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Neil Cherry, scientist, teacher, politician, peace worker

Part 9

Neil starts research on health effects of electromagnetic radiation

Dorothy - 10/07/03

Request to investigate health effects of a cellsite coincides with research on health effects of nor'westers

When Victoria Wood asked Neil Cherry in 1994 if he would investigate the possible health effects of a cellsite near Opawa Primary School in Christchurch her request triggered his research into the impact of electromagnetic radiation - research that continued for eight years and ended only with his death. Latterly Neil was keenly interested in the impact of Schumann resonances on human health.

Neil had not previously worked on such aspects of electromagnetic radiation, but the request was timely because the group at Lincoln were currently trying to explain the symptoms people were experiencing in nor'westers.

Across Canterbury the symptoms were very similar, but the big difference was that some people said that they got the symptoms when the nor'wester blew, but others said that they could forecast when the nor'wester was going to arrive. Those who reported the effects when the nor'wester blew were inland, and those who could forecast its arrival were on the coast.

The scientists' original theory was that the static electricity in the dry air created positive ions that changed people's serotonin levels because it had been shown in mouse studies in Europe that positive ions increased their serotonin levels. The inland people were in the area of the positive ions, but the coastal people were in a sea breeze. It took six to eight hours for the nor'wester to blow away the sea breeze.

"The seabreeze question took me back to my understanding of the ionosphere where the positive ions are creating an electric field between the ionosphere and the earth," Neil recalled. "The positive ions in the nor'wester are creating a stronger local electric field and those norwest ions travel over the sea breeze creating the electric field down to earth, so both of the populations were receiving the changed electric field from the ions.

"I looked up the literature on melatonin and serotonin and found that electromagnetic fields in many studies of electrical workers show reduced melatonin. That suggested that the nor'westers were altering the serotonin/melatonin ratio through the altered electric

fields. When those electric fields flow through your body they create a current which creates magnetic fields so they become electromagnetic fields."

Victoria Wood's request for Neil to investigate the situation at Opawa Primary School stimulated his interest in undertaking further research. He began to research the epidemiological and biological studies of people and animals and cells exposed to electromagnetic fields. He found that contrary to the claim by Telecom and its consultant Dr David Black that there was no evidence of health effects there was a massive body of published scientific evidence.

Eight years researching evidence of health effects of electromagnetic radiation

Neil has spent the last eight years collecting, summarising and trying to understand that evidence and he has been asked to make presentations throughout New Zealand, Australia, Japan, Ireland, the United States, Canada and Europe. He is not funded for his research into the health effects of electromagnetic radiation; these have been sponsored trips funded by local bodies, universities, or groups. People are keen to gain knowledge and often when he is invited to one place there are invitations to add to his trip by giving presentations in other places. His 1999 trip to address the National Congress in Trento which is in northern Italy was extended by invitations to give presentations in Rome, Avezzano, Perugia and Florence. Neil also gave presentations in Salzburg, Berne, Brussels, and Dublin as part of the same trip, with many requests for a return visit over the next two years.

Neil has given evidence in over twenty resource consent hearings, many in New Zealand but also in Australia, in court cases in the Environment Court in New Zealand, three in the Planning Court in Australia, in an Australian Senate Inquiry, and in an occupational radar exposure appeal case in Baltimore involving a state trooper. In that case his evidence was dismissed as being 'unconventional'. He next prepared evidence for two cases in California involving occupational exposure for cellphone industry people who have brain tumours and have been involved in heavy cellphone use. For these cases Neil sent his evidence by mail.

Baltimore case of Dr Christopher Newman

Probably the most high profile court case was heard in Baltimore before a Federal judge. It involved Dr Christopher Newman, a neurologist and brain expert, who has been a heavy cellphone user and has a brain tumour where his phone aerial was. Neil's evidence was to incorporate all the biological, animal and human studies showing chromosome damage, DNA damage and brain cancer increases in exposed human populations. He cited over two hundred studies. He went to Baltimore four times during his preparation for the case. "I believe the judge used an incorrect balance of evidence in her approach to dismiss the case. Now it has been appealed at the Supreme Appeal Circuit Court."

In March 2002 Neil appeared in the court case in Baltimore. Gae accompanied him in case he needed help, but he was still able to walk with the weakness in his left leg being the only problem. They spent a week in Baltimore. Neil appeared on the first day, but needed to be there a few days early to prepare for the case. It was the coldest week of winter in Baltimore. As Neil was the first witness there was time to enjoy the harbour, the restaurants and the friends Neil had made on the previous visits while working on the court case.

Regrettably the judge did not accept the evidence.

In the meantime over twenty presentations internationally have moved to show that across the spectrum electromagnetic fields are genotoxic, that is they damage DNA. Therefore they cause mutation of cells and cell death with a safe level of zero exposure. This means that EMR across the spectrum should show in people increased cancer, cardiac effects, reproductive effects, and neurological effects, and there are multiple epidemiological studies showing all these effects are significantly elevated in exposed populations, including dose response relationships. That means the disease increases and increases with higher exposures which all point to a

safe level of zero confirming the genotoxic nature of electromagnetic fields.

Looking back

"When I look back over my life my Stage 3 project was about the technology of fibre-optic cables - putting signals on to light. My Honours project was on how microwaves alter electrons in natural substances altering free radical activity.

Schumann resonances

"My latest publication in the journal of Natural Hazards takes me right back to the basics. It is about the Schumann resonances being the plausible biological mechanism for the observed health effects of solar and geomagnetic activity. What that shows is that there is a natural global low frequency electromagnetic signal pre-dating life on earth, so we have evolved in the presence of this signal. Our brain's electromagnetic frequency range exactly matches the frequency range of this natural signal. Geomagnetic activity has been shown to cause in people a dose response reduction in melatonin and altered reaction times, showing that their brains detect and respond to these signals. I have cited over a hundred published studies showing that human health effects of cancer, cardiac, reproductive and neurological effects are all modulated by melatonin and are correlated with Schumann resonances which are highly correlated with solar and geomagnetic activity. Our brains are tuned into this signal. When the intensity goes up and down from the optimal average level, these effects go up. In biology we call this homeostasis.

"There is a natural good level which is doing a good job synchronising our brains and our hormones. When it goes up or down it is difficult for the vulnerable people, such as those who are ill, very young or very old. This is correlated with all the effects mentioned earlier - heart attack, arrhythmic heart problems, suicide, crime, epileptic seizures, cot deaths, breast cancer, non-Hodgkins lymphoma. It appears that the ten year solar cycle modulates the incidence of some sensitive cancers because cancer is a chronic exposure problem. Acute admissions to the cardiac ward at the Christchurch Hospital show the same frequency spectrum as the Schumann resonances - 28 day, 14 day, 9.3 day, 7 day, 4 day. I now have two papers being published showing that the Schumann Resonance signal synchronizes the brain which has allowed intelligence to be developed. Synchronization is necessary because the brain is an adaptive, soft, flexible and varying biological organ. The synchronization also allows stable visual images in the brain so that what you see is clear and reliable using ELF electromagnetic signals in the brain."

In response to my request for more information about Schumann resonances Neil explained them as follows. Thunder storms are formed in hot humid climates (i.e. the tropics) in the electric field between the earth and the ionosphere. They produce around a hundred bolts of lightning every second. The lightning produces an electromagnetic signal which travels around the world at the speed of light with an intensity in proportion to the thunderstorm activity. The fundamental frequency of this signal is 8 cycles per second with harmonics typically at 6-7 hertz intervals like 14, 21, 26, 33 hertz. These are in the same frequency ranges as our brain EEG alpha, theta, delta rhythms. They are trapped in a resonance cavity between the ionosphere and the earth. In the night hemisphere the bottom layer of the ionosphere disappears because it recombines so it is a deep cavity in which the Schumann resonance frequency is lower and its intensity is much lower. In the day hemisphere it is higher in terms of frequency and intensity, resulting in a strong diurnal pattern. This means that when you go into long cloudy periods or live in the Arctic or Antarctic and have a six-month winter there is still a signal to give you a daily reference. The strongest daily signal of day and night is the sun, but the Schumann Resonance signal is a secondary signal for daily cycles and a primary signal for many other cycles in which our brains have evolved.

However there is no signal other than the Schumann Resonance that explains why our brains are well coordinated and organised and synchronised to maintain a steady frequency pattern which is necessary for intelligence.

It is not surprising that if you live in signals which are a million times higher in terms of the low frequency fields in our homes you have cancer, cardiac and reproductive problems. If you are using a cellphone in terms of your head's exposure the signals are over a billion times higher than the natural signal which our brains can detect and respond to.

When Neil presented this information in Baltimore Motorola did not accept it and said that he had not done any research which was relevant to the case. He defended the relevance of research into the Schumann Resonance Signal, saying that our brains detect and respond and our hormones change as a result of a signal that is a billion times less than that of a cellphone. It puts everything else in context. We have evolved as intelligent species using this natural signal and it communicates with our body through the melatonin/serotonin cycle. Since our bodies are tuned into this cycle for our daily pattern all of our vital organs are tuned into it, because on a daily basis our melatonin/serotonin cycle determines our waking and sleeping, pushing our heart, lungs, liver, spleen and stomach into action in our waking hours, and into a relaxed state when we sleep.

Most people do not realise that biology uses electromagnetic signals to organise itself, to communicate, to keep healthy. Our brain is an electromagnetic system and our nervous system uses electromagnetic signals to dictate movement like writing, for instance. It is not a chemical flow, but an electromagnetic signal going from the brain to the muscles in the fingers and telling the motor neurons to initiate a particular action. Our cells communicate with each other to make sure that their neighbours are healthy using electromagnetic signals.

The same environment can produce different reactions in different people.

People can live in the same environment and react differently. They have a different heritage, different history, different genes, different vulnerability, different sleep patterns, different natural melatonin levels, different repair mechanisms, different competence in the immune systems, and different experiences for the immune system to be tuned up or not tuned up. This is why it is dangerous for children to be brought up in too clean a home. It is also why some people can smoke for five years and develop lung cancer, and others can smoke for forty years and not get it.

At the World Breast Cancer Conference a paper was presented by an oncologist saying that there was a genetic cause for breast cancer. One of the conference participants who was a woman with breast cancer raised a challenge. She said that she didn't think it was primarily a genetic cause because she and her daughter, her mother and cousins had breast cancer, along with five other neighbours in her street to whom she was not related and there was a factory near by releasing zenoestrogen which caused breast cancer. So the main point was that genetic vulnerability contributed but did not cause the cancer while chemicals did. Most of the conference agreed with her.

Another oncologist pointed out that aspirin significantly reduced the risk of recurring breast cancer by 30-40% shown in multiple research studies so why was she spending over \$1000 a month in her present treatment. This statement was challenged and dismissed by the Canadian Cancer Institute.

A search of Medline (a medical studies database) took about three seconds to find the three studies cited. The oncologist was right. The context of his presentation was a poison triangle because many chemical companies producing toxic insecticide and pesticide, etc., that cause cancer, also produce cancer therapy chemicals and have investments in hospitals. This means that they make money from all parts of this process.

For more information about Neil Cherry's scientific research go to his website www.neilcherry.com

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