



HOME ABOUT NZINE NZ MAP CONTACT

RECENT ARTICLES YOUR VIEWS

Search Articles



[< Back](#)

The Electromagnetic Radiation Health Threat - Part I

- Dorothy - 8/5/97

If you are interested in our other articles on this subject you will find them indexed here: [Electromagnetic Radiation Index](#)

To download Dr Neil Cherry's reports and to read more about his work, please visit his [website](#) for more information.

Have you thought seriously about the threat to our health posed by electromagnetic radiation, through equipment used at work, frequent use of cell phones or cordless phones, microwaves, many household appliances or overhead transmission lines? Do you think that it is too complicated and that it is best to leave it to the experts?

In an interview with Dr Neil Cherry about his work in this area he discussed some of his research and the evidence for his concern, and challenged us and our local bodies to take responsibility for our health and reduce the threats coming from electromagnetic radiation.

Being informed - a source of empowerment

Empowering people - that is the most important driving force for Neil's energies at the moment. That is the integrating point behind what he is doing - sharing information, hopefully in ways that people understand it.

In his many roles, as a university lecturer, as a Regional Councillor, as a public speaker, and a media commentator. he is working to disseminate information power. There are so many vital issues that are complex, and people are being disempowered by being told, "This is too complicated. Trust us. We know what we are doing."



Dr. Neil Cherry

As one of the people who is now an elected politician and who knows about the parliamentary system, Neil's analysis is that in many ways those making decisions often don't know what they are doing. They are people just like us. They have been given opportunities like anybody who has been elected, and it is their duty to use those opportunities with care and responsibility for the people who have put their faith and trust in them.

Neil's expertise is something that has been built up year by year and integrated with the knowledge that has been acquired in the past. The knowledge is modified by the most extensive reading before Neil makes a public statement.

Electromagnetic radiation a threat to our health

Electromagnetic radiation is the big issue he is involved in at the moment—radio waves from radio and TV towers, microwaves from cell phones, cell sites, mobile phones, cordless phones, and microwave ovens (the last being a minor problem compared with the others). The background radiation has been rising significantly by factors of thousands in the general population since the Second World War. Cancer is partly genetic, but largely environmental. Our food, the toxins in the environment like air pollutants, benzene, toxins in food like saccharine, are shown to be potential carcinogens, all those PCBs and other fairly toxic chemicals, can damage cells, but evidence is very strong that electromagnetic radiation damages cells in a way that is potentially cancer causing.

The official position of those who make their money out of producing and using this technology is that we all know that the only thing that electro magnetic radiation can do is heat and if it doesn't heat it can't have any effect.

However, a different view comes from science from reading the people who have researched what happens to cells in laboratories in repeatable experiments. For example, a laboratory took human breast cancer cells, and exposed them to an infusion of melatonin, which is a natural neurohormone which we all have, which helps us sleep at night. Then they applied a very low level of varying electric field, 50 cycles field, and the oncostatic effect of melatonin was totally eliminated.

Every night when we go to sleep our melatonin levels rise and melatonin goes through our blood and cleans our cells up. For example, it scavenges out free radicals which are highly damaging chemicals. If the free radicals persist for very long they damage DNA and cause damaged cells and are shown to be carcinogenic. Melatonin is one of those agents that cleans us up every night to reduce the possibility that cells will become carcinogenic.

That experiment shows that electromagnetic radiation from power lines and appliances can reduce the melatonin cleaning-up effect on human breast cancer cells. The experiment was repeated in three other laboratories. It gave a very reliable and repeatable result. The strength of the signal they used was two to twelve milligauss - a very low level magnetic field magnitude in that wave.

The European standard for safety for ELF fields is "20,000 milligauss is safe", whereas this experiment shows that 2 milligauss causes a significant reduction in the cleansing effect of melatonin on cancer cells.

Is there any other evidence that people who work with ELF fields get breast cancer?

There are several papers in epidemiology which show that people who work with ELF fields get more breast cancer. The first paper that Neil read showed that there is a statistically significant increase in breast cancer among these people but there was no known mechanism, so it was not regarded as a significant result. This was breast cancer in men. This was a surprising result. Breast cancer in women working in the electrical industry was the subject of the next paper which gave similar findings.

Neil put together the cell work and the epidemiology, finding a mechanism and a result, so it cannot now be said that we do not know how it happens. Such findings were supported by other tests.

What has been the international reaction?

Instead of these theories being accepted, big international studies have been conducted to disprove the connection. It is impossible to identify a particular given cause in each case. Research needs to be conducted over a large section of the population.

Those who work in the electrical industry are at risk, as the ELF fields act as co-carcinogens preventing the repair mechanisms from working. Not only may cancer result, but also people may suffer from depressed immune systems.

People living in the U.S. embassy in Moscow were concerned that radar was being aimed at the top floor of the building. Tests showed

that there were changes in the blood and an increase in cancer among those who lived there, including the children.

Air traffic controllers who were exposed to radar were tested and were found to have broken chromosomes. When they were taken away from the exposure the repair began, but the recovery rate was very slow.

Physiotherapists operating microwave equipment were the subject of research in 1993. In this group there was an increase of 50 - 60% in miscarriage rate, of which 48% occurred in the first seven weeks, yet they were exposed to the microwaves for a very brief time - at most two minutes per treatment.

Eighteen months later Australian Telecom responded saying that microwaves have difficulty penetrating the foetus, though short waves can. If it is not heat that causes the problem then the reason could well be that free radicals are damaging the DNA which causes damage to the chromosomes because of reduced melatonin. This could result in a deformed foetus which then aborts.

No records have been kept of the number of miscarriages in the general population, which means that there are no past statistics for comparison.

There have been problems among physiotherapists in Sweden and Denmark where there have been an increasing number of still births, cot deaths, deformity of children, and perinatal problems.

Cell phones are another cause of problems.

When the cell phone signal is held next to the brain there are changes in the brainwaves in 70% of people. This test was done at a level of about 2 microwatts per sq. cm., which is only a fraction of the actual exposure experienced from the cell phone. It is the level which is experienced at a cell phone site. In this, as in most aspects, people are not all the same. Some are more electro-sensitive. People who sleep with a cell phone by the bed have poor REM sleep, leading to impaired learning and memory. This is related to melatonin reduction.

In research at the University of Washington rats' brains were exposed to a microwave signal and showed breaks in the DNA associated with increased free radicals and increased cell deaths - at levels of exposure about what a cell phone produces next to people's heads. People are now suing cell phone companies because of brain tumours caused by high use.

In spite of this research one "world expert" in electromagnetic radiation and health has said that the worst thing about a cell phone is that it can cause an interruption during dinner in a restaurant.

What research in epidemiology suggests that the work on rats might have an applicability to people? The cells in rats' brains are very similar to human brain cells.

The National Cancer Institute in the U.S. did a study of people in industries that exposed their workers to microwaves. They found that in seven industries in the Eastern U.S. there has been a tenfold increase in brain tumours among employees who have worked there for twenty years. The main cause appears to be electromagnetic radiation. Other possible causes have been checked, such as solder fumes which could have doubled the rate but not resulted in a tenfold increase.

In the [second article](#) Dr Cherry discusses the international reaction to research on this question and how people can be protected from the dangers of electromagnetic radiation.

See also Jackie Steincamp's excellent [article](#) on electromagnetic radiation in New Zealand.

For more information you may also like to visit the [Plain Communications Electromagnetic Radiation Information Web site.](#)

In addition, if you are looking for comprehensive technical research on the potential effects of radiofrequency and microwave radiation, then you may want to consider downloading [Dr Neil Cherry's Reports](#) for more information.

Forum

[Participate or View Thread](#)

[Home](#) [NZ Map](#) [Contact](#) [Recent Articles](#) [Your Views](#)

Copyright 1996 - 2005 NZine - A Quality Service from [Plain Communications LTD](#)