

Cell phones and children

Townsend Letter for Doctors and Patients, July 2005
by Rose Marie Williams

Cellular phones seek out a receiver by sending strong electromagnetic radiation several miles in all directions. This poses significant exposure levels to the brain since phone antennas are within an inch of the head. Other individuals in the immediate area who are not using a cellular phone are also exposed to EMFs. Electromagnetic fields (EMFs) and electromagnetic radiation (EMR) generally refer to the same phenomenon the outward radiation of energy fields from a transmitter. The terms are used interchangeably as was discussed in "Cell Phone Controversy," which appeared in the June issue of the Townsend Letter. (1)

The human body was designed to generate its own beneficial electromagnetic fields to govern its many intricately related functions. Artificially generated EMFs from phones and other sources may be harmful by disrupting the body's own biologically useful EMFs which control all bodily functions from memory and reasoning to organ function and nerve health. (1)

EMFs from cellular phones are directed into the ear, jaws, eyes, scalp, brain, hypothalamus, sinuses, and the pineal gland. Very small magnetic fields influence the pineal gland by increasing or decreasing the production of melatonin and serotonin, two important neurohormones with multiple functions, including the direct control of all biocycles in the human body. (1)

The Cellular Phone Task Force, a consumer advocacy organization, advises that using a cellular or digital cordless phone for two minutes disrupts the blood-brain barrier. Longer use permanently destroys brain cells. Dizziness, nausea, insomnia, memory loss, inability to concentrate, fatigue, depression, anxiety, and agitation are all neurological symptoms warning of irreversible damage. (1)

This laundry list of symptoms may encourage the inappropriate use of numerous prescription drugs without the real cause ever being suspected or corrected.

Children and Cellular Phones

Low-dose radiation from cellular phones is biologically active, and "we are not transparent to these signals," says Louis Slesin, editor of Microwave News, a newsletter dealing with health risks associated with electromagnetic radiation. (2)

Britain, France and Germany have openly discouraged use of cellular phones by children because of health concerns. Children's developing nervous systems may be especially vulnerable. Our own Food and Drug Administration (FDA) claims these advisories were "precautionary," and "not based on scientific evidence that any health hazards exist." Health and environmental advocates are increasingly promoting the precautionary principle, which would require questionable substances and technologies to first prove their safety before being approved, not the other way around as has been the common practice in the United States. (2)

Parents are advised to limit use of cellular phones by children and teens, and to encourage them to use a headset or send text messages (that keeps the phone away from the head). Emergency or prudent use of cellular phones should replace unlimited casual conversation. (2)

In 1999, the respected British scientist, Sir William Stewart, chair of the government-backed Independent Experts Group on Mobile Phones reviewed scientific evidence on radio frequency (RF) radiation. Not enough conclusive evidence existed. However, a precautionary approach was still advised, particularly regarding children. Stewart advised that children under the age of 16 restrict mobile phone use to essential calls, and to minimize length of calls. This was endorsed by the British

Lawrie Challis, chair of the United Kingdom's Mobile Telecommunications Health Research Programme, (www.mthr.org.uk), an independent organization, warns that similar to the Chernobyl disaster, it may take years for the full extent of health problems to be known. The mobile phone industry's reaction to safe avoidance is evident on Motorola's international website, (www.motorola.com), claiming "There is no scientific basis to restrict the use of mobile phones by children, and this remains a matter open for parental choice." (3)

British scientists, Stewart and Challis, are angered by this cavalier stance, and have criticized mobile phone companies for not giving clearer information about the radiation emissions of their phones. (3)

Most cellular phone sales staff are unfamiliar with the "specific absorption rate," (SAR) values of the products they sell. A consumer who is looking to purchase a cellular phone with the lowest emissions must check the websites for each manufacturer to ascertain which product appears to be safest – a daunting task. SAR is a measure of the radio emissions absorbed by human tissue when using a mobile phone, and is expressed in units of watts per kilogram (W/kg). The European Council recommends a maximum of 2W/kg in 10g of tissue. The lower the SAR, the better. (3)

According to Janet Newton of the EMR Network, the SAR values were established from studies conducted with healthy 180 lb. male subjects. As usual, any health risks to 60 lb. children, or 120 lb. females were not considered.

Companies Target Children

A mobile phone company in the United Kingdom which specifically targeted children ages four to eight for a newly designed product announced it would suspend sales due to concerns raised by the National Radiological Protection Board (NRPB). A report issued in January 2005 said that mobile phones should not be used by children younger than eight years-old for fear of long-term health damage. (4)

NRPB director, Professor Stewart, believes the pace of mobile phone technology is outstripping the rate of research, and that any potential risks will be worse for children. The younger the child, the greater is the danger. He also believes that evidence of potentially harmful effects to children has become more persuasive in recent years, which is why he advises against the use of mobile phones by children less than eight years-old. The telecommunications industry has not been thrilled with these precautions. (4, 5)

"Firefly phone targets teens, their parents," headlines a story by Mike Dano in the RCR Wireless News, March 11, 2005. Constantly seeking new customers, wireless companies have begun targeting children and young teens by pitching to parents about the benefits of checking up on their kids, as well as promoting to kids the fun of having the latest status-symbol toy. (6)

Firefly Mobile, Inc, a new company founded three years ago, launched its Firefly phone for the eight to twelve year-olds. This represents a market of 20 million youngsters, of which only 10% currently have mobile phones. This untapped market has caught the attention of other companies as well. Toy maker, Hasbro, is targeting a phone designed to appeal to children aged eleven to fourteen. (6)

The youth market is very lucrative because teenagers are more likely to use video downloads and related services. (5) Until parents start balking, kids will keep right on talking.

Companies Target Schools

All over the country schools are being targeted as convenient sites for tower location. Industry's offer

of payment at a time when so many school districts are financially strapped, plus the benefits of having state-of-the-art technology installed are extremely difficult to resist. Health risks rarely enter Page 3 – Cell phones and children

into the discussion, or are easily dismissed because governmental agencies support industry's claim of insufficient proof of health problems. As with many other concerns of health risks, the telecommunications industry refuses to do the proper scientific research, or derides studies that indicate potential health problems.

Advocacy groups like the EMR Network have been working to raise awareness among parents and teachers of the probable health risks associated with exposure and of the value of following the precautionary principle of safe avoidance. Just outside Washington, DC, in Fairfax, Virginia, teachers have begun to question the benefits versus the risks of having towers sited on their school buildings and have formed a new website, (www.protectschools.org).

In Astoria (Queens, New York), local members of the American Federation of Teachers issued a statement against siting towers on school buildings. They are not alone in their fight. A "huge victory for our children," was claimed by Astoria councilman, Peter Vallone, regarding Nextel's agreement to remove four antennas from a building across the street from an elementary school (PS-122). (7)

The antennas were installed by Nextel in October, and faced the school. A rally organized by local legislators in November brought out more than a hundred parents and teachers who threatened Nextel with boycotts and legal action. Nextel agreed to remove the four antennas facing the school, but activated another eight antennas which Nextel claims do not face the school. (7)

Councilman Vallone introduced a resolution that was unanimously passed on March 9, asserting that many questions about potential long-term health risks have not been adequately resolved, and must be studied before proper assessments can be made regarding the placement of cellular phone base stations where residents live and work. Vallone indicated he did not want the cellular tower situation to parallel lead paint and asbestos, which were assumed to be safe, until many years later they proved to cause serious health problems. (7)

The EMR Policy Institute (EMR Network) has been receiving increased inquiries from teachers concerned about antennas being located on or near school buildings. EMR director, Janet Newton, has been working with the American Federation of Teachers (AFT) and the National Education Association (NEA) to raise awareness about radiation exposure. She strongly encourages teachers to contact their local, state, and national representatives of these organizations.

In Great Britain the general secretary of the National Association of Headteachers has called for a ban on mobile phones in schools. (5)

Firefighters Fight Cell Towers

The International Association of Firefighters (IAFF) has issued a Position Statement on the potential health effects of Radio Frequency (RF) radiation from mobile phone base stations, and has called for a moratorium on the siting of further base stations at firefighters' workplaces. (8)

The IAFF has adopted the precautionary principle of protecting its members by opposing the use of fire stations as bases for towers and/or antennas for the conduction of cell phone transmission, until a study with the highest scientific merit and integrity on health effects of exposure to low-intensity RF/MW radiation is conducted and proven not to be hazardous to the health of its members (<http://daily.iaff.org/celltowerfinal.htm>). (8)

The wireless telecommunications industry maintains there is no increase in health risks from

exposure to radio frequency radiation. This information is based on non-continuous exposure of the public to low intensity radio frequency fields emitted from wireless telecommunications base stations.

Most studies on this subject generally look at the safety of the phone itself and most studies are at
Page 4 – Cell phones and children

least five years old. IAFF wants to know the effects of living directly under these stations for extended periods of time. (8)

The IAFF and its medical team are pushing for a study that will contrast the health of fire fighters residing in stations with towers to those without similar exposure, to determine the effects of radio frequency radiation on the central nervous system, the immune system, and other metabolic effects observed in preliminary studies. IAFF General President, Harold Schaitberger sums it up by saying, "There currently is no good scientific study that determines whether or not cell towers on fire stations are hurting our members, so a study must be done." (8)

Radio frequency (RF) microwave (MW) radiation transmissions of the type used in digital cellular antennas and phones can have critical effects on cell cultures, animals and humans in laboratories. There is epidemiological evidence of serious health effects at "non-thermal" levels where the intensity of the radiation was too low to cause heating, but shows increased cell growth of brain cancer cells, changes in tumor growth, more childhood leukemia, changes in sleep patterns, headaches and neurological changes, decreased memory, learning deficiencies, increased blood pressure, and other health problems. (8)

It is admirable that the IAFF has taken a definitive stand to protect firefighters in the US and Canada by establishing a moratorium on the placing of new towers or antennas on fire stations, and by embarking on their own health study instead of accepting industry's insufficient and questionable data.

It would be wonderful, indeed, if our nation's children had an equally strong and concerned advocacy group acting on their behalf. Rather than protect the public's right to raise questions about health issues regarding cell towers, our legislators voted with industry to make it illegal for the public to use health concerns as a reason to oppose cell towers in their communities. Most information from the media is manufactured by, and biased toward the industry. Any hope of learning the truth about health risks comes from a few grassroots environmental and health organizations.

Global News

Mast Sanity, founded by Lisa Oldham, is one of the UK's largest advocacy groups responding to potential health risks from the more than 50 million cell phones in use and 50,000 mobile-phone masts which have sprung up "like virulent fungi." Ms. Oldham criticizes the industry's position that "no conclusive evidence of health risks exist," by reminding us this is the same indoctrination used by the asbestos and tobacco industries. Her organization has found "all sorts of cancer clusters around masts leukaemia, Hodgkin's, breast cancer, as well as reports of dizziness, headaches and nosebleeds." (3)

Australian researcher, Don Maisch, believes the communications industry glosses over potentially adverse health effects, reporting research selectively and restricting funding in case the results prove commercially damaging. "The cell phone industry has learned from the tobacco wars that if you want to put off the day-of-judgment, you have to control the science," says he. (3)

In August 2002 researchers from Orebro University and the Karolinska Institute in Sweden found cell phone users were "significantly more likely to develop benign brain tumors than non users." There was no comparable association for users of digital phones. (2)

Another Swedish study has shown that acoustic neuromas (benign tumors of the acoustic nerve) are twice as common in mobile phone users. (5)

The May 2002 issue of *Differentiation*, a scientific journal on cellular and biological research, contained a report by a Finnish team who found protein changes occurred when human cells were
Page 5 – Cell phones and children

exposed to cell phone radiation for one hour in lab studies. One of the altered proteins is necessary for maintaining the blood-brain barrier, which protects the brain from toxins in the bloodstream. (2)

Consumer Advocacy Groups

The Cellular Phone Task Force

P.O. Box 1337, Mendocino, CA, 95460;707-937-3900

www.emrpolicy.org, EMR Policy Institute, JNewton@emrpolicy.org

www.lessEMF.com 1-888-LessEMF

www.microwavenews.org

www.protectschools.org

www.HealthLine.cc 1-800-370-3447

www.bma.org (UK) British Medical Association

www.dh.gov.uk (UK) Dept. of Health

www.mthr.org.uk UK's Mobile Telecommunications Health Research Programme

www.mastsanity.org, (UK)

www.iegmp.org, (UK) Independent Expert Group on Mobile Phones

www.nrpb.org (UK) National Radiological Protection Board

References

1. Williams, RM, "Cell Tower Controversy," TLFDP, #263, June 2005.
2. "Are cell phones safe?" Consumer Reports, Feb 2003, (JNewton@emrnetwork.org, 2/7/03).
3. "Why no wiser about mobile risks?" www.TimesOnLine, UK 10/3/04, (JNewton@emrpolicy.org, 1/14/05).
4. Freeman, S., "Children's mobile withdrawn over fears," www.TimesOnLine.co.UK/article 10,,2-1435340,00.html 1/11/05, (JNewton@emrpolicy.org).
5. Coates, Hawkes, "Mobile phone tumour risk in young children," www.TimesOnLine.co.UK/article 100,,2-1436543,00.html 1/12/05.
6. Dano, M. "Firefly phone targets teens, their parents," www.RCRNews.com/article.cms?articleId=47901, 3/11/05, (JNewton@emrpolicy.org).
7. Bertrand, D., "Antennas Removed," www.nydailynews.com/boroughs/v-pfriendly/story/292436p-250364c.html (JNewton@emrpolicy.org, 3/24/05).
8. "IAFF Releases Position Statement on RF Safety Study," (JNewton@emrpolicy.org. 4/8/05).

COPYRIGHT 2005 The Townsend Letter Group

COPYRIGHT 2005 Gale Group