

Summary of a Public Hearing

held in Jersey, Channel Islands. UK. 26th February 2007

organized by the Jersey Mast Group and the local government.

Expert Witness - Dr. George Carlo MD

Dr. Carlo is Chairman of the non-profit Science & Public Policy Institute based in Washington D.C. USA, a position he has held since its inception in 1992.

His qualifications: trained in medical sciences, pathology, epidemiology and law. He has been a medical faculty member of a Washington university for 25 years.

This is a summary of the transcript made of the Hearing and subsequent Question and Answer period.

In 1993 the public started to question the safety of cell phones/mobile phones.

In 1984 cell phones were exempted from pre-market tests based upon the notion that they were of such low power that no heating effect would be possible and consequently no biological effects could result. This was known as the LOW POWER EXCLUSION. As a result, there have been no relevant data with which to address concerns about the public health effects of this technology. {Pg. 3.} Dr. Carlo commented that had we known then what we know now, **cell phones would never have been allowed onto the market - they are too hazardous.**

The USA Congress held public hearings in 1993 and became concerned about lack of regulation, chastising the Federal Food & Drug Administration (FDA) as well as the industry for their lack of research. The Telecommunications Industry then offered to put up \$28.5 million in a fund to research the knowledge gaps as long as the FDA did not regulate the industry until all research studies were completed. {Pg. 4.}

Dr. George Carlo was appointed to organize the research and oversee the funding of studies. In the period 1993 - 2000 the monies were used to employ more than 200 scientists and medical doctors. All work was peer reviewed and some 56 studies were conducted with great rigour. Their efforts showed that there were indeed non-thermal effects - i.e. biological effects.

By 1996 identified effects included

1. Presence of genetic damage in blood cells exposed to radiation from cell phones
2. Confirmed cellular dysfunction - leakage in the blood brain barrier

3. In cell phone users there was found a near tripling of rare, brain tumours - always on the side that the user had held the phone.

Dr. Carlo then recommended to the Industry that they inform the public of the findings - the Industry chose not to do so. Dr. Carlo started publicizing the research outcomes. In 1999 and 2001 published books were released, the most readily available being "Cell phones : Invisible Hazards in the Wireless Age" (ISBN: 0-7867-0818-2).

All the peer reviewed papers are available in two more volumes published by an academic press. {Pg.4}

Since the industry did not choose to do any post-market surveillance Dr Carlo established a Registry (2002) to receive medical reports of people affected by cell phone use. {Pg. 6 & 24 .}

This has allowed Dr. Carlo to identify the mechanism of harm that operates at the level of the cell membrane and in turn it permits an understanding of the wide variety of symptoms expressed by people recorded in the Registry. Carlo sees this as a very serious health situation since close to 3 billion users now enjoy the convenience of cell/mobile phones worldwide. {Pg. 7.}

There are now more than 300 statistically valid findings showing excess risk between cell/mobile phones and brain cancer. {Pg. 8.}

This is a medical problem now - there is DISRUPTED CELLULAR COMMUNICATION.

Patients in many countries have now developed MEMBRANE SENSITIVITY SYNDROME.

MEMBRANE SENSITIVITY SYNDROME (MSS) has been identified for 25 years and was originally seen as the result of exposure to chemicals and now is seen from Electro-Magnetic Radiation (EMR) exposure. {Pg. 6.}

Susceptible people with MSS have internal bleeding when exposed to EMR.

Mechanism of Harm to Living Cells {Pg. 10 - 14}

1. Low Frequency EMR - such as power lines, especially high voltage ones. They primarily create a magnetic field which affects the physiology of cells and tissues, especially when there is a lot of power pushing the field.

2. High Frequency - Ionising radiation . This form breaks chemical bonds.

3. Radio Frequency Radiation (RFR) lies between the other two on the spectrum.

A microwave oscillating at 1,900 million cycles per second (1900mHertz) is too fast for the human body to pick up unless it has 100 watts behind that signal - then it will heat tissue, as occurs in a microwave oven.

When microwaves are used to allow speech communication the information has to be packeted and is bundled based on amplitude modulation. Additional breaks are necessary to allow new calls to come in - this pulsing then creates a SECONDARY WAVE - this information carrying wave (ICW) oscillates in the Hertz range and so the body can recognize it.

On the Cell Membrane there are different receptors to keep track of what is happening around the cell - there are both chemical and vibrational receptors (VR). The vibrational receptors pick up the signals oscillating in the Hertz - kilohertz range. Since these are **all man-made frequencies** the body interprets them as notice of an invasion - "we are under seige". First, the active transport channels close down with the consequence that wastes accumulate inside the cell and nutrients enrich the area outside the cell. Without nutrients the cell experiences energy deficiency, which disrupts INTERCELLULAR COMMUNICATION (a fundamental physiological process).

The wastes build up and the consequent free radicals disrupt the mitochondrial function as well as interfere with DNA repair. Cellular dysfunction occurs which leads to apoptosis or suicide. Cell membranes disintegrate and permit micronuclei into the nutrient rich environment between the cells. Immune processes do not commence because of the improper INTERCELLULAR COMMUNICATION. The result - micronuclei (wild pieces of DNA) are free to clone and proliferate - this is the mechanism for tumour development.

From this mechanism comes disruption of the blood-brain barrier.

All information carrying radio waves (ICRW) produce this effect upon living cells - THERE IS NO THRESHOLD.

The robustness of the individual is the determinant of how sick a person becomes from exposure to these microwaves. {Pg.15} Children are more susceptible because as they grow their cells are differentiating so cell membranes are vulnerable to ICRW exposure. {Pg.16} The most vulnerable are children and the very old. {Pg.21} The recommendation is that no child under 12 years be permitted to use a cell phone or be exposed to WiFi, etc.,

Autism - children with heavy metal build up from vaccines, then exposed to ICRW, have mercury entering the brain, producing environmentally induced genetic damage that appears in the daughter cells.

Alzheimers - essentially the same mechanism allows the accumulation of toxins to enter the brain tissue.

With information carrying radio waves (ICRW) so concentrated now in our living environment - cell phones, cordless phones, Wi Fi and WLAN, as well as many wireless household devices, the background level is rising rapidly and we now understand there is no threshold level. **It affects all living cells.** {Pg.18}

The Registry established in 2002 had in the first 6 months one million people visit the website, of whom 90 per cent had complaints about cell phone use causing brain and eye cancer. {Pg.24}

In the 2006 - 2007 period 90 per cent of people were not cell phone users, yet they were being exposed to the ICRW from WiFi, and living near masts. Exposure hotspots include airports, hotels, coffee houses and educational institutions.

When electrosensitive people are tested they will individually respond to different frequencies. {Pg.25}

Carlo insists we must now have MONITORING following deployment of masts.

Measurements need to be made of the antenna emissions. When independent measurements are conducted they often show much higher power emission than permitted by the Government guidelines. Also it is important to determine if frequencies are being transmitted other than those licensed. {Pg.25 & 37} From this point forward independent monitoring should be made a condition of any contract/license.

PREVENTION/ INTERVENTION

Based upon the close to 3 billion users of cellphones (2006-7) it is projected that 40,000 - 50,000 new cases of brain and eye cancer will appear starting this year. By 2010 the yearly new cases will be around 400,000. {pg 21 & 23}

There are prevention/intervention products being marketed now.

Two Noise Field technologies available for cell phones. 1) active and 2) passive. (pg 23). Also there are subtle energy products such as Quantronic Resonance therapy, diodes, magnetic therapies - all intended to restore intercellular communication.

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Membrane Sensitivity Syndrome (MSS) is environmentally induced genetic damage. The good news is that it can be repaired. **If the ICRW** (information carrying radio waves) **exposure is removed and the people are put through a detox procedure** the cell membranes can be returned to normal.

SCHOOLS - need to measure the levels of ICRW and also look at how performance of students has changed since introduction of wireless technology into or around school. Also need to consider disciplinary problems since these can worsen from exposure to ICRW.

MEDICAL DOCTORS - there is available an intake document SWEEP that allows one to see if EMF/ ICRW is/are affecting a patient's health and prognosis.

Setting up a Safe Wireless Initiative in the UK, in Ireland and other places too.
Designed to help the community have their doctors start looking for the health effects.

Technical Information.

CELL PHONE INSTALLATIONS

Need to use primarily a fibre optic system for the spine with some wireless transmission. Fibre optic is more efficient and has greater capacity - information travels at the speed of light.

Need to add NOISE FIELD (NF) technology to all transmission stations. This is a low power magnetic field which attaches to the ICRW (information carrying radio waves) and renders it chaotic so that VR cell membrane receptors do not recognise it as an invader so the protective responses are not triggered. There are also NF applications for point of use on your laptop, and other wireless devices. { pg 18} Cost of NF devices at cell transmission nodes would be around \$300 - \$500 per site. They should be made a condition of license now. {pg 18 & 33} Better to use many small masts generating 1-2 watts, each with its NF device connected to an fibre optic spine. You do not want masts/antenna talking to each other.

Transition to a safer infrastructure is essential now - it may mean replacing the existing infrastructure to make it safe. {Pg 32 - 33}

If companies are sharing an antenna the rate of emissions will not change much as long as the number of callers remains static. Masts are communicating all the time as they search for the cell phones.

If different providers all have their own masts and antennae then each one needs connective ability.

At the beginning of a cell phone call a lot of connections need to be made, meaning that in the first 30 seconds there is very high intensity, maybe even emissions into the thermal range, and then intensity reduces in order to save the cell phone battery. The amount of power required for each connection is determined by where the user is in relation to the base station at the time of commencing the call. {Pg 36}

Is it possible to know a safe distance from a base station ? One needs to know the direction of the signals and how large the plume is - it is affected by the traffic. If a cell phone using 0.6 watts generates a plume of 8 – 9 inches then if power rises to 100 watts the plume is around 200 feet.{Pg 45}

Resonant cavities

This is a place where microwaves/ICRW become trapped - cars, airplanes, buildings with metal walls or metal studs in the walls - then there is repetitive exposure due to reflection. It is worth checking any workplace/ residence for such cavities.
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Legal issues

The telecommunications industry worldwide has been self-policing for 20 years. There are NO SAFETY STANDARDS - only guidelines that differ greatly from one country to another.

In USA there are 7 active class action suits against the cell phone industry.

In 2005 the Supreme Court was asked to rule on 5 of the cases as the Industry tried to have them dismissed. They were not successful and the cases are still in progress. In 2002 - 2004 the insurance industry started excluding health risk claims in the product liability coverage for the cell phone industry. By 2004 they became totally self-insured.

The result of this is that the cell phone industry cannot do any kind of safety intervention because this would become an admission of guilt and they would be liable for the damages that people are claiming.

It is for this reason the Industry is not a trustworthy source of information.

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As more and more features are added to the phones, they require more power - one cannot watch movies with 0.6 watts of transmission power. New phones have software that allows greater power which make it likely that thermal effects could be experienced in addition to the cellular membrane effects.

The industry via the IEEE in the USA is currently attempting to have the allowable levels raised from 1.6 W/kg to 16W/kg to accommodate these new developments.
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