one published study.*' Dr. Moskowitz recommends switching to a CDMA carrier if you want to reduce your radiation exposure.

Magda Havas, PhD of Trent University, Canada, agrees that pulsed radiation is more dangerous, '*Pulsed radiation is much more harmful and the true intensity is not provided as it is averaged during a period of time (30 minutes for public exposure in US). The average of the pulse (maximum reading) and the minimum reading gives a false low reading. Engineers like to measure averages but living organisms react to extremes so these average readings under estimate the potential for harm if the radiation is pulsed.*'³³

Autism

A five-year study published in the *Journal of the Australasian College of Nutritional & Environmental Medicine* suggests that electromagnetic radiation (EMR) from cell phones, cell towers, Wi-Fi devices and other similar wireless technologies are an accelerating factor in autism. They found that EMR negatively affects cell membranes, and allows heavy metal toxins, which are associated with autism, to build up in your body. EMR, could impact autism by facilitating early onset or by trapping heavy metals inside nerve cells. They also showed that autism rates have increased concurrently along with the proliferation of mobile 'phones and wireless use.

³¹ EnvironmentalHealthTurst.org

³² *New Scientist*; February 23, 2008; *BMC Genomics*; 2008 9:77.

³³ *Electromagnetic Health*; May 31, 2011; *Gizmodo*; May 31, 2011; *The New York Times*; May 31, 2011.

Dr. George Carlo, the study's co-author, said, 'A rise of this magnitude must have a major environmental cause. Our data offer a reasonable mechanistic explanation for a connection between autism and wireless technology.'

When Dr. Carlo provided the results to the phone industry (who funded the research), they offered him a position for \$1 million a year to silence him. Instead, he started a non-profit institute called *The Safe Wireless Initiative* to inform the world of this danger.

Statistical increases regarding salivary gland tumours

In 2011 an Israeli research group reported a sharp increase in the incidence of parotid gland tumours over the last 30 years, with the steepest increase happening after 2001. This is a salivary gland near your cheek. The researchers found a four-fold increase in parotid gland cancers from 1970 to 2006, while rates of other salivary gland cancers remained stable.³⁴

Dr. Siegal Sadetzki, the principal investigator of a 2008 study, testified at a US Senate Hearing that cell phones were identified as a contributor to salivary gland tumours. Using a mobile 'phone increased your risk of salivary gland tumour by up to 58%, depending on how often you used your 'phone. Usually a parotid gland tumour is diagnosed in a person's late 50s but more cases are being diagnosed much younger. Adam Yauch, formerly 'MCA' of the Beastie Boys, recently died of this. In Israel, one in five cases now is under the age of 20. This is a very rare tumour, but it is occurring in young people.

As a result, the Israeli government issued warnings about children using mobile 'phones. The Israeli Dental Association has also issued a warning, due to the dramatic increase in a very rare and malignant tumour of the cheek.

Breast cancer

A young woman with no other predisposing risk factors for cancer developed multi-focal breast cancer. The young lady had the habit of tucking her mobile 'phone in her bra! [Actually, not uncommon amongst ladies with no pockets in the skirts.] The pattern of the cancer, and distribution of the cancerous cells, lined up perfectly with the shape of her cell phone.³⁵

Effect on DNA

DNA has been shown to be susceptible to EMF radiation fields. Martin Blank, PhD of Columbia University states that DNA is, '*exquisitely sensitive*' to EMFs, across the entire spectrum of frequencies (i.e. from the low frequency ELFs, such as from electricity, to the higher frequency radiofrequency and microwaves from cell phones and Wi-Fi, due to DNA's '*coil of coil structure*'.³⁶

The European Reflex Report, shows DNA breaks in a comet assay test from 24 hours of cell phone radiation exposure compared with DNA breaks from 16,000 chest x-rays.³⁷ Microwave radiation not only leads to electrosensitivity but can lead to cancer when DNA damage occurs.

³⁴ *Epidemiology*; January 2011; 22(1): 130-131.

³⁵ Environmental Health Trust's newsletter, May, 2012. National Institute of Environmental Health Sciences; April 25, 2012.

³⁶ Speech by Martin Blank, PhD, at the November 18, 2010 Commonwealth Club of California program, '*The Health Effects of Electromagnetic Fields*,' co-sponsored by ElectromagneticHealth.org.

³⁷ *Reflex Report* as presented by Eileen O'Connor at the Commonwealth Club of California, November 18, 2010.

Sleep

A study published by the Massachusetts Institute of Technology's Progress in Electromagnetics Research Symposium revealed that radiation from mobile phones delays and reduces sleep, and causes headaches and confusion. In turn the failure to get enough sleep can lead to mood and personality changes, ADHD-like symptoms, depression, lack of concentration and poor academic performance. About half of the people studied believed themselves to be electrosensitive, reporting symptoms such as headaches and impaired cognitive function from mobile phone use.

Dr Chris Idzikowski, the director of the Edinburgh Sleep Centre, says: '*There is now more than sufficient evidence, from a large number of reputable investigators who are finding that mobile phone exposure an hour before sleep adversely affects deep sleep.*'³⁸

Bones

Electromagnetic radiation from cellular phones may affect bone strength. Men who wear their cell phone on the right side of their belts were found to have reduced bone mineral content and bone mineral density in the right hip.

[M]en who did not use cell phones had higher [bone mineral content] in the right femoral neck (near the top of the thigh bone) ... The cell phone users also had reduced [bone mineral density] and [bone mineral content] at the right trochanter -- an area at the outside top of the thigh bone, close to where the phone would be worn on the belt.³⁹

Headsets

Standard recommendations to reduce radiation exposure include use of a headset. However, certain types actually worsen the problem. Wireless headsets (Blue-tooth) and wire connected ear-pieces act as carriers for the radiation signal. The ear-piece becomes an aerial pushed directly into the ear. Testing has proved that a mobile 'phone headset may raise the amount of radiation emitted by over 300%. The British Independent Group on Mobile Phones suggested that headsets are a solution only if they are used with filters to stop the headset wire from acting as an effective antenna.

A sample of scientific study warnings

- A \$25-million research project, funded by the Cellular Telephone Industry Association (CTIA), found the following: a nearly 300 percent increase in the incidence of genetic damage when human blood cells were exposed to radiation in the cellular frequency band. A significant increase in cell phone users' risk of brain tumours at the brain's outer edge, on whichever side the cell phone was held most often. A 60 percent greater chance of acoustic neuromas, a tumour affecting the nerve that controls hearing, among people who had used cell phones for six years or more. A higher rate of brain cancer deaths among handheld mobile phone users than among car phone users.⁴⁰
- In 2008, Dr. Ronald B. Herberman, director of the University of Pittsburgh Cancer Institute, issued a warning to his faculty and staff urging them to limit cell phone use because of the possible risk of cancer.
- A 2004 World Health Organisation ten-year Interphone study (the largest of its kind), which compiled research from 13 countries, involving nearly 50 scientists, showed that people using mobile 'phones for 30 minutes a day over ten years had a greater risk of developing brain cancer. The chance of developing a malignant tumour is increased by

³⁸ Geoffrey Lean; 'Mobile Phone Radiation Wrecks Your Sleep'; *The Independent*; Sunday 20 January 2008.

³⁹ Newswise; March 24, 2011.

⁴⁰ Dr. Mercola; *Do You Know the Real Reason Cell Phone Use is Banned on Airlines?* mercola.com January 12 2010.

more than a third with prolonged use. The study found a correlation between mobile use, radiation and cancer.⁴¹ The media and telephone industry at the time falsely reported that the study found no correlation. In fact heavy users of mobile 'phones doubled the risk of glioma (a brain tumour). This study is now outdated because mobile use has expanded significantly since 1999; heavy use is not now 30 minutes but two hours a day. EMF research activists also found 11 serious design flaws with the study, which underestimated the risk of cancer. A 40% increased risk of glioma was found after 1,640 hours of cell phone use, even after the effects from the design flaws that underestimate risk.

- In June 2011, the International Agency for Research on Cancer (IARC), a branch of the World Health Organization, reviewed the extant research on mobile 'phones stating that they are possible cancer-causing agents, classifying them in the 2B category. This is the same category as the pesticide DDT, lead, gasoline engine exhaust, burning coal and dry cleaning chemicals. The panel ruled that there was evidence that mobile use was linked to two types of tumours—brain tumours (gliomas) and acoustic neuromas. While many scientists asserted that the panel did not go far enough, Professor Dariusz Leszczynski, of the Radiation and Nuclear Safety Authority in Finland, said that this should be considered big news: *'for the first time a very prominent evaluation report states it so openly and clearly: RF-EMF is possibly carcinogenic to humans. One has to remember that IARC monographs are considered as gold standard in evaluation of carcinogenicity of physical and chemical agents. If IARC says it so clearly then there must be sufficient scientific reason for it, or IARC would not put its reputation behind such claim.'* This same evidence led the National Cancer Institute and the American Cancer Society, claim it showed *'no evidence'* of harm!
- The US President's Cancer Panel has reported that *'the true burden of environmentally induced cancers has been grossly underestimated.'* The panel pointed to cell phones and other wireless technologies as potential causes of cancer.⁴²
- The 2009 special EMF issue of the *Journal of Pathophysiology* contains over a dozen different studies on the health effects of electromagnetic fields and wireless technology.
- A review of 11 long-term epidemiologic studies published in the journal *Surgical Neurology* revealed that using a mobile for ten or more years doubles the risk of being diagnosed with a brain tumour on the same side of the head where the mobile 'phone is typically held.
- *The BioInitiative Report* has studies regarding exposure to electromagnetic fields revealing: effects on gene and protein expression; genotoxic effects (DNA damage); effects on immune function; effects on neurology and brain tumours and other cancers.
- Research by NIH and the US Department of Energy's Brookhaven National Laboratory conclusively determined that a mobile's electromagnetic field can cause changes in brain activity. After 50 minutes on a mobile, the emitted radiation increases the activity in your brain cells. The exact effects of that brain activity are as yet unknown but the study debunked the myth that mobile phone radiation, at non-thermal levels, does not cause biological changes (the SAR exposure involved was only .901 W/Kg, well under the FCC limit of 1.6 W/Kg for cell phones).⁴³
- Dr. Devra Davis found evidence of studies, some decades old, showing that the radio-frequency radiation used by mobile 'phones could have biological effects sufficient to damage DNA and cause tumours.⁴⁴ Most of these studies were funded by the

⁴¹ *International Journal of Epidemiology*; May 17, 2010.

⁴² President's Cancer Panel 2008-2009 Annual Report.

⁴³ *Journal of the American Medical Association*; (JAMA) February 23, 2011; 305(8):808-13.

⁴⁴ Dr. Devra Davis; *Disconnect*. Time.com September 27, 2010.

telecommunications industry. The potential damage of mobile 'phones has been known for a long time. While some countries (e.g. France, Finland Israel) responded to this with warnings on handsets, the USA and Britain did nothing. Davis shows that mobile radiation can lead to DNA damage, memory loss, Alzheimer's disease, cancer, break down of your brain's defences, and reduced sperm count. The 'phone industry tried to hide the evidence and even tried to discredit researchers who published unfavourable data, while some lost their jobs.

- Professor Lennart Hardell of Sweden has found that those who begin using mobiles heavily as teenagers have 4 to 5 times more brain cancer as young adults! People who started mobile phone use before the age of 20 had more than a five-fold increase in glioma [cancer of the glial cells that support the central nervous system]. The analysis of data was from one of the biggest studies carried out on the mobile 'phone/cancer link.⁴⁵
- Witnesses before a US Senate Committee testified about research into mobile 'phone use and its impact on human health, explaining the potential side effects such as brain and salivary gland tumours. Meanwhile, three senior members of the US Congress have called on the General Accounting Office to conduct a thorough review of the science and adequacy of current FCC exposure guidelines.
- There are studies underway researching the impact that EMF radiation has on bees and other insects. The initial findings are worrying.
- Alasdair Philips of Powerwatch in the UK says that a review of the incidence of brain tumours conducted in the UK show that the incidence rates for malignant temporal and frontal lobe tumours is rising. Research by de Vocht shows a rise in brain tumours in the regions of the brain closest to where you hold a cell phone. Tumours in other areas of the brain are actually decreasing.
- A Chinese study led Duan Y said: '*Correlation between cellular phone use and epithelial parotid gland malignancies*' showed a dose-response relationship between mobile 'phone use and parotid gland tumours, and as much as a 3,000% increased risk of parotid gland tumours with greater than 2.5 hours of cell phone use per day. '*The authors found general indications of a dose-response relationship between cellular phone use and parotid gland malignancy.*'⁴⁶ Brain tumour analyst L. Lloyd Morgan, B.S., who was lead author of the landmark report, *Cellphones and Brain Tumours: 15 Reasons for Concern*, says the risks of parotid gland tumours found in the Duan Y, et al parotid gland study were '*as large, perhaps larger, than the risk of lung cancer from smoking.*'

These are just a sample of the many studies which clearly demonstrate the dangers of mobile 'phones.

The SAR Value ('Specific Absorption Rate')

This is a measure of the potential of the 'phone to produce heat in body issues. However, in telephone company studies this is tested against a Plexiglas head in a simulated 200-pound man, and the figure produced is an estimate of radiation penetration. This test does not evaluate the risk from the frequencies of the 'phone, the erratic pulsing and modulation of the signals, or the magnetic fields from batteries.

⁴⁵ *The Independent* September 21, 2008. *EMF & Health: A Global Issue* September 8-9, 2008, The Royal Society, London.

⁴⁶ *International Journal of Oral and Maxofacial Surgery*. See: ElectromagneticHealth.org post, *Important New Chinese Study Connecting Cell Phone Use with Parotid Gland Tumors*, and coverage by *Microwave News*, 'Chinese Put Cancer of the Parotid Gland on Centre Stage.'

The SAR level is also altered by practical circumstances, such as: the strength of the signal, how hard the 'phone is working (it struggles more when the signal is poor), your distance from the signal masts, whether a headset is used and the way the 'phone is held.

In other words, the SAR value is of no practical use in demonstrating the safety issues of the device.

Illnesses potentially linked to mobile 'phone radiation

- Effects on Gene and Protein Expression (Transcriptomic and Proteomic Research).
- Genotoxic Effects – RFR and ELF DNA Damage.
- Stress Response (Stress Proteins).
- Effects on Immune Function.
- Effects on Neurology and Behaviour.
- Brain Tumours and Acoustic Neuromas.
- Childhood Cancers (Leukemia).
- Magnetic Field Exposure: Melatonin Production; Alzheimer's Disease; Breast Cancer.
- Breast Cancer Promotion (Melatonin links in laboratory and cell studies).
- Bone damage.
- Heart damage.
- Diabetes.
- Parkinson's.
- Autism.
- Headaches.
- Sleep disruptions and fatigue.
- Altered memory function, poor concentration and spatial awareness.
- Behavioural problems.
- Alzheimer's.

Why are governments not issuing urgent warnings?

- The key answer is that the telecommunication industry is bigger than the drug industry having far more influence on governments.
- A large proportion of retirement funds, from influential organisations, are invested in telecommunications.
- Institutions like the World Health Organisation and the European Commission are cap in hand with big business.

Comment

What I don't understand is how a trillion dollar industry could have emerged without our government expressing concern about human exposure to microwave radiation, when we have known for over a half century that microwaves are biologically active. There has been a terrible failure of government here. I hope we can learn from this.

Congress needs to place public safety above commercial interests. We have seen health overlooked in so many areas of society, for example in government support of Big Pharma, Big Telecom, Big Agra, etc., at the expense of public health, and it is our responsibility as citizens to stand up and let our representatives in Congress understand what we value, and actively vote those representatives in government out

of office if they are not concerned with our values and responding to serious public health issues.⁴⁷

Aside: laptops

In the course of researching this paper I discovered something quite alarming regarding EMF radiation. As a very heavy user of a laptop I knew that there was probably a certain amount of EMF effect but believed it to be small. In fact, many studies have stated that computers do not create any medical danger; the health problems are associated with posture, too much concentration, failure to rest the eyes or to walk about etc.

As the victim of more than one serious medical condition I recently noticed that my symptoms improved after a very unusual break from my laptop for two days. I determined to limit my stretches of work, which for many years would mean working at my desk for many hours a day without a break.

However, I now discover that the amount of EMF radiation emitted by a laptop under charge is immense; much more than a mobile 'phone. The best advice is to use a laptop running on battery and charge it when away from your desk. I had been using one plugged into the mains for 12 years and the area of my body suffering medical damage is right in front of it.

Therefore, I issue this warning to those who have been doing the same thing as me; in my experience that is many people.

Conclusion

There is nothing new in the fact that the authorities have failed to give a sufficient warning about the use of mobile 'phones since their past history shows a tendency of neglect regarding the dangers of new products. When these products make so much money that they affect the economy, then there is little chance of early warnings by any government.

That mobile 'phones cause damage of various sorts is now undeniable. The real issue is that very young children are not only using them but are addicted to prolonged use. Most parents have no idea at all that this is an accident waiting to happen and that in ten or twenty years there will be problems with brain tumours that are avoidable if action is taken now.

It is wicked that there is insufficient information out in the public domain, or worse, that false counsel is given by the establishment that these 'phones are completely safe.

Proposals

- Do not buy young children a mobile 'phone.
- Only allow older children to use a mobile for emergencies only. If a child is brought up sensibly they can develop enough character to swim against the modern tide of public opinion which encourages heavy mobile use.
- Discourage mobile 'phone use by children.

⁴⁷ Camilla Rees, founder of ElectromagneticHealth.org is also founder of *Campaign for Radiation Free Schools* (Facebook).

- Do not keep a mobile on your body near sensitive organs (breasts, ovaries, heart, genitals). The most dangerous place for radiation exposure is within about six inches of the emitting aerial. This very day I warned a 13-year-old of the danger of carrying her mobile in her shirt breast pocket; when I explained why, she removed it. No one had warned her before.
- Use the speakerphone instead of putting the phone to your ear.
- It is advisable to tilt the phone away from your ear when you are talking and only bring it in close to your ear when you are listening ... radiation is 'significantly less when a mobile is receiving signals than when it is transmitting.
- Many mobiles emit the most radiation when they initially establish contact with the cell tower, making their 'digital handshake.' To reduce exposure it's best to wait until after your call has been connected to put your 'phone next to your ear.
- Limit calls inside buildings.
- Don't assume one cell phone is safer than another; there's no such thing as a safe mobile 'phone.
- If you must use a mobile extensively, use a headset / ear-piece that separates EMF radiation. [Such as a combination shielded wire and air-tube headset. These operate like a stethoscope, transmitting sound to your head; there is no wire that goes all the way up to your head.]
- Keep your mobile switched off until you need it. Ideally, you should only use your phone with full bars and good reception.
- Use a landline at home and work.
- Don't use your mobile as an alarm clock (near your head).
- Do not use a hands-free telephone at home (they are equally or even more dangerous).

Final quotes

Exposure to cell phone radiation is the largest human health experiment ever undertaken, without informed consent, and has some 4 billion participants enrolled. Science has shown increased risk of brain tumours from use of cell phones, as well as increased risk of eye cancer, salivary gland tumours, testicular cancer, non-Hodgkin's lymphoma and leukaemia. The public must be informed.⁴⁸

No research has found cell phones to be a danger to health.⁴⁹

All truth passes through three stages. First, it is ridiculed. Second, it is violently opposed. Third, it is accepted as being self-evident.⁵⁰

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