The evidence is in – and it is overwhelming. Even at typical low power, cell phones and wireless technology cause severe biological disturbances in human cells. In August 2007, 26 medical and public health experts issued their Bioinitiative Report – available online – reviewing all the literature on the effects of electromagnetic radiation.

Cell phone researchers not in the pay of mobile phone corporations agree on three things:

1. Current guidelines based only on the heating effects of cell phones do not address non-heating damage to DNA, nor the effects of frequency modulation used to broadcast information and are completely inadequate to safeguard public health. Specific Absorption Rate (SAR) should not be used as a basis for a safety standard since it regulates against thermal effects only.

So far cell phone “safety codes” only regulate radiation capable of burning skin. It’s like saying cigarettes aren’t dangerous unless they burn you.

Cell phone manufactures insist that “many studies” show their miniature microwave ovens are safe. But when pressed by the Washington Post to back up their claim, the cell phone industry could cite no studies showing no adverse impact from cellular telephones on human tissues, nervous systems or organs.

Dr. George Carlo confirms: “The industry had come out and said that there were thousands of studies that proved that wireless phones are safe, and the fact was that there were no studies that were directly relevant.”

There are more than 15,000 scientific studies reporting the cell phone health hazards. At least 66 epidemiological studies show that electromagnetic radiation increases brain tumors in human populations. [“Cell Phone Convenience or 21st Century Plague?” by Dr. Nick Begich and James Roderick earthpulse.com]

A Two-Minute Call

After only two minutes of cell phone exposure, the blood-brain barrier fails, allowing proteins to enter the brain that can cause nerve damage. “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 are linked to proteins being found in the brain.” So, adds Leif Salford of Lund University in Sweden, is Parkinson's disease. [Electronics Australia Magazine Feb/00]

Stress Proteins

Cell phone and cell phone tower radiation stress our cells, releasing DNA-damaging free radicals and stress proteins that can migrate through the opened blood-brain barrier and cause degenerative damage in the brain. Dr. Theodore Litovitz, a biophysicist and professor emeritus of physics at Catholic University, explains: "Because stress proteins are involved in the progression of a number of diseases, heavy daily cell-phone usage could lead to greater incidence of disorders such as Alzheimer's and cancer." [Reuters Apr 23/08; wirelessconsumers.org Dec03/01]

2. Children through teenage years, and pregnant women should be kept away from cell phones and cell phone radiation.

Alarmed British military scientists have discovered that every cell phone transmission disrupts brain
functioning responsible for memory and learning. “Overuse” can cause forgetfulness and sudden confusion, as well as loss of the ability to concentrate, calculate and coordinate.

Children and teens who become hooked on cell phones face a lifetime of learning disabilities, hyperactivity, high risk from driving accidents, greatly increased acute and chronic asthma, hearing loss, vision loss, sleep disorders and cancers – as well as loss of social skills, inability to think and reason clearly, loss of contact with their surroundings. [India Tribune Sept 17/04]

More than 2 billion people – including at least 500 million children – are using cell phones.

At least 87% of 11- to 16-year-olds own cell phones. In the USA, one in three teenagers uses a cell phone. RF/MW signals currently under discussion for inflicting on wireless classrooms throughout North America and the overdeveloped world will operate in the 2.4 GHz frequency range – two to three times higher than current cell phones. Plans are already underway to boost classroom radiation levels with “upgraded” technology emitting 5 GHz. [Uncensored (NZ) Nov 9/06; irf.univie.ac.at]

These kids may be difficult to replace, because researchers at University of Szeged in Hungary have discovered that men carrying their cell phones on standby anywhere in their clothing throughout the day produce about a third less sperm than those who do not. Of the remaining sperm, high numbers were found to be swimming erratically – significantly reducing chances of fertilization. [BBC June 27/04]

Put men – made infertile by their cell phones – together with fashionable beach-going women who carry their cell phones in their bikini bottoms and ... We could be looking at an inadvertent cell phone cull. Especially if women are culled by bra-makers encouraging them to carry cell phones in their convenient, already cancer-prone cleavage.

The Spanish Neuro Diagnostic Research Institute in Marbella has found that a call lasting just two minutes can alter the natural electrical activity of a child's brain for up to an hour afterwards. Spanish doctors now fear that disturbed brain activity in children will lead to impaired learning ability, as well as psychiatric and behavioural problems.

Brain scans allowed Dr. Michael Klieseisen's team to see what is happening to the brains of cell phone
users. "We never expected to see this continuing activity in the brain," he told the European press in
new stories blacked out in the U.S.

Dr. Gerald Hyland finds the results "extremely disturbing." Parents who believe they are enhancing
their children's safety and social standing by sending them back to school with cell phones could be
impairing their health and ability to learn, Dr. Hyland warns. "The results show that children’s brains
are affected for long periods even after very short-term use. Their brain wave patterns are abnormal
and stay like that for a long period. This could affect their mood and ability to learn in the classroom if
they have been using a phone during break time, for instance."

These same altered brain waves "could lead to things like a lack of concentration, memory loss,
inability to learn and aggressive behaviour. My advice would be to avoid mobiles." [Mirror Dec 26/01]

Led by Sir William Stewart, the famous British biochemist and president of the British Association for
the Advancement of Science biomedical specialists, the Stewart Inquiry report on "Mobile Phones
and Health" was released in April 2000. Sir William said he would not allow his grandchildren to use
mobile phones. [Journal of the Australasian College of Nutritional & Environmental Medicine Sept /01]

In Sweden cell phones are being marketed to 5-year-olds. Olle Johansson, Associate Professor of
Neuroscience at the Karolinska Institute in Stockholm declares: “Parents should take their children
away from that technology." [Dialing Our Cells by William Thomas]

The Australian government's Commonwealth Scientific and Industrial Research Organisation
(CSIRO) described laboratory tests as far back December 1974 showing neurons in the soft skulls of
developing fetuses are extremely sensitive to heat during the process of cell division. “The mother's
pelvic structure promotes deep RF radiation penetration within the developing embryo or fetus,” Dr.
Barnett warned. The womb's saline fluid is also highly conductive to Radio Frequencies and
microwaves – and the EMF-conductive human body is 65% water-by-weight. Brain functioning may
be impaired for life. [CSIRO June 1994; irf.univie.ac.at/emf; EMFacts Consultancy Mar 26/03]

The age of cell phone users continues to drop as fast as their IQ and attention span. In 2007, the
average age of first-time “users” was 10. By next year, International Data Corp forecasts the 9-and-
under market will rack up an additional $1.6 billion in revenue for cell phone companies – and add
another nine million child zombies in the United States alone.

According to a Eurobarometer survey of children in 29 countries, most had cell phones after age 9.
"We’re pretty bullish on increased usage by teenagers,” exudes Adam Guy, a senior analyst at the
Strategist Group. "Usage penetration is exploding."

Four in 10 people, particularly young adults, make cell phone calls to kill time as well as themselves.
[London Telegraph Oct 9/07]

Professor Mild, of Orbero University, Sweden is a Government adviser who led the research says
children should not be allowed to use mobile phones. He and others want a revision of the emission
standard for mobiles and other sources of radiation, which they describe as “inappropriate” and “not
safe”. [London Telegraph Oct 9/07]

Dr. Salford says brain neurons that would normally not become senile until people reached their 60’s,
are doing so now when people reach their 30's because of cell phone exposure. [ RFSafe.com
Nov26/03]

Cellular One’s slogan – "Wherever you go, there we are” – takes on ominous overtones as
uninformed people are buying cell phones worldwide at the rate of 25 thousand a day and succumb
3. The risk of contracting cancer from cell phones is about 4% of more than 2 billion users – 80 million people and rising at 25,000 new "users" every day. The risk of premature senility and contracting Alzheimer's is extreme. Most kids brought up using cell phones will be functionally senile by the time they are 30.

You only need 2000 hours on a cell – OR A CORDLESS – phone to qualify for a 2 to 4x increased likelihood of a brain (glioma) or ear (acoustic neuroma) tumor.

On a New Zealand news show, Dr. George Carlo called marketing strategies aimed at children, "grotesque" after identifying as many as 50,000 new cases of brain and eye cancer attributable to cell phone use being diagnosed every year. (Mobile users who wear metal-frame glasses intensify the exposure to their eyes and heads.) Based on current epidemiological studies, that number will reach half a million cell phone cancer cases annually within the next two years. [IsraCast Technology News July 29/05]

After heading a $28 million cell phone study from 1993 through 2001, Dr. Carlos' finding "that RF causes genetic damage" was not welcomed by his cell phone industry sponsors. Ross Adey worked on similar research funded by Motorola in 1991. After he came to similar conclusions, Motorola was adamant that Adey never mention DNA damage and radiofrequency radiation in the same breath. [WSW July 11/02; wirelessconsumers.org Dec03/01]

**Beyond Cancer**

It's not just cancer that makes cell phones so dangerous. Lloyd's of London refuses to insure phone manufacturers against the risk of subscribers developing cancer – and early onset Alzheimer's. [Observer Mar11/99]

“Cumulative DNA damage in nerve cells of the brain can lead to Alzheimer's, Huntington's, and Parkinson's diseases.” One type of brain cell can become cancerous from these double-strand DNA breaks at lower than the current Specific Absorption Rate exposure-standard (4 watts/kg).

It is not the total energy associated with the EMF that is critical, but rather pulsed oscillations. Many repetitions at the higher frequency close to subtle natural rhythms cause non-thermal threshold to be reached in a shorter time. This makes cellular processes "unusually sensitive to non-thermal ELF frequency fields."

Dr. Henry Lai, a 20-year EMF researcher, and colleague Dr. N.P. Singh confirmed double-strand DNA breaks in test animals exposed for just two hours to pulsed, cell phone microwaves.

When you talk on your mobile phone at 800 MHz and 1,990 MHz, whipping anything back-and-forth 800 or 1,990 million times per second is bound to cause breakage in the double-strand DNA of human cells. [guardian.co.uk]

EM engineer Alasdair Philips of Britain's Powerwatch looked for people under age 40 using cell phones more than four hours a day, and found them already retired as “unfit for future work” due to early onset dementia. [EMFacts Consultancy Mar 26/03]

**Drive Time**

Stunned by an additional $4 billion a year in claims for drivers using cell phones, North American
insurers discovered that juggling phones while driving is not causing a 600% increase in accidents. Cell phones are much worse than merely dangerous driving distractions. Tests conducted by the U.S. Department of Energy found that using a cell phone severely impairs a driver's memory and reaction times by disrupting signals to and within the brain. Hands-free mobile phones cause even more crashes because they typically emit 10-times more brainwave interference than handheld units.

Phoning from inside a car or truck is a bad call for everyone in the vehicle – especially children – because the surrounding steel structure amplifies cell phone emissions “by up to 10-fold,” the UK House of Commons Science and Technology Committee reports.

University of Toronto investigators report that the heightened probability of cracking up your car persists for up to a half-hour 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. Motorists talking on cell phones are actually more impaired than drunk drivers with blood-alcohol levels exceeding 0.08. It doesn't matter whether the phone is hand-held or hands free. [Human Factors and Ergonomics Society]

If you put a 20-year-old driver behind the wheel with a cell phone, her reaction times are the same as a 70-year-old driver. But not as wise. [AP Feb 2/05; Human Factors Winter/05]

**Electrical Fields and Magnetic Fields**

“The electricity that comes out of every power socket has associated low frequency electromagnetic fields. Various kinds of higher frequency radiowaves are used to transmit information – whether via TV antennas, radio stations or mobile phone base stations.”

“Radio, television, radar and cellular telephone antennas, and microwave ovens are the main sources of RF fields. These fields induce currents within the human body, which if sufficient can produce a range of effects.”

“A magnetic field is only produced once a device is switched on and current flows.”

Magnetic fields penetrate living tissue “easily”.

“Magnetic fields as low as around 2 milligauss or a millionth of a Tesla can produce biological effects. Using a cell phone or a PDA exposes you to magnetic pulses that peak at several tens of microtesla, which is well over the minimum needed to give harmful effects.” [Bioeffects Initiative report]

**Childhood Leukemia**

“Childhood leukemia is the most frequent childhood malignancy that peaks in the age group of 2 to about 5 years… This peak seems to have been newly evolved in the early quarter of the 20th century and may be due to electrification”… acting as synergistic activators of toxic chemical compounds, I add to the Bioeffects Initiative finding.

**Melatonin, Alzheimer’s and Breast Cancer**

“Melatonin is found in nearly all organisms… it helps prevent both Alzheimer's disease and breast cancer. Long-term exposure to extremely low frequency (ELF, = 60 Hz) magnetic fields is associated with a decrease in melatonin production.”
“Amyloid beta protein is generally considered the primary neurotoxic agent causally associated with Alzheimer's disease. Melatonin can inhibit the development of Alzheimer's disease and, thus, low melatonin may increase the risk of Alzheimer's disease.

“Low melatonin production is a likely risk factor for breast cancer… 11 of the 13 published epidemiologic residential and occupational studies are considered to provide (positive) evidence that high MF exposure can result in decreased melatonin production. (The two negative studies had important deficiencies that may certainly have biased the results.)”

“Some modulation patterns are more bioactive than others, for example, frequencies are similar to those found in brain wave patterns. Current public safety limits do not take modulation into account and thus are no longer sufficiently protective of public health where chronic exposure to pulsed or pulse-modulated signal is involved, and where sub-populations of more susceptible individuals may be at risk from such exposures.” [Bioeffects Initiative report]

Low Power is Very Dangerous

Cell phone researcher Dr. Peter French says unequivocally that brain and other “cells are permanently damaged by cellular phone frequencies.” This cellular damage, French notes, is maximized at low power. [guardian.co.uk]

Much like taking repeated blows to the head, rapidly pulsing cell phones signal permanent brain damage. And the high frequency range used in today's digital cell phones is also very close to the resonant frequency of human DNA, as well as the resonant frequency of the human skull case.

As the Bioeffects Initiative report points out: “Published laboratory studies have provided evidence for more than 40 years on bioeffects at much lower intensities than cited in the various widely publicized guidelines for limits to prevent harmful effects. Many of these reports show EMF-caused changes in processes associated with cell growth control, differentiation and proliferation which are the molecular and cellular basis of cancer.”

“Windows of intensity align across different carrier frequencies." [Bioeffects Initiative report]
It’s Not Just The Cell Phones!
What about all these cell phone relay towers springing up everywhere?

Our bodies – and each one of our trillions of cells – are exquisitely sensitive receiving antennas.

There are currently over 210,000 cell towers, providing 81% wireless penetration in America alone, and one would be hard-pressed to find an inhabitable place on Earth that is not within range of cell frequency transmissions. [CTIA The Wireless Association June/07]

The work of researchers like Dr. Henry Lai, Dr. Ross Adey and Dr. Jerry Phillips show that such effects as DNA strand breaks are produced not only by short-term exposure at high intensity, but also by long-term, chronic exposure to low intensities – like that increasingly experienced by growing numbers of people from cell phone towers and microwave communication facilities.

Henry Lai found Radio Frequency Radiation like that from cell phone towers penetrates further into a child's small, growing skull.

As my friend Chris Anderson points out, “This is continuous exposure, and it is not optional.”

Sydney Australia – first city to go wireless – saw a significant jump in allergies and deaths.

By 2005, more than 500 cell tower disputes around the country ended up in court. But federal law prohibits towns from rejecting a transmission tower on the grounds that it poses health concerns. [New York Times May 1/05]

Now, cell phones small enough to fit inside a cigarette case have decreased reception so base stations must boost their microwave transmissions 15% to 20%. [New York Times Mar 10/03]

Findings by the Associated Bioelectromagnetics Technologists show that RF exposure from cell phones and cell phone relay towers “is wholly correlated with the repeatedly documented increased incidence of autism – now reported by at least some researchers as greater than 1 per 100 newborn.”

Coltan

A tiny piece of mineral used in your phone called coltan is causing a frenzied rush for its extraction in strip mines across the Congo – exploiting children, razing pristine forests, wiping out up to 90% of all mountain gorillas, and has already led to the rape of more than 250,000 women as old as 75 and girls as young as three.

Since consumers don't have any idea where the coltan in their phones comes from, please stop buying them until guidelines guaranteeing the provenance of cell phone and wireless laptop computers come in.

Conclusions of the Bioeffects Initiative Report

“The conclusion that, if health effects of commonly encountered RF exposures exist, they must be small, is wrong. The evidence points to a quite substantial hazard. Scientific research has shown that the public is not being protected from potential damage that can be caused by exposure to EMF, both power frequency (ELF) and radio frequency (RF).”

“There is a need for a biological standard to replace the thermal standard and to also protect against cumulative effects across the EM spectrum.”
One main conclusion from the worldwide NATO meetings in 2005: “Worldwide harmonization of standards have to be based on biological responses.”

“DNA damage (strand breaks), a cause of cancer, occurs at levels of ELF and RF that are below the safety limits. Also, there is no protection against cumulative effects stimulated by different parts of the EM spectrum.”

“ELF limits for public exposure should be revised to reflect increased risk of breast cancer at environmental levels possibly as low as 2 milliGauss or 3 mG.”

“There is substantial scientific evidence that some modulated fields (pulsed or repeated signals) are bioactive, which increases the likelihood that they could have health impacts with chronic exposure even at very low exposure levels. Modulation signals may interfere with normal, nonlinear biological processes.”

“Current standards have ignored modulation as a factor in human health impacts, and thus are inadequate in the protection of the public in terms of chronic exposure to some forms of ELF-modulated RF signals... The collective papers on modulation appear to be omitted from consideration.”

A Coming Cull?

Professor Khurana has placed his considerable reputation behind warning: “Unless the industry and governments take immediate and decisive steps, the incidence of malignant brain tumours and associated death rate will be observed to rise globally within a decade from now – by which time it may be much too late to medically intervene.” [Independent Mar 30/08]

“Dr. George Carlo predicts surefire disaster, and the complete destruction of the health care system from electromagnetic radiation alone.” Right now, the Bioeffects Initiative report indicates that as many as one in 10 people suffer debilitating effects from electromagnetic sensitivities. EMR expert Chris Anderson predicts, “In the next 5 to 10 years, fully half the developed world’s population could suffer disability from EMR. [Chris Anderson EMR expert – correspondence with the author.]”

After carefully reviewing more than 100 clinical studies showing that using “hands free” and regular cell phones for 10 years or more can double the risk of brain cancer, PhD Vini Khurana – who has
received 14 awards while publishing more than three dozen scientific papers – predicts that cell phones will kill far more people than either smoking or asbestos. Smoking continues to cull some five million people worldwide every year, while asbestos exposure in England continues to claim as many corpses as road accidents. [Independent Mar 30/08]

In September 2007, the EU's European Environment Agency (EEA) and the country of Germany both issued warnings to their citizens advising them to avoid the use of Wi-Fi and cell phones until further long term studies are conducted, citing fears that the ubiquitous use of wireless technology has the potential to become the next public health disaster on the level of tobacco smoking, asbestos, and lead in automobile gas. [naturalnews.com]

Dr. Vini Khurana urges everyone to stop using cell phones immediately. [Independent Mar 30/08]

**Guaranteed Cell Phone Protection**

Dr. Gro Harlem Brundtland, director general of the World Health Organization, former Norwegian prime minister and licensed physician emphasized: Making shorter calls does not help, [Microwave News Mar-Apr/02; Dagbladet Norge Mar 9/02]

The only way to ensure complete protection against being turned into a zombie by cell phones is to avoid using them except in emergencies when no other voice communication is available – at the max, experts suggest, one or two minutes per month.

**Seven Things You Can Do**

1. Do not use a cell phone for longer than one minute twice a month.

2. Do not live within two miles or five kilometers from a cell phone tower. Get the tower removed… or move.

3. In your home, unplug all electrical appliances when not in use. (Switching TVs and similar devices “off” does not turn them off. Intersecting electrical fields result.)

4. Avoid using wireless routers and portable phones.

5. Keep your bedroom free of electrical appliances, especially near your head while you sleep. Use a battery-operated alarm clock – never a plug-in clock radio! Unplug lamps when not in use.

6. Replace dimmer switches with regular switches to eliminate high-frequency radiation – the "dirty electricity" hidden in your home's most likely improperly grounded electrical wiring. (Even if done to Code.)

7. Take the best quality daily vitamin and mineral supplements program you can get your hands on.

http://www.willthomasonline.net/willthomasonline/The_Evidence_Is_In.html