Do You Have Microwave / EMR Sickness?
Your Cell Phone (i.e. Electromagnetic Weapon)
May – Insidiously – Be Making Us Sick!
By Paul Raymond Doyon

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

In the beginner's mind there are many possibilities. In the expert's mind there are few. – Shunryu Suzuki

The intuitive mind is a sacred gift and the rational mind is a faithful servant. We have created a society that honors the servant and has forgotten the gift. – Albert Einstein

A good student answers questions but does not question answers. – Ira Shor

Many people have a hard time fathoming that something that they cannot see, touch, smell, taste or hear – sense with the five senses – can harm them so much. But if people did really know the facts regarding the dangers of cell phones and WiFi (wireless networks) and the masts (cell phone towers) that emit an ever-increasing and pervasive level of microwave radiation, would they still be willing to use them? Would they still be willing to allow the antennas to be built in the vicinity of their homes, work places, schools, and hospitals? The fact of the matter is that there are about eighty immune system disorders that we didn’t have twenty-five years ago before we really started microwaving the planet. Research is showing that this electrosmog may very likely be playing a role in a host of illnesses including autism, ADHD, CFS, Alzheimer's, allergies, heart disease, stroke, diabetes [1], insomnia, depression, infertility, leukemia, breast cancer, brain tumors, miscarriages, birth defects, and a plethora of other illnesses – not to mention electrosensitivity (ES) [2].

Dr. George Carlo [3], who ran a multi-million dollar research program for the cell phone industry and went public regarding the dangers posed by cell phones, uses the analogy of putting a frog in water. If you put a frog in boiling water, it will jump out. However, if you put a frog in cold water and gradually heat the water, you can cook the frog because the frog's body will adjust to the slight changes in temperature and it will not notice it is being cooked. Well, the same thing might be happening to an unsuspecting public – a public that has not been informed about the real dangers of microwave radiation from cell phones, WiFi and other high-frequency-radiation emitting devices and antennas.

The truth of the matter is that your cell phone and your WiFi might very well be making you and those close to you sick! Please read on!

I. Symptoms known to be caused by exposure to electromagnetic radiation depending on frequency, duration, and exposure levels in the early stages (and/or at lower exposure levels) can be decreased stamina, memory problems, fatigue, sleep disturbances, headaches, eye sensitivities, increased allergies and other sensitivities, dizziness, irritability, concentration problems, nausea, and restlessness. At the latter stages (and/or at higher exposure levels), unexplained anxiety, insomnia, swollen lymph nodes, depression, loss of appetite, hypoxia (lack of oxygen getting to the tissues), hyperactivity, dry eyes, vision problems, weakened immune system, frequent urination, night sweats, extreme thirst, weight gain or weight loss, testicular pain and so on (Becker[4] 1985, Levitt 1995, Cherry 1996, Kolodynski & Kolodynski 1996, Santini et al 2002, Al Khlaiwi & Meo 2004, Radio Wave Sickness, Selsam 2005, Bortkiewicz et al 2005, Sage 2006). These symptoms very often suddenly appear in people who have had a cell phone tower installed nearby their home.
II. Microwave exposure induces oxidative damage [5] leading to depletion of the body's natural production and store of a number of antioxidative enzymes [6] and antioxidants like super oxide dismutase (SOD), catalase, glutathione, CoQ10, and melatonin (Wei 1999, Campanella et al 2003, Gautier & Santini 2003, Ilhan et al 2004, Ozquner et al 2005, Regoli et al 2005, Zwirska-Korczala et al 2005, Goldberg G. 2006, Jelenkovi et al 2006, Kalns et al 2006, Ozquner et al 2006,Yurekli et al 2006, Carlo [7] 2007). When the body becomes depleted in antioxidants, what are known as free radicals aka reactive oxygen species (ROS) will wreck havoc on the body's cellular systems (e.g. cell wall, mitochondria, DNA) causing oxidative damage which can thus lead to premature aging, a weakened immune system, and sticky blood, among other serious problems. With a depressed level of antioxidants in the blood, for example, not only low-density lipoproteins (LDL) [8] will bind with free radicals (oxidants) leading to the gooey stuff that forms plaque on arterial walls, but evidence is showing that this can also happen with the high density lipoproteins (HDL) as well (Hurtado, et al 1996). This leads to arteriosclerosis and more viscous blood which in turn can cause blood clots leading to strokes and heart attacks.

III. Microwaves, depending on their frequencies, have been known to effect an abnormal flux of calcium into or out of cells [9] (Nair 1989, Cleary 1999, Dorothy 1999 [10], Amara 2004). When there is an abnormal influx of calcium into mast cells, for example, they produce histamine (Chakravarty 1986, 1987). This is just one of the ways in which microwave exposure has been known to trigger or aggravate allergic reactions. [11]

IV. Microwave exposure has been known to induce mitochondria dysfunction (Dutto et al 1984, Xie et al 2004, Goldberg G 2006, Buchachenk et al 2006). The mitochondria are the powerhouse of the cell. Dysfunctional mitochondria will interfere with the cellular energy production and can be linked to fatigue – and very possibly even obesity. [12]

V. Microwaves have been shown to depolarize the body's red blood cells (Tomson). This will cause the red blood cells to clump together and when this happens, the amount of oxygen getting to the brain cells and the body's other organs' cells is substantially diminished leading to hypoxia. This can cause symptoms similar to altitude sickness: nausea, dizziness, inability to concentrate, headaches and so on. Microwaves have also been shown to induce protein shedding from the cellular membranes of red blood cells (Liburdy et al 1984, 1987, 1988). This would naturally weaken the red blood cell leaving it more susceptible to attack by free radicals and hence to oxidative damage.

VI. Microwave exposure has been shown in studies to induce a decrease in the numbers of Natural Killer (NK) cells (Smialowicz et al 1983, Yang et al 1983, Nakamura et al 1997, 1998, Dmoch & Moszczynski 1998), which is a form of white blood cell (lymphocyte) and is the body's first line of defense against pathogens. This leads to the body's weakened ability to recover from viral and other types of infections. Therefore, people exposed to microwave radiation would take longer than normal to recover from your day-to-day infections.

VII. Exposure to long-term microwave radiation has been shown to change a particular form of white blood cell (lymphocyte) ratio – known as the T-helper/T-suppressor (T4/T8) cell ratio – from normal to abnormal (Dmoch & Moszczynski 1998). Abnormalities in this T-lymphocyte ratio have been shown to lead to an increased susceptibility to viral, fungal, and bacterial infections. Symptoms include "sore throats, low-grade fevers, weakness, persistent fatigue, and swollen lymph glands" (Braverman).

VIII. In fact, research has shown that exposure to microwaves and other electromagnetic radiation not only weakens the immune system, [13] but also affects an increase in viruses, bacteria, mold, parasites, and yeast in the blood of the human host. [14]
Microwave exposure has been shown in studies to induce what is known as "subliminal" stress (Becker [15] 1985, Levitt [16] 1995), (since the body does not know it is being stressed) causing the adrenal glands to excrete an abnormally greater amount of cortisol and adrenaline. Excretion of adrenaline, for one, can lead to irritability and a feeling of hyperactivity – the latter now very common in children with Attention Deficit Hyperactivity Disorder (ADHD). In a continuous state this will eventually lead to adrenal exhaustion, in which the adrenal glands just stop working, which is a common abnormality found in Chronic Fatigue Syndrome (CFS).

Microwave exposure has been shown to alter levels of 5-HT in the blood (Wang 1989) of workers exposed. 5-HT is a precursor to the production of the brain hormone serotonin. Low levels of serotonin have been linked to anxiety and depression (Gorman et al 2002, Goldberg G 2006). An increase in anxiety and depression can in turn be linked to growing numbers of suicides.

Microwave exposure has been shown to induce a decrease in levels of the brain hormone norepinephrine (Takahashi et al 1994). This hormone is essential for control of the autonomic nervous system, and lack of it can lead to autonomic nervous system disorders. For example, if the autonomic nervous system is not working properly, the body will have trouble regulating its temperature – i.e. cooling itself when it is warm and heating itself when it is cold (Gandhi & Ross 1987). This could lead to feeling colder than one would normally when it is cold and feeling warmer than one would normally when it is warm (Way et al 1981). In fact, people with Chronic Fatigue Syndrome (PWC) have been found to have a disturbed circadian Core Body Temperature (Tomoda et al 1997). An abnormal decrease in norepinephrine levels has also been connected to short-term memory disturbances (Clinton et al 2006), ADHD (Arnsten & Li 2005) and depression (Charney 1988, Meyer et al 2006).

Production of the brain hormone melatonin has also been shown to be altered by exposure to microwaves (Yellon 1994, Altpeter et al 2006). This brain hormone and antioxidant is necessary for proper sleep. 42 million (approximately one in five) Americans in 2006 took sleep medication for insomnia, up 60% from 2000 (Saul 2006), while others often experience sleep disturbances due to exposure to electromagnetic radiation (EMR) (Hubert et al 2002). A drop in melatonin levels has also been connected with increases in breast cancer (Blask et al 2005).

Changes in the levels of the brain hormone, dopamine (or dopamine transporters), has also been shown to be connected with microwave radiation and other EMF exposure (Mausset-Bonnefont et al 2004, Sieron et al 2004). A drop in dopamine levels has also been linked with depression (Brown & Gershon 1993) and restless leg syndrome (RLS) (Allen 2004).

Exposure to electromagnetic radiation has been shown to effect an abnormal drop in the levels of the neurotransmitter acetylcholine (Modak et al 1981, Dutta et al 1992, Omura & Losco 1993, Testylier et al 2002, Gautier et al 2003). A drop in the levels of this neurotransmitter has been linked to a number of neurological and neuromuscular disorders – including Alzheimer's disease.

Some electromagnetic frequencies have been shown to induce restlessness (Cherry 1996, Rajendra et al 2004, Shtemberg et al 2004, Selsam [17] 2005). This only strengthens the possible connection between EMR and restless leg syndrome (RLS) since dopamine has been shown to be affected by EMR and dopamine agonists are used to treat RLS (Weimerskirch & Ernst 2001, Aramideh & de Weerd 2006).

Electromagnetic fields – like those emitted by cell phones – have been shown to alter regional cerebral blood flow (Huber et al 2002, Huber et al 2005, Haarala et al 2003, Goldberg G 2006, Aalto et al 2006). In conditions like autism and chronic fatigue syndrome (CFS) it has been shown via

XVII. Numerous studies are now connecting microwave and other electromagnetic radiation exposure to an increase in allergies (Kimata 2002 [see also Ingels], Kimata 2003, Kimata 2005). Microwave exposure has been shown to turn on mast cells to produce more histamine [20] – the chemical responsible for allergic reactions – and other electromagnetic fields have been shown to actually increase the number of mast cells in the body [21] (Johansson & Liu 1995, Johansson et al 1996, Johansson et al 2001). Microwaves have also been found to increase immunoglobulin antibodies in the body (Bergier et al 1990, Dmoch & Mosczynski 1998, Moszcynski et al 1999, Yuan et al 2004, Kimata 2005). Immunoglobulin antibodies are responsible for triggering an allergic reaction to a particular substance or protein. Could it be that the EMR confuses the body into making antibodies to the wrong things? Many researchers and scientists were – and still are – puzzled by the fact that the East German population had so few allergies in comparison to the West German population when the two countries unified (Hermann-Kunz 1999a & 1999b, Heinrich et al 2002, Kramer et al 2002). But what they failed to examine is the simple fact that East Germany had much stricter regulations regarding ambient radiation levels than West Germany. Since East Germany adopted West Germany's standards, allergies in former East Germany have since reached par with the levels of former West Germany.


XVIII. Microwave exposure has also been shown to adversely affect the heart (Becker, 1985, pp. 314-315; Ozquner et al 2005) and could very well be linked to heart irregularities and responsible for triggering heart attacks.


XIX. Exposure to microwave radiation has also been shown to effect an abnormal increase in nitric oxide (NO) (Jelenkovic et al 2006). An abnormal increase in cellular calcium can also lead to an abnormal increase in cellular NO (Kitamura et al 1997, Li et al 2003), which in excess combines with the superoxide (O2-) to produce a damage-producing free radical or oxidant called peroxynitrite (Henmani & Parihar 1998). Peroxynitrite has been linked with chronic fatigue syndrome (Pall).

XX. Microwave exposure has been shown in numerous studies to open the blood brain barrier (BBB) (Albert & Kerns 1981, Williams et al 1984, Quock et al 1986, Quock et al 1987, Neubauer et al 1990, Schirmacher et al 2000). The BBB protects the brain from foreign substances like viruses, bacteria, and chemical toxins in the blood which may injure the brain. Thus, exposure to microwave radiation could very well open people up to viral and bacterial infections of the brain that would not normally occur otherwise.

XXI. There has been a dramatic increase in brain tumors (Bleyer 1999) and other cancers in the past twenty years – especially with the advent of the cell phone. After 1984 (the year the first cellular phone networks were set up in most major cities in the USA) there was a notable jump in children’s brain tumors (see video [22]) though according to the National Cancer Institute (NCI) this is due to better diagnostics (1998). Brain tumors are now the number two cause of death in children followed by leukemia. Just last year seven people in Melbourne at RMIT University working in a building on the top two floors underneath a cell phone mast suddenly were diagnosed with brain tumors (Macnamara 2006). They had been working under the mast for ten years.

XXII. There has been an exponential increase in autism [23], ADHD, Chronic Fatigue Syndrome [24], and Alzheimer’s [25] since 1984, the year the first commercial cell phone networks started to
spread across the USA. These rates increased even further with the switchover from analog (1G) to digital (2G) in the early 90s (Marshall [26] 2001, Weatherall 2007).

XXIII. There have been numerous confirmed cases of deformities in animals (Animal Study) and plants (Kato 2004) near cell phone towers and the worldwide disappearance of frogs (Balmori [27] 2006), birds (Mukherjee [28] 2003) and insects (most recently bees [29] see Barrionuevo 2007) is being connected with these levels of ambient background radiation (Sandu 2007) [30]. Also, sardines (or pichard) in Australia (Gov. of Australia [31]), carp in Japan (CBS News [32] 2003), and lobster in Florida (Schneider [33] 2003) have been found to be infected with forms of the herpes virus. One study has even shown that electromagnetic fields can actually stimulate the genome of the Epstein-Barr Virus (Grimaldi et al 1997), the herpes virus responsible for mononucleosis in the US or aka glandular fever in the UK, Australia, and New Zealand. A number of herpes-family viruses (e.g. CMV, EBV, HH6V) are usually found to infect people with CFS, autism, ADHD, and Alzheimer's.

Now, in heavily electropolluted Japan it has been reported that it is very common for women to have miscarriages in their last trimester of pregnancy. Usually, the fetus is deformed. [34] One study (Nagaishi et al 2004) has shown chromosome abnormalities in the fetuses of miscarriages in Japan and another has shown an increasing male/female ratio in fetal deaths since the 1970s (Mizuno 2000). Cell-phone use has also recently been shown to lower sperm count in men the longer they use the phone (Hope 2006).


The cell phone industry makes hundreds of billions of dollars in profits every year. They have the money and the power to influence politicians, the media, and even the research. Unethical researchers receive mass funding from this industry and are pressured to tell you it is safe while the researchers who inform us of its true dangers have consistently had their funding cut. [35]

At present there are approximately 40,000 signatories to The Freiburger Appeal [36] drafted after a number of German doctors recognized a connection between many of the symptoms listed above and exposure to microwave radiation and other EMR – and after the German government had failed to act to protect its citizenry. In some countries like Israel and Ireland there have been cases where citizens have taken their health and the law into their own hands when they realized that their governments would not protect them or their children from this danger. [37] Naturally, we all have a right not to be exposed to this radiation which is affecting our health and making us and our families sick. Unfortunately, it seems like our governments favor the corporations and of course their money over our rights. We should expect to be seeing lawsuits in the future with regards to second-hand RF radiation. [38]

The only way the cell phone industry gets its power is because consumers pay them their money. They have created an imaginary need or addiction. But if you heed the information above, then you will hopefully realize that you do not really need this "unnecessary evil" – or rather you need it like you need a hole in your head or rather a brain tumor. Consumers need to become aware that they do have the power to affect change. Hence, the consumer is either part of the problem or part of the solution! The consumer can decide. The consumer has a choice – that is – unless they are Unconscious! The forces of greed, selfishness, conformity, ignorance, apathy, obedience, fear, blind skepticism, and denial are powerful forces in our societies, which industries use to manipulate a populace. However, they are all still forms of Unconsciousness. And only an Unconscious person, aware of the severe damage that this technology is leveling, would pay an industry to cause them, their family and others harm. Only an Unconscious person would be a willing partner in a grave crime being committed against other human beings, plants, insects, and animals living on this planet.
Social psychologists have shown that it is much easier for people to harm other people when they do so under the orders of an authority figure and further if done so indirectly and incrementally. When you add in the unconscious elements of conformity (everyone else is doing it so it must be OK), convenience, selfishness, greed, and denial, well you naturally have the ingredients for a disaster. If someone kills you directly and immediately, they go to jail; however, if someone kills you indirectly and incrementally, well they get away with murder. What should eventually come to light is that the Weapons of Mass Destruction (WMD) are not in Iraq, but rather in our front pockets, and we are not only committing mass genocide with these EM WMDs but also a slow mass suicide.

What can we do to protect ourselves and our families from this unconsciousness? One thing would be to limit ones and one’s family’s exposure to the electrosmog as much as possible. This can be done by relocating (though finding a place without this radiation is becoming more and more difficult), and if this is not possible – shielding ones home. There was recently a building built in Budapest which is designed to block residents’ exposure to EMR (All Hungary News 2007) which is evidence that people are indeed starting to take this problem seriously. More and more people are looking into creating EMR-free communities (see EMF-Refugee at http://health.groups.yahoo.com/group/emfrefugee/) and we can expect in the future that doctors will start sending patients to these areas. Meters and shielding materials can be purchased at www.lessemf.com and other companies like it. [The Electrosmog Detector is an essential, easy to use hand-held detection device for home or office, your children’s school or daycare, and for travel. It allows you to locate sources of harmful radiofrequency/microwaves around you so that you can either disable the RF/MW broadcasting source (such as a cordless phone base, Wi-Fi system, etc.), shield yourself or relocate to avoid exposure. To find out more, e-mail electrosmog@peoplepc.com]

Numerous studies are now showing that a number of antioxidants have an ability to protect one against the negative consequences of exposure to electromagnetic radiation. However, each antioxidant works differently in the body with some offering more protective effects to specific organs (e.g. milk thistle has been shown to offer the liver specific protection) while a number work in conjunction with each other. Therefore, it is useful to think of a football team analogy when taking antioxidants with each one performing a specific function while also working together as a team. The following are recommended with many already being shown in studies to offer protection against EMR: Alpha Lipoic Acid (ALA), Acetyl-L-Carnitine, Vitamin C, Vitamin A, Vitamin E, the B vitamins, Carotene, Cryptoxanthin, Lutein, Zeazanthin, Lycopene, Flavanoids, Gingko Biloba, Pycnogenol, Grape Seed Extract, Quercetin, Isoflavones, Milk Thistle, Bilberries, Blueberries, Hawthorn, Glutathione (from whey powder), N-Acetyl-L-Cysteine, Super Oxide Dismutase (SOD), Selenium, Catalase, Bee Propolis and Coenzyme Q10. Many of these products can be bought at discount supplement companies like www.iherb.com. Also, products like Noni Juice, Blueberries, Bee Propolis, Snake Venom, certain Chinese herbs, Inositol, Transfer Factor plus the acupuncture point ST36 (Zusanli) – have been shown to stimulate NK cell production in the body. For people suffering from mycoplasma infections, the product Myco from Raintree Nutrition – www.raintreenutrition.com has been shown to be effective against this pathogen. Acupuncture and Qigong are also helpful in balancing and strengthening the body’s own natural electromagnetic field. These are however, all short-term solutions. In the long-term, the only solution will be to drastically reduce this dangerous and unacceptable level of ambient background electromagnetic radiation.

Since it is premature to expect civilization to wake up from its unconsciousness anytime in the near future, the only feasible alternative now is to look at fiberoptics – which has been proposed by the late New Zealand biophysicist Dr. Neal Cherry and is also now being promulgated by Dr. George Carlo. So rather than radiating the whole planet with high frequency microwaves, it would be much safer to have fiberoptic cables everywhere with ubiquitous outlets in which to plug in electronic...
devices including cell phones and computers. One can also envision umbrella cell-phone and WiFi usage areas – similar to cigarette smoking areas – having an extremely limited range, where those who would like to go and fry their brains with microwaves can do so without harming those who would rather not.

"All that is necessary for evil to triumph is for good people to do nothing."

P.S. The cell phone industry has been buying up the patents on inventions that help protect cell phone users from the harmful radiation emitted by cell phones. Unfortunately, it is a catch-22 situation for them since if they use them, they are hence admitting what they have been denying all along – that cell phones are actually dangerous. This would open them up to a plethora of possible lawsuits. Either way, the consumer loses.

**Footnotes**

[1] Dr. Magda Havass ground-breaking research has found a link between EMR and diabetes – and also among other illnesses like MS: Havass has done studies showing that not only is the problem real, but otherwise serious medical conditions can be helped by using the Graham-Stetzer filter. In a study presented at the International Scientific Conference on Childhood Leukaemia in 2004, Havass found that the filters were associated with fewer and less severe headaches, more energy, lower blood sugar levels for diabetics, and improved balance for those with multiple sclerosis. I was stunned with the results we got, Havass said. The lower the dirty electricity in a room the lower the symptoms expressed in patients. Some of the startling results included putting people with diabetes in a room with the filter, and blood sugar levels began to normalize instantly. The results with Multiple Sclerosis patients was even more remarkable. People who were in wheelchairs and using walkers, we put the filters in and we have videotapes of people who couldn't walk, walking, Havass said. I actually think some percentage of the population that have MS are already responding to dirty electricity. Maybe it would work with Parkinson's, Alzheimer's, depression, asthma? Further results of a study Havass reported to the World Health Organization on Electrical Hypersensitivity included a study of a private school in Toronto that had 50 filters installed. The study was single-blind (the teachers knew nothing about what the researchers were studying), and 50% of teachers showed some improvement in at least one of their symptoms. Other subjective results included teachers reporting that students were less disruptive in the classroom. Could dirty power be causing or exacerbating the rise in ADD/ADHD in kids? No one really knows because no one is studying the issue (Henderson 2006).

[2] More and more people are becoming electrosensitive every day and yet many people who are electrosensitive may not be aware of their own electrosensitivity. People who are extremely electrosensitive will even feel ill when in a room with people who have their cell phones on standby mode and also when they are close to cell phone towers. The former Director-General of the WHO, Dr. Gro Harlem Brundtland, a medical doctor, became electrosensitive and was able to detect when someone in the same room was carrying a cell phone.

[3] Dr. Carlo, also a lawyer, is the director of the Washington-based non-profit Safe Wireless Initiative http://www.safewireless.org and has been fighting the cell-phone industry ever since he went public with the dangers of cell phones and was hence relieved of his position working for the cell phone industry.

[4] In 1971, Zinaida V. Gordon and Maria N. Sadchikova of the USSR Institute of Labor Hygiene and Occupational Diseases described a comprehensive succession of symptoms, which they identified as Microwave Sickness. The initial symptoms are low blood pressure and slow pulse. The second stage includes headaches, dizziness, eye pain, sleeplessness, irritability, anxiety, stomach pain, nervous tension, inability to concentrate, hair loss, which are eventually followed by adrenal exhaustion and ischemic heart disease" (Becker, 1985, pp. 314-315).

[5] Actually, it was shown by a Dr. Dewhem Harmam in 1954 – hired by the US Government during the cold war to come up with a cure for radiation poisoning, that exposure to radiation would release a deluge of lethal hydroxyl radicals in the body due to the ionization of water in the body by the radiation (McLeod and White 2002). Gugkova, et al (2005) have shown that the reactive oxygen species hydrogen peroxide forms in aqueous solutions when exposed to "high peak-power pulsed electromagnetic radiation of extremely high frequencies." Alam & Ohgaki (2002) have shown that ferrous iron can bind with hydrogen peroxide to produce the hydroxyl free radical under exposure to ultraviolet radiation. We can only speculate that the same might happen with other forms of radiation exposures combined with the electromagnetic damage to erythrocytes with the possible release of iron into the extracellular blood.
In studies conducted by Cremer-Bartel (1983) [cited in Levitt] weak ELF fields were shown to alter a particular enzyme necessary for the synthesis of melatonin. Interestingly, a number of researchers (Ishikawa et al. 1982, Ikarashi et al 1984, 1985), for research purposes, have applied microwave radiation in order to inactivate brain enzymes to prevent postmortem changes – and which also result in changes in neurotransmitter levels. For example, it was shown by Ikarashi et al (1985) that “microwave irradiation at 10 kW rapidly inactivated brain enzymes” while exposure of a .5 second 5 kW burst of microwave radiation on rat brains (Ishikawa et al 1982) reduced noradrenaline, dopamine, and 5-hydroxytryptamine. (On the other hand, a 1.5 second exposure increased the monamine levels and was recommended for complete enzyme deactivation before brain dissection.) Moreover, it has been shown that exposure to microwave radiation can cause a diffusion of dopamine from some high-level dopamine areas of the brain to other areas which usually contain low levels (Kant et al 1979). In short what we are seeing here is an imbalance of dopamine in the brain induced by microwave radiation and one can only speculate as to what the consequences will be of incessant exposure to microwave radiation due to the brain hormone imbalances it is producing in the general population. Moreover, since brain enzymes act as catalysts in promoting biochemical reactions, which include the production or metabolism of neurotransmitters – which affect behavior – we can only speculate what long-term consequences (e.g. increases in psychological illness, criminal behavior, etc.) the current – and unceasing – modern-day exposure to ambient microwave radiation is producing in the general population especially on those who use cell phones on a regular basis.

We understand that these information-carrying radio waves trigger protein membrane responses at the cell membrane level leading to disruption of intercellular communication and build up of free radicals inside the cell. Understanding of this mechanism is very important because it now explains the wide diversity of symptoms that we are seeing in patients who are reporting electrohypersensitivity and also other conditions such as headaches and unexplained anxiety that henceforth from this point forward now we'll know will be associated with these information-carrying radio waves” (Carlo 2007).

Dr. Carlo explained in detail his theory of how cell phones cause brain damage. It begins with the wave. The signals use carrier waves of around 1,900 megahertz (MHz), which are so high in frequency that they pass right through us, and our houses, unnoticed. But harmful information-carrying waves are packed into the carrier waves. These information waves, which carry signals that can be decoded by our computers and mobile phones, are low-frequency waves in the range of one hertz (Hz). That's slow. So slow that our cells can feel them as an aggravating, physical jolt at their surfaces. Within 30 seconds or so of bombardment, our cells temporarily shut down their surface transport and intercellular communication functions, to resist further damage from threatening invaders. Normally, small threats to cells cause them to send out chemical signals to neighbouring cells that tell them to protect themselves from invaders, and they signal for help from our immune system's T-cells. But bombardment from mobile phone waves causes whole areas of cells and tissues to shut down their surfaces, stopping the active transport of good and bad stuff in and out of the cell, without time to signal a warning to other cells. Further, the shut down of gap junction communication pathways compromises tissue and organ functions, including the immune system.

Free radicals build up inside the cells so they eventually die and spill toxins and fragmented DNA into the space between cells. There, micronuclei form as a result of membranes becoming organized around broken bits of DNA. These micronuclei wreak havoc, disrupting cell function and allowing cancers to form. That is how, as Dr. Carlo explains, both benign and malignant tumours are caused by wireless signals. He suggests a similar process occurs at the blood-brain barrier that protects our delicate neurons and their tiny sophisticated chemical signals from contaminants in our blood. Although exposure may not fully deplete brain enzyme action, it can cause sufficiently long-term effects that may cause brain enzyme imbalances, and thus many other effects. Moreover, Nair and Cleary have reported, that the flux of positively charged sodium, calcium and potassium ions across cell membrane can also be affected by radio-frequency exposure, over a wide range of frequencies (27 MHz to 10 GHz)” (Amara, et al, 2004)

Dr. Blackman has conducted far more experiments in his laboratory on this influx/efflux than anyone else. They
have shown that calcium ion alteration occurs at particular carrier frequencies, particular signal strengths, particular modulation frequencies and in particular temperature ranges, but not in others which lie between them. After summarising these hundreds of experiments Carl Blackman stated that EMR must be treated as chemicals (plural) because we have made the mistake of treating it as a single chemical looking for single effects across the whole spectrum, when it is clear that the effects are very significant and occur at particular combinations of variables, but do not occur at a nearby different combination" (Dorothy 1999).

[11] "Attempting to explain a 25% increase in asthma and a 5% increase in asthma-related death rates throughout rapidly mobilizing metropolitan Sydney, Franch found that the production of histamine, which triggers bronchial spasms, is nearly doubled after exposure to mobile phone transmissions. Cell phones also reduce the effectiveness of anti-asthmatic drugs, and retard recovery from illness" (Thomas 2005).

[12] Researchers (Takahashi, et al 1994) in Japan have been able to induce obesity in rats by producing microwave-induced lesions to an area of hypothalamus (called the ventromedial hypothalamic nucleus or VMH). They noted a drop in the hypothalamic contents of norepinephrine and dopamine and a decrease in adrenal epinephrine concluding that a drop in these hormones may be related to the VHM-induced obesity.

[13] "[Dr. Coghill's] latest research suggests the microwaves generated by mobile phones may damage the ability of white blood cells to act as the 'policemen' of the body, fighting off infection and disease. Mr. Coghill took white blood cells, known as lymphocytes, from a donor, keeping them alive with nutrients and exposed them to different electric fields. He found that after seven-and-a-half hours, just 13% of the cells exposed to mobile phone radiation remained intact and able to function, compared with 70% of cells exposed only to the natural electromagnetic field produced by the human body" (BBC News Online Network). http://news.bbc.co.uk/1/hi/health/194065.stm

[14] Dr. Robert Young states in an interview on a British news program that "when we are exposed to lower frequencies ranging between 10 hertz and 100 hertz, those particular frequencies have a tendency to disturb cells significantly that they start disorganizing, breaking apart, and giving birth to perceived viruses, bacteria, yeasts, and molds" (Qlink World).

[15] "Initially, the stress activates the hormonal and/or immune systems to a higher than normal level, enabling the animal to escape danger and combat disease. If the stress continues, hormone levels and immune reactivity gradually decline to normal. If you stop your experiment at this point, you're apparently justified in saying, 'The animal has adapted; the stress is doing no harm.' Nevertheless, if the stressful conditions persist, hormone and immune levels decline further, well below normal. In medical terms, stress decompensation has set in, and now the animal is now more susceptible to other stressors, including malignant growth and infectious diseases. In the mid-70s, two Russian groups found stress hormones released in rats exposed to microwaves, even if they were irradiated only briefly by minute amounts of energy. Other Eastern European work found the same reaction to 50-hertz electric fields. Several Russian and Polish groups have since established that after prolonged exposure the activation of the stress system changes to a depression of it in the familiar pattern, indicating exhaustion of the adrenal cortex... Soviet biophysicist N. A. Udintsev has systematically studied the effects of one ELF magnetic field (200 Gauss at 50 hertz) on the endocrine system. In addition to the slow stress response we've been discussing, he found activation of the 'fast' fight-or-flight hormones centering on adrenaline from the adrenal medulla. This response was triggered in rats by just one day in Udintsev's field, and hormone levels didn't return to normal for one or two weeks. Udintsev also documented an insulin insufficiency and rise in blood sugar from the same field. One aspect of the syndrome was very puzzling. When undergoing these hormonal changes, an animal would normally be aware that its body was under attack, yet, as far as we could tell, the rabbits were not. They showed no outward signs of fear, agitation, or illness. Most humans certainly wouldn't be able to detect a 100-gauss magnetic field, at least not consciously. Only several years after Friedman's work did anyone find out how this is happening. In 1976 a group under J. J. Noval at the Naval Aerospace Medical Research Laboratory at Pensacola, Florida, found the slow response in rats from very weak electric fields, as low as five thousandths of a volt per centimeter. They discovered that when such fields vibrated in the ELF range, they increased levels of the neurotransmitter acetylcholine in the brainstem, apparently in a way that activated a distress signal subliminally, without the animal's becoming aware of it. The scariest part was that the fields Noval used were well within the background levels of a typical office, with its overhead lighting, typewriters, computers, and other equipment. Workers in such an environment are exposed to electric fields between a hundredth and a tenths of a volt per centimeter and magnetic fields between a hundredth and a tenths of a gauss" (Becker, pp. 277-278, 1985).

[16] "...Test animals appear not to know they are stressed, yet blood tests show high levels of cortisone, a substance released in the body under conditions of long-term disease, as opposed to adrenaline, which is released in a fight-or-
flight response. Monkeys exposed to a 200 gauss magnetic field for four hours a day showed a generalized stress response for six days which then declined, suggesting that animals had adapted to the exposure. Researchers who stop the experiment at that point can reasonably conclude that there has been no long-term damage. However, in subsequent experiments, it has been found that when the exposure continues, hormone and immune levels will fall far below normal and remain there. The immune system becomes exhausted and unable to rebound, opening the body to infectious diseases and an inability to fight malignancies” (Levitt, 1995, pp. 128-129).

[17] "These reports show that the people for years have been ill due to pulsed high frequency electromagnetic fields, without the treating doctors recognising the cause. For that reason, people who are receiving the high frequency at home or at work have suffered and are suffering and they receive no therapy. The deciding [effective] therapy is to end the exposure. The continually repeated assertion in the media by the Radiological Protection Commission (Strahlenschutzkommission), that there is no proof for health risks under the present valid limits, has had the consequence that most doctors, (including myself until a year ago) have not drawn a relationship between the many unexplained illness patterns and high frequency radiation. The doctors do not know that at not one single mobile phone base station have investigations into the health-state of the people been carried out. Thus, the evaluation of the Strahlenschutzkommission in 2001 has no scientific basis” (Selsam 2005).

[18] Dr. Michael Goldberg was able to find commonalities in the bloodwork and the blood flow in the brain (via SPECT) of people with CFS, autism, and ADHD. He states While there is ongoing controversy regarding past brain biopsy findings and their implications, if any, to this generation of children, we do have NeuroSPECT Scans, which show reproducible, quantifiable blood flow in the brain. Blood flow corresponds directly to function. When NeuroSPECT Scans of children diagnosed as autistic/PDD have been correlated with MRI’s and CAT Scans, the combination consistently shows no pre-existing damage to the brain, but rather points toward an immune shutdown consistent with that found in adults with Chronic Fatigue Syndromes and other adult dementias and with children diagnosed as quiet ADD and mixed ADD (Goldberg MJ 2000).

[19] Dr. Miike and his colleagues determined that the phenomena of school phobia in Japan had actually physiological causes and is actually what they term Childhood Chronic Fatigue Syndrome (CCFS). There were approximately 10,000 school phobia cases in Japan in 1990. This number increased to approximately 140,000 in 2004 – an increase of 1400 percent in just fourteen years.

[20] A doctor, John Holt, in Australia has written to us saying that when working with microwaves (to irradiate cancer cells) he has observed that the microwaves from cell phones cause a doubling of histamine (which are released from mast cells) he has observed that such electrosmog from mobile phones could be the cause of the ever-increasing asthma and other allergies” (FEB 2001).

[21] "Professor Johansson: ‘We are right now in the process of examining a larger number of facial skin samples, and from them the most common finding is a profound increase of mast cells. Furthermore, increases of similar nature have now been demonstrated in an experimental situation employing normal healthy volunteers in front of visual display units, including ordinary house-hold television sets’ “ (FEB 2001).

[22] <http://www.youtube.com/watch?v=PVhgyXD5co&mode=related&search =>

[23] Though often only attributed to mercury in vaccines, “In the 1990s, reported autism cases among American children began spiking, from about 1 in 10,000 in 1987 to a shocking 1 in 166 today” (Studies in the News 2006).

[24] I stumbled into the field of autism somewhat by accident. My wife had had Chronic Fatigue Syndrome for over ten years. Jokingly, my son asked me "Why are you sending Mom all over the country to doctors? Why don't you just fix her?" That began my journey into clinical research. It rapidly became apparent we were dealing with some component of the immune system, an autoimmune like reaction. During that time, as I was investigating all options for my wife, a few Autistic children were referred to my practice. Much to my surprise, these children had blood work comparable to that of my wife and other adults with this undiagnosed disorder, and to that of children I had been seeing diagnosed with quiet ADD and mixed ADHD I remember thinking then, “What could the immune system have to do with autism?” Paralleling this, beginning in the 1980's was the initially slow, now epidemic incidence of disorders in children labeled as Autism/PDD and the increase of reports of autoimmune diseases in the animal literature, of altered ecological balance, immune system abnormalities in various species. We either have to assume that this increase of disorders in the human population is mass-hysteria, mass-psychosis, schizophrenia, and/or behavioral developmental disorders in children or we must step back and realize that maybe we have a large number of adults and children suffering from a disease process that is affecting how their brain and nervous system functions, in ways that physicians had never understood (or had the...
technology to understand). I have family after family within my new practice in which there is a mother or father with Chronic Fatigue Syndrome, an older child with ADD/ADHD, and a younger child or two with Autism/PDD. As noted, unless we assume this is all random, there is unfortunately a logical connection between the above disorders and their rapid emergence as a crisis" (Goldberg MJ 2000).

By 1986, she was seeing more than 300 patients with the now-familiar symptoms, and cluster outbreaks had been reported in cities and towns across the country, including a well-publicized one at Lake Tahoe. She consulted with UCSF virologist Jay Levy, who was then working to discover the HIV virus. She and Levy wondered whether they were seeing a new virus or something related to AIDS in a milder form. Somehow, they felt, the immune system in these patients had been disrupted. When we get sick with a flu, the fever, achiness and fatigue are not caused by the virus itself but by the immune response, the chemicals released to fight infection. Perhaps Jessop's patients had an immune system stuck in the on position, creating persistent flu-like symptoms. But what virus was causing the disruption? After investigating a number of potential culprits – human herpes virus 6 (HHV-6) and Epstein-Barr virus (EBV), among others – Jessop and Levy, like other investigators, came up empty. In 1988, the Centers for Disease Control and Prevention (CDC) named the puzzling illness chronic fatigue syndrome (CFS), as if this illness were about nothing more than being a little extra tired. The moment the name was set in print, patients lambasted it for trivializing a devastating illness and inviting psychiatric stigma. By 1991, Jessop was seeing 1,500 patients with CFS, marking the Bay Area as one of the largest clusters of the nationwide epidemic (Wall 1995).

[25] Just ten years ago, Alzheimer's was considered an obscure and rare condition, but today it is the nation's fourth leading cause of death. What happened?" (Levitt, 1995, p. 200).

[26] "The incidence of ME/ICD-CFS is known to be rising: in April 1994, the insurance company UNUM (one of the largest disability insurers) reported that in the five years from 1989-1993, mens' disability claims for CFS increased 360%, whilst womens' claims for CFS increased 557%. No other disease category surpassed these rates of increase. In order of insurance costs, ME/ICD-CFS came second in the list of the five most expensive chronic conditions, being three places above AIDS. At the Fifth American Association of Chronic Fatigue Syndrome International Research and Clinical Conference held in January 2001 in Seattle, the Associate Director of the University of Washington's CFS Research Centre (Dr. N Afari) confirmed that the incidence is indeed rising" (Marshall et al 2001).

[27] A bibliographical review on the possible effects of radiofrequency radiation (RFR) from wireless telecommunications on living organisms and its impact on amphibians is presented. The technical characteristics of this new technology and the scientific discoveries that are of interest in the study of their effects on wild fauna and amphibians are described. Electromagnetic pollution (in the microwave and in the radiofrequency range) is a possible cause for deformations and decline of some amphibian populations. Keeping in mind that amphibians are reliable bio-indicators, it is of great importance to carry out studies on the effects of this new type of contamination. Finally, some methodologies that could be useful to determine the adverse health effects are proposed (Balmori 2006).

[28] The wireless telecom revolution is catching on at the expense of a tiny winged creature the house sparrow. The tiny birds are fast disappearing from cities contaminated with electromagnetic waves arising out of increased number of mobile handsets. According to Dr. S. Vijayan, Director of the Salim Ali Centre for Ornithology and Natural History (SACON), A number of studies has been conducted to find out the relationship between the increase in electromagnetic waves and the decrease in the number of sparrows. A positive correlation has been found between them. There have been studies in Spain which showed that sparrows disappear from cities where electromagnetic contamination is very heavy, Dr. Vijayan added (Mukerjee 2003).

[29] In 24 states throughout the country, beekeepers have gone through similar shocks as their bees have been disappearing inexplicably at an alarming rate, threatening not only their livelihoods but also the production of numerous crops, including California almonds, one of the nation's most profitable. I have never seen anything like it, Mr. Bradshaw, 50, said from an almond orchard here beginning to bloom. Box after box after box are just empty. There's nobody home. The sudden mysterious losses are highlighting the critical link that honeybees play in the long chain that gets fruit and vegetables to supermarkets and dinner tables across the country. Beekeepers have fought regional bee crises before, but this is the first national affliction. Now, in a mystery worthy of Agatha Christie, bees are flying off in search of pollen and nectar and simply never returning to their colonies. And nobody knows why. Researchers say the bees are presumably dying in the fields, perhaps becoming exhausted or simply disoriented and eventually falling victim to the cold. As researchers scramble to find answers to the syndrome they have decided to call "colony collapse disorder," growers are becoming openly nervous about the capability of the commercial bee industry to meet the growing demand for bees to pollinate dozens of crops, from almonds to avocados to kiwis. Along with recent stresses on the bees
themselves, as well as on an industry increasingly under consolidation, some fear this disorder may force a breaking point for even large beekeepers. A Cornell University study has estimated that honeybees annually pollinate more than $14 billion worth of seeds and crops in the United States, mostly fruits, vegetables and nuts. “Every third bite we consume in our diet is dependent on a honeybee to pollinate that food,” said Zac Browning, vice president of the American Beekeeping Federation. The bee losses are ranging from 30 to 60 percent on the West Coast, with some beekeepers on the East Coast and in Texas reporting losses of more than 70 percent; beekeepers consider a loss of up to 20 percent in the offseason to be normal (Barrionuevo 2007).

[30] A study conducted by three departments of Panjab University has found that cell phone towers are the dominating source of electromagnetic radiations in environment in the city and this could lead to diseases in plants and animals (Sandu 2007).

[31] In 1995, a massive 'kill' of adult pilchards occurred over their entire distribution in Australia, from Carnarvon (WA) to Page 12 – Do You Have Microwave / EMR Sickness?

Noosa Heads (Qld). After examining several possible causes, including sudden temperature changes caused by upwelling of deep water, a herpes virus has been found to be the cause of the deaths. The cause of the virus has not been determined conclusively (Gov. of Western Australia).

[32] A herpes virus that has decimated Japan's carp farms is spreading, officials said Thursday, as they battled to contain the country's first known outbreak of the fish disease. Since October, farm-bred carp in Lake Kasumigaura and Lake Kitaura in eastern Japan have died en masse, threatening the lakes' annual catch. On Sunday, fisheries officials in Ibaraki prefecture (state), where the lakes are located, had estimated the amount of dead fish at 860 metric tons (946 short tons), equivalent to 150 million yen (US$1.4 million) of losses for fishermen (CBS News 2003).

[33] A herpes-like virus has infected up to 10 percent of baby lobsters in the Florida Keys, leading some fisheries experts to wonder whether the disease explains recent dips in lobster catches. Biologists doubt the disease can be transferred to humans, but have alerted the national Centers for Disease Control and Prevention just in case (Schneider 2003).

[34] "Prof. Ogino then presented a graph which showed a drastic increase in miscarriages and SIDS in Japan in recent years, with no corresponding increase in Germany. An article on risk assessment (Science 165:1232 (1969)) compared Japan's wild forward push with America's more cautious approach. It brought up the idea of the Precautionary Principle" (Ormsby 2004).

[35] Grants were not given to look for low-level hazards, and scientists who did find such effects were cut down to size. Funds for their work were quickly shut off and vicious personal attacks undermined their reputation.... when nonthermal dangers were documented in America, military and industrial spokespeople simply refused to acknowledge them, lying to Congress and the public. Many scientists, who naturally wanted to continue working went along with the charade (Becker, 1985, p.306).

Many of the researchers I have contacted personally have told me that they have virtually no funds and others have mentioned that they have to search for obscure journals in which to publish their research since it seems the word is out and pressure is being applied on journals not to publish EMF studies.

[36] “In the Freiburger Appeal [6], initially 50 doctors in Germany reported reduced therapeutic efficiency of prescribed drugs correlated with the use of pulsed microwaves, such as those from Mobile Telephone Masts. Some 40,000 signatories have now supported the appeal, including 1,200 doctors. Alongside the Freiburger Appeal there are now similar appeals from Lichtenfelser, Hofer, Bamberger and Helsinki. In the Irish Republic, the IDEA group of Doctors has its own reports relating to Mobile Telephone Masts [10] which confirm the findings of the Freiburger Appeal doctors (JerseyMastConcern).

[37] In November 2003 something or somebody pulled the mast from its base and left it lying on its side. Eileen said: When I went to see what had happened I cried with delight. Even to this day nobody in Wishaw seems to know how the mast came down. Naturally the phone company wanted their broken mast back but they hadn't bargained with the Siege of Wishaw. Residents surrounded the downed mast with a posse of volunteers and camped on the site 24 hours a day determined there would be no mast replacement. The stand-off lasted for almost 18 months until finally the mast owners admitted defeat (The Irish Post 2006).

Israel On the 28.9.06, 200 people from the neighbourhood Neve Horesh, in Dimona, decided to take their health and the law into their hands and destroyed a cellular antenna. Two weeks ago they found out that one of the villas owners in the area installed cellular antenna on the roof for $1200 a month, they asked him to remove it, because it risked them and their children. Their next step was to ask the city engineer to order to destroy it. The cellular company applied to court
and claimed it had all the necessary approvals. On the 27.9.06, 200 people arrived to the house and destroyed the cellular antenna, the owner of the villa and his family saw the people and ran away and the residents destroyed the technical equipment that was used to operate the antenna. We didn't care that the police would arrest us, told Nissim Ben Yakar, one of the residents. It was about our children lives. The villa owner's luck was that the angry residents didn't burn his house, because the rage against him was very big (Ifargan 2006). (Translation by Iris Atzmon)

Radiofrequency radiation emissions from cellular towers and handsets hold the potential for increased incidence of long-term medical effects, but of equal importance are the immediate effects of exposure to the radiation. Unlike second-hand cigarette or cigar smoke, exposure to which has been linked to life threatening and debilitating diseases, radiofrequency radiation exposure has, to date, successfully avoided the issue of passive personal exposure. It is extraordinary that absorption of unwanted radiation is never cited as an objectionable byproduct of the wireless communication craze. The reason may be that radiofrequency radiation, being tasteless, odorless and invisible, just isn't considered. But, in fact, recent research has demonstrated that even short-term exposure to radiation power densities emanating from a nearby cellular telephone is sufficient to modify brainwave patterns, affect short-term memory, and modify an individual's ability to perform physical tasks such as driving an automobile. These effects are all well and good for those who are willing to accept the risk of modified brain functions and cancer but they are not well and good for the innocent victim of the insidious radiation – radiation that an innocent non-participant cannot even be aware is being deposited into his or her body. Radiation emanating from a portable cellular telephone does not discriminate. It propagates through the entire environment surrounding the radiating antenna of the phone (Kane 2007).

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