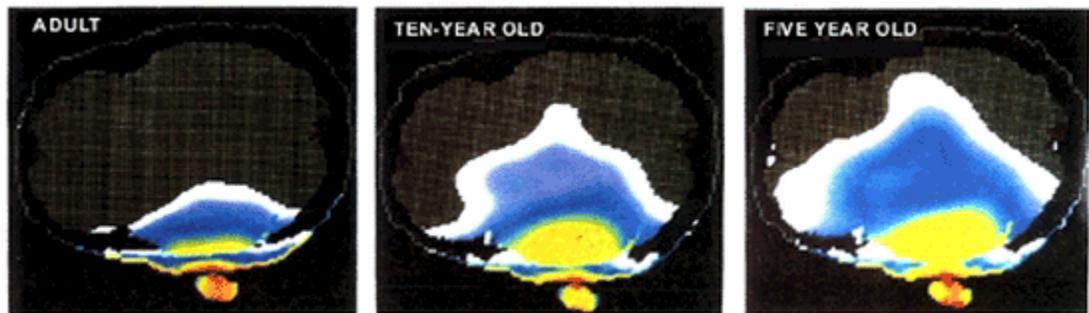


Cell Phone Health Effects | Busy Signals Think Twice Before You Place That Call

by William Thomas



**Scan Showing Human Brain Cell Phone Microwave Penetration
Adult | Ten Year Old | Five Year Old**

Though intended for renovations, Chris Anderson would like all visitors to deposit their cellular phones in the cement mixer by his front door. This sounds excessive - until you step into Anderson's orchard, where the pegged needle of a shrieking electromagnetic radiation (EMR) meter placed beside a connected cellphone still shows significant exposure 100 feet away.

Much to the chagrin of this certified EMR-mitigation specialist, every day some 300 million cell phone users are "reaching out and touching someone you love. Yourself, and anyone else within range of the microwaves emitted by your cell phone."

Mesmerized by magical gadgets, we have yet to count the costs of miniature radio transmitters that are transforming Marconi's invention into new possibilities for portable personal pollution. As entire nations reach for pocket communicators, the explosively emergent \$40 billion a year cell phone industry is poised to deliver a "Wireless Revolution" that over the next five years is expected to double the one-billion people connected by telephone lines over the past century.

Silicon sensors are already calling to each other. Soon, countless communicating microchips embedded in everything from bumpers to brooms will be sending streams of encoded electrical energy through glass, steel, concrete, bone and flesh.

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CELL PHONE HEALTH RISKS

Exquisitely sensitive to subtle electromagnetic harmonies, human brains and bodies as intricate as galaxies depend on tiny electrical impulses to conduct complex life-processes - including the ability to read, recall and respond to these words. Acting as antennas, our anatomies just as easily tune into spurious signals from radio and microwave transmissions. Blake Levitt, author of *Electromagnetic Fields*, says that when it comes to cellphones, "a worse frequency could not have been chosen for the human anatomy."

As cell phones conquer consumer minds and markets, researcher Carolanne Patton notes that "the brain reaches peak absorption in the UHF bands, right where cellular telecommunications operate." British military scientists have discovered that cellphone transmissions disrupt the brain sites for memory and learning, causing forgetfulness and sudden confusion.

Other studies show that electromagnetic signals from cellular phones reduce the ability to concentrate, calculate and coordinate complicated activities such as driving a car. Startled by \$4 billion a year in extra claims among cellphone-wielding drivers, North American insurers did a double-take that found simply juggling 'cell phones is not causing a 600% increase in accidents over other drivers busy shaving, applying makeup, tuning radios, taming pets, making out, pouring coffee, retrieving dropped cigarettes, talking and gesturing to passengers, or actually steering the vehicle.

Instead of just another dangerous distraction, tests conducted by the U.S. Department of Energy found that using a cell phone severely impairs memory and reaction times. "Hands-free" mobile speaker-phones cause even more crashes because they typically emit 10-times more brainwave interference than handheld units.

For all drivers dialing out on their cell phones, University of Toronto investigators report that the heightened probability of cracking up your car persists for up to 15-minutes after completing a call.

That's comparable to the risk of crashing while driving dead drunk exclaims Dr. Chris Runball, chairman of the B.C. Medical Association's emergency medical services committee. Reeling from "dial-a-collision" costs, the government of British Columbia may join England, Spain, Israel, Switzerland and Brazil in restricting or banning the use of cell phones by drivers.

In New Zealand, cellphone towers are prohibited on school property because of possible health effects. But Health Canada regulations ignore the hidden hazards of cell-wrenching cellphones, which send pulsed signals through the skull in a process one expert likens to "jackhammers on the brain."

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"Safety Code 6" looks only at microwaves burning skin. "Basically, Health Canada claims if it can't cook you, it can't hurt you," says Walter McGinnis. "It's like saying cigarettes aren't dangerous unless they burn you."

One of a handful of licensed electricians who understand electromagnetic fields well enough to eliminate them from household wiring, McGinnis has been testing EMFs and collaborating with fellow testers and researchers for nearly a decade. In Victoria, where he has helped residents defeat six cellphone towers, there was dancing in the streets after Microcell Connexions withdrew its application to erect a microwave transmission tower against the Wishart Elementary School fence in the spring of 1998.

Microcell spokesman Colin McCrae points out that emissions from the company's towers carry about the same energy as a 50-watt lightbulb - well within federal guidelines.

This is hardly reassuring, retorts the former president of the Wishart parents advisory council. Tania Berenuik observes that Health Canada "also told us thalidomide, asbestos and the blood supply were safe."

Carrying similar risks of long-term lethality, and strangely just as legal, cellphone addiction mirrors the prestigious early allure of smoking - as well as an immensely profitable industry's steadfast denial of risk and responsibility. As poisonous as cigarette smoke and even harder to corral, the cellphone's "second-hand" microwave and radio-frequency (RF) pollution pose invisible but significant risks to bystanders - particularly children riding in cars that transmit amplified cellphone signals through their steel structure. Reporting the conclusions of a 12-person British study team, scientist Sir William Stewart told London's Financial Times that "children may be more vulnerable because of their developing nervous system, the greater absorption of energy in the tissues of the head and a longer lifetime of exposure."

Roger Coghill became a long-standing advocate for health warnings to be affixed to cell phones after this biologist found that cellphone transmissions damage the ability of white blood cells to ward off infectious disease by disrupting the immune system's electromagnetic communications.

Dr. Neil Cherry has measured accelerated aging, increased cell death and cancers caused by radio frequency microwaves from cellphones and their relay towers. With the brain's electro-chemical communications repeatedly zapped by lightning-like cellphone pulses, this Ph.D. biophysicist warns that headaches, fatigue, lethargy, nausea, dizziness, depression, arteriosclerosis and even Alzheimer's can result from frequent or prolonged calls on cell phones.

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"There is also a higher incidence of cardiac problems," Cherry comments, "in terms of the timing function in hearts. You get more heart attacks and more heart disease - it has now been shown in many studies."

The biophysicist from Lincoln University in Christ Church, New Zealand has also found that cell phones can murderously modify moods. In brains and bodies seriously derailed by tiny imbalances in trace minerals and hormones, depression, suicide, anger, rage and violence can result when calcium and serotonin levels are disrupted by cellphone transmissions.

In 1995, Cell phone sales in North America exceeded the birth rate. Hired by the Cellular Telecommunications Industry Association to condone cellphones, public health scientist George Carlo found that rare tumors on the outside of the brain are more than doubled among cell phone callers - particularly on the right side of the head where `phones are usually held. Carlo told ABC's "20/20" that cell phone causes genetic damage that leads to cancer.

Warning of "the potential for a global health disaster," ABC recommended "prudent avoidance" of cellphones after finding that every cellphone they lab-tested exceeded the Federal Communication Commission's standards for EMF absorption rates. EMF researcher Dave Ashton cautioned 20/20 viewers that because cellphones constantly search for the nearest repeating tower, "long-term damage comes from cell phones in the stand-by mode." Cell phone "shields" and headsets "cannot adequately address these problems," Ashton added.

Dr. Carlo later told London's Express newspaper that cellphones cause genetic damage following a dose-response curve. That is, the more a person uses a cell phone, the more cellular destruction and health risks they incur. Cellphone-confused cells can go crazy, Carlo cautioned. Experiments on captive animals show that this cumulative DNA damage is passed on to succeeding generations.

Addicted as we are to a culture of convenience, we forget how inconvenient it is to contract cancer. An Adelaide Hospital study confirmed Carlo's conclusions after finding B-cell lymphomas doubled in mice within 18 months of one-hour daily exposure to power densities experienced by a cellphone user. B-cell lymphomas are implicated in 85% of all cancers.

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READY OR NOT

As magazine-size "cellular" relay antennas hidden in church steeples and rooflines keep popping up just about everywhere, more and more communities are declaring their airspace a "No Fry Zone". But in Canada, where cell phone towers come under federal jurisdiction, municipalities are only "advisers" to a process in which no permits are required to erect transmitter towers deemed necessary for "national security." Cellphones do save a lot of lives. FCC Chairman William Kennard reports that every day more than 98,000 people make 911 calls from wireless cell phones.

Many more lives are involuntarily imperiled by non-emergency calls. Pat Irwin was working in a Colwood health food store when she noticed a truck unloading metal framework. The next morning, a new cellphone tower was ready to add its emissions to another BC Tel tower already operating down the street. There had been no announcement, no public hearings - just a quiet notification to the municipality that a tower was going up, literally overnight.

The intruder radiated for a month when Irwin felt her immunity dropping. She wondered if other changes in her energy and menstrual cycle were "not from the moon or something that I ate."

Irwin also seemed more irritable after her central nervous switchboard began receiving round-the-clock cellphone calls. With cellular relay towers in Kansas and Oklahoma being shut down because they interfered with passing aircraft, Irwin sensed how the same transmissions plucked her own electrical circuitry, inflicting a "chronic edginess" that "twangs human nerves." Sleep disorders, she learned, are common among people exposed to high levels of electromagnetic pollution.

After several other women in the same business centre reported similar symptoms, Irwin quit her job. "I saw it as something that was there to stay and I'd be daily exposed to it over a long period of time," she told Alive. "All this stuff is what we're playing with on a daily basis, and we don't know the long-term health effects."

Implying recognized hazard, cell phone companies such as B.C.'s FIDO insist that the new digital phones operating at 1/50 the power of older analog models are safer. But there is nothing "safe" about the new 1.9 gigahertz broadcasting frequency. Much like a boxer taking repeated blows to the head, rapidly pulsing cellphones signal permanent brain damage. A study by Dr. Peter Franch found unequivocally that "cells are permanently damaged by cellular phone frequencies." This cellular damage, Franch noted, is maximized at low dosage - and "inherited unchanged, from generation to generation."

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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. Cellphones also reduce the effectiveness of anti-asthmatic drugs, and retard recovery from illness.

Katharina Gustavss, a certified Building Biology consultant with 25 years experience, explains that CDMA's 217 Hz spikes are very close to the frequencies of human cell membranes. Gustavss accompanied a Microcell technician to the Colwood microwave relay tower Irwin and others had complained about. When he waved a spectrum analyzer, Gustavss checked the display and saw "pretty scary" energy spikes.

"What's that?" she asked the tech.

"I've never seen that before," he told her. It turned out that this cellphone tower tester only set his meter to an averaging mode. Switching to "real time" froze the readings at "scary" maximum output levels.

How dangerous are cellphones? "The risk is extremely high," declares Dr. Cherry. "There are 66 epidemiological studies showing that electromagnetic radiation across the spectrum increase brain tumors in human populations. Two of those studies are for particular brain tumors from cell phones."

Cherry says that because cancer takes decades to develop, it will be another 10 or 20 years before "mobiles" manifest a big bonanza in brain tumors. But he adds, we're already seeing "acute effects that are noticed within minutes of using a cellphone."

After two minutes' conversation, a cellphone's digitized impulses disable the safety barrier that isolates the brain from destructive proteins and poisons in the blood. Professor Leif Salford, the neurologist who carried out the research for this finding, informed the Daily Mail: "It seems that molecules such as proteins and toxins can pass out of the blood, while the phone is switched on, and enter the brain. We need to bear in mind diseases such as MS and Alzheimer's which are linked to proteins being found in the brain."

DANCING WITH THE TELECOMONSTER

If you must pack a cell phone, treat it like a loaded pistol. Keep it turned off. Don't carry it near ovaries, testicles, or the heart. For partial protection, buy an antenna shield. Limit calls to one-minute, six to 10 minutes a month. Never fire off a cellphone with children anywhere in sight.

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A better bet is to facilitate the growth of organic telephone networks with lots of fibre. Instead of more microwave towers, "We should be wiring up our cities with fibre-optic cables to provide Internet, fax, telephone, radio and television at very high quality," Cherry urges, "rather than saturating our cities with the microwave, radiowave and low frequency signals all the time."

When it comes to cells, consciousness and cell phones, every call is collect. How can convenience count more than cancer? What is gained by being in constant contact with disembodied voices, while being "out of touch" with the friends and neighbours around us? Are we comfortable having our location traced by monitoring authorities?

Unless we start voting with our wallets, consumer complacency could prove as species-limiting as corporate cynicism. "Microwave frequencies are the same as those used in radar and your microwave oven," says Florida cellphone tower opponent Joe Chwick. "You wouldn't think of sticking your head in the oven, but there is no hesitation to putting the cell phone to your ear."

Having somehow survived three-million years of evolution without them, many contemporary hominids claim they cannot live without them. But can exquisitely sensitive electromagnetic beings live with cell phones - and the cell phone towers their signals ride in on? Like polyethylene food and water containers, plastic cookers and coffee-makers, microwave ovens and petroleum-powered vehicles, cellphones could be one of those brilliantly beguiling inventions we have to let go. Would hanging up on such an intrusive and hazardous addiction be so terrible?

On Jan. 1, 2001 I cancelled my cellphone service...

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