

Study Confirms Brain Impacts of RF—Natl Institute of Drug Abuse

Will Thomas.

<http://willthomasonline.net/turkish%20cell%20phone%20study%20confirms%20brain%20impacts.htm>

(other links: <http://www.jns.dergisi.org/text.php?id=417> Journal of Neurological Sciences

<http://www.newswise.com/articles/environmental-health-trust-experts-warn-that-cell-phone-radiation-excites-the-brain-of-healthy-adults> Environmental Health Trust

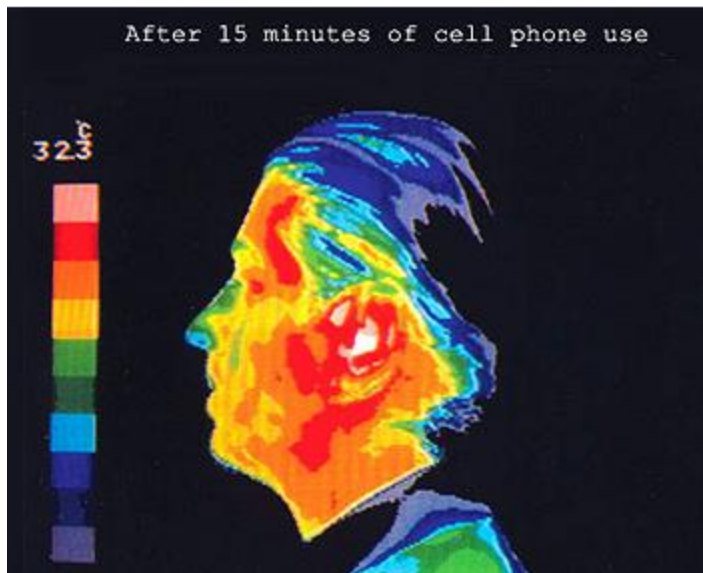
<http://psychnews.psychiatryonline.org/newsarticle.aspx?articleid=108400> Psychiatry Online

<http://www.dailymail.co.uk/sciencetech/article-1374632/Smartphone-cold-turkey-Scientists-prove-youngsters-suffer-gadget-withdrawal.html> London Daily Mail

http://www.huffingtonpost.com/devra-davis-phd/cell-phone-radiation_b_3528946.html Huffington Post

A team of researchers led by the **director of the National Institute of Drug Abuse, psychiatrist Nora Volkow, MD** has found that exposure to just 50 minutes of cell phone radiation excites the metabolism (burning) of glucose – the brain’s main fuel – in those parts of the brain that receive the most cell phone radiation. Instead of making you smarter, this electromagnetic stimulation stresses the brain, releasing free radicals and stress proteins that significantly reduce brain function – and may cause tumours. “This stunning report indicates that even short-term exposure to nerve cells from cell phones can increase glucose in the brain,” says MD Ronald Herberman, chair of the Environmental Health Trust board. The [Environmental Health Trust](#) “educates individuals, health professionals and communities about controllable environmental health risks and policy changes needed to reduce those risks.” **The study warns of addiction and brain damage from nearly ubiquitous mobile phones.**

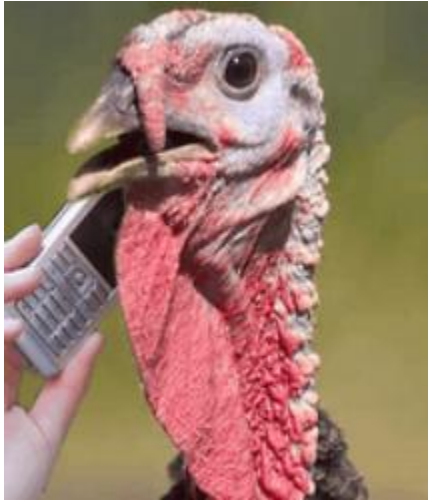
“We know that increased glucose also occurs with infections and other inflammatory processes, and leads to the production of potentially damaging reactive oxygen radicals that can alter the ways that cells and genes work,” Dr. Herberman continues. “Radiofrequency radiation might contribute to increased risk for brain tumors as well as other alterations in brain functions.” This new report provides additional reasons for taking steps to reduce direct exposure to the brain from cell phone radiation, he emphasized. Glucose in the brain indicates excitability – and stress. **By causing the brain to burn (metabolize) more glucose, cell and portable phone use can lead to chronic glucose deficits. “As glucose is the sole energy source in the brain under normal dietary conditions, and there is an absolute requirement for glucose during synaptic transmission in the nervous system, the results of the current study emerge as even more significant,”** says EHT scientific advisor MD PhD Richard Stein.



“The areas of the brain that had increased glucose in the JAMA study are involved in thinking, sensing, and decision making, including repression of antisocial behavior,” added Lloyd Morgan, Senior Science Advisor to the EHT. “Yet standards for phones today rest on the assumption that such effects cannot possibly occur. It is time to revise the standards, and to take into account both the short- and long-term effects that microwave radiation from cell phones can have on the brain and body.” “By using radio-labeled PET scans to examine glucose and energy metabolism in the brain of healthy adult volunteers, the NIDA team got as close as one can get to visualize brain metabolism and brain activity in real time, in response to non-ionizing radiation,” explains EHT scientific advisor MD PhD Richard Stein. “Their results validate and reinforce previous reports that used other experimental approaches, and have found that microwave radiation altered cellular signaling pathways and brain activity. “Of course, we do not know whether the changes in glucose metabolism represent the primary perturbation, or whether they occur secondarily, as a response to some other disturbance, such as the activation of heat shock pathways, which was reported to occur by several independent groups in response to non-ionizing radiation. But one thing is certain, the current study clearly reveals changes in a pathway that is essential for brain energy metabolism and synaptic transmission, and is intimately interconnected with other pathways that fulfill fundamental roles in biological systems. The Volkow study is an important contribution to public health.” [JAMA Feb/11; bmedreport.com Feb 23/11] Earlier this year, neurobiologists at the California Institute of Technology showed that very weak varying electric fields affect the thinking, resting and sleeping brain. [Nature Neuroscience last month Feb/11]



DR. DAVIS COMMENTS Dr. Devra Lee Davis, president and founder of Environmental Health Trust, says that this new work, combined with studies carried out by Henry Lai, Allan Frey and others in the past three decades and documented in her new book – *Disconnect: The Truth About Cell Phone Radiation, What the Industry Has Done to Hide It, and How to Protect Your Family* – reinforces the need for revamping our current approach to cell phone safety. “Cell phone standards assume that no biological impact of microwave radiation from cell phones can occur without a detectable change in temperature,” said Dr. Davis. “In fact, this JAMA study used phones with a SAR of less than 1 W/kg for 50 minutes and found significant increases in brain glucose – the sugar that provides the brain’s main source of energy. “Tumors are just the tip of the iceberg,” Dr. Davis adds. “Their development is preceded by years of other biological perturbations that have profound medical relevance – and this study confirms that significant biological changes occur after relatively brief exposures such as those that take place daily with the world’s five billion cell phones. “Could the stimulating impact of cell phone radiation to boost brain energy explain some of the growing addiction many of us feel for our phones?” [WEEP News Sept 29/10] Repeated elevated levels of “feel good” dopamine in the mood-regulating amygdala means habitual cell phone users need a fix as often as cigarette smokers. But after many calls, lesions and shrinkage in the amygdala makes heavy “users” more anxious, depressed, dumber, forgetful – and aggressive. [ABCs Of Cell Phones And Other Hazards Of The Wireless Age by William Thomas] [France and Israel have already acted, discouraging the use of cell phones by children and even putting warning signs on handsets.](#) "This is about the most important and unrecognized public health issues of our time," says Davis. "We could avert a global catastrophe if we act." [WEEP News Sept 29/10] People who have used cellphones for half an hour a day for more than a decade have about twice the risk of glioma, a rare kind of brain tumour, on the side of their head where they hold the phone. Glioma is usually fatal. Dr. Davis says brain cancers typically take decades to develop, and the fact that they're being found after 10 years in cellphone users after relatively light exposure by today's usage standards is worrisome. “For such a risk to show up in cellphone users within 10 years given what we know about brain tumours, which is that they can have a latency of 40 years, is deeply, deeply disturbing,” she said. [There are an estimated five billion subscriptions worldwide.](#) Cellphone-safety tests are based on the amount of radiation absorbed into the head of man who is in the top 10% of U.S. military recruits, a 200-pounder with an 11-pound brain standing at 6 feet, 2 inches. The standards were based on early analog phones used no more than six minutes at a time, not the digital models now in use. They were set to prevent the head from overheating. The tests don't account for the smaller head sizes of women and children. [Globe and Mail Sept 24/10] [CBC interview with Devra Davis](#) (Interview starts at 37 minutes and 53 seconds)

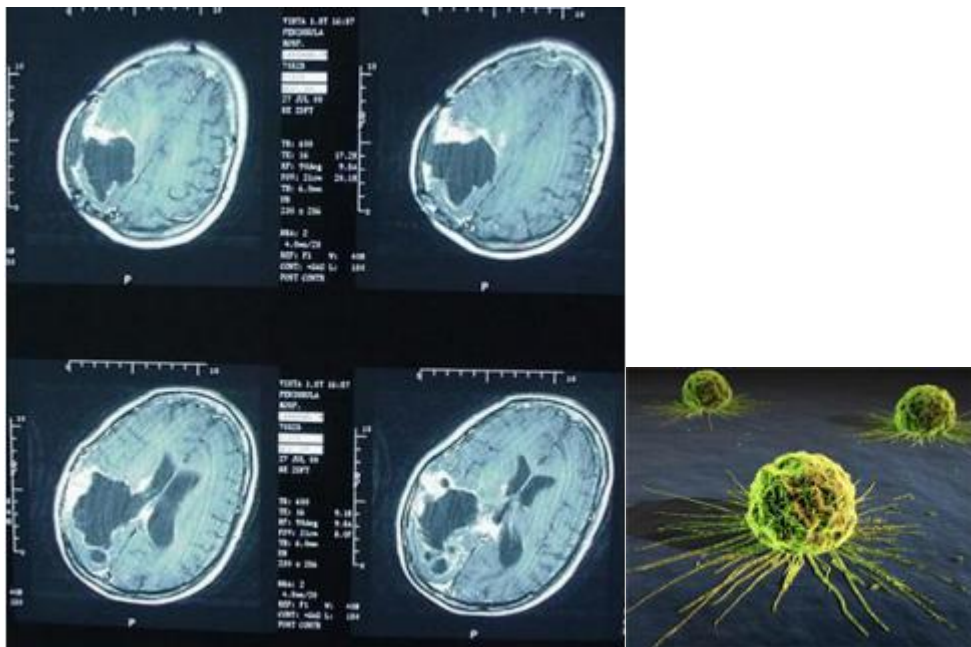


DON'T BE A TURKEY IN TURKEY (OR ANYWHERE ELSE) [About half of all Turks in Turkey have a mobile \(cell, cellular\) telephone](#), but it really seems as though every Turk has two mobile phones and talks on them all the time. Turks are on the phone all the time – usually on mobile phones that use the pulsed GSM standard of 900Mhz and 1800Mhz bands: **that is, they are addicted to devices that are whipsawing the cells in their brains and bodies at 900 and 1800 million times per second!** [turkeytravelplanner.com] A prepaid Turkey SIM card with an international cell phone is the most convenient and economical solution for irradiating yourself and others while travelling in Turkey. As wireless provider Telestial boasts, [incoming calls to your Turkey cell phone are always FREE!](#) [telestial.com]



RISKY “FIXES” The Environmental Health Trust encourages simple and dangerous “precautions” that may actually increase RF and microwave radiation exposure to individual “users” and the wider populace. Like many “health” specialists and government advisers, EHT recommends that cell phones should be used with headsets or speakerphones. But the wire linking “hands-free” kits to the phone can significantly boost the brain's exposure to radiation from mobile phones by acting as an aerial to channel ambient electromagnetic fields, as well as cell phone radiation to the ear. The level of emissions depends varies according to how the phone is held. (Government tests do not allow for this.) “It's clear

that consumers can't rely on hands-free kits to reduce radiation emissions at the brain from mobile phones," says *Which?* editor Helen Parker. "Although these kits can reduce radiation, they can also increase it significantly, depending on where you position the phone and kit. Unfortunately, there is no way that consumers can work out the best position to reduce radiation." The London-based consumer research magazine found that hands-free kits can cut emissions. But in most cases, this supposedly "safer" arrangement more than triples the brain's exposure to radiation from headset wires hanging straight down – their usual position in use. [Reuters Nov 2/00; Scotsman Aug 9/00] Turkish people have spent \$27.5 billion for 135 million mobile phone handsets sold in Turkey since 1994. There are still 10.5 million illegal sets in use, which do not have a valid International Mobile Equipment Identity number. At least 72 million of these handsets are now considered "trash". This toxic refuse is worth around \$18 billion. [worldbulletin.net Mar 10/10] "If you're worried about levels of radiation from your mobile phone, you shouldn't rely on a hands-free set," said Graeme Jacobs at *Which?* Antonia Chitty, one of the authors of the report, said there was a mismatch between the reasons the companies design hands-free kits and the reasons many people buy them: "Consumers are buying them because they want the protection. Our impression is that companies are developing them to be handy and convenient." [Guardian Apr 4/00] Bluetooth and other headsets "may actually intensify your exposure to harmful radiation because the headset itself acts as an antenna, which is now inserted directly into your ear canal," warns Dr. Mercola. [healthiertalk.com] Draping a cell phone headset wire across a pregnant belly can be very bad for baby. In addition, headset-wired "mobiles" must crank out much more power to carry over the wire's extra distance. Even worse, calls from inside a vehicle must blast away at full power to propel urgent chitchat through its steel structure. This will greatly increase the radiation exposure of everyone in proximity. Also often recommended is using the cell phone's speaker to keep it away from the head, or an Air-Tube headset with a Ferrite filter to prevent the headset wire from acting as an antenna. But both of these "solutions" will necessitate still more – and more powerful – cell phone relay towers to carry increased traffic, including video, photos and Internet transmissions.



10-MINUTE CALL COULD TRIGGER CANCER Because even low levels of radiation from handsets interfere with the way brain cells divide, mobile phones can take as little as ten minutes to trigger changes in the brain associated with cancer. Israeli scientists exposed human and rat cells in a laboratory to low-level

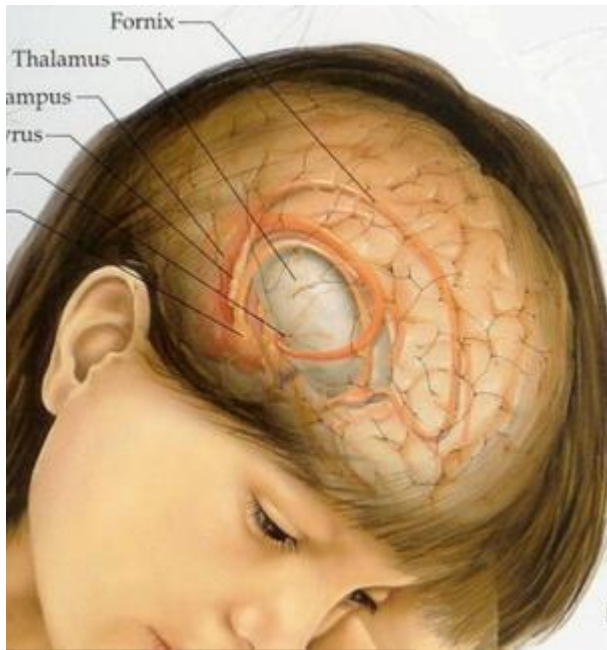
radiation at 875 megahertz – a frequency similar to many mobile phones. Though the radiation was far weaker than emissions from a typical cell phone, it began to switch on a chemical signal involved in the division of cells within ten minutes. The reaction was not caused by heating. "The significance lies in showing cells do react to cellphone radiation in a non-thermal way," study co-author Dr Rony Seger emphasized. Graham Philips of Powerwatch observed, "Safety guidelines assume health effects from mobiles can only occur when significant heating of body tissue occurs. This study shows biological changes in response to low-level mobile phone radiation." [Daily Mail Aug 30/07]



WHEN WILL WE EVER LEARN? When are we addled addicts going to learn that each techno “fix” – from cell phone headsets to sunblocking Chemtrails – introduce further unintended consequences. Dr. George worries that Chemtrails used to propagate radar and radio waves over cities and countryside are also amplifying and conducting wireless radiation. “EMR [Electromagnetic Radiation] is most likely a synergen,” Dr. Carlo emailed a researcher. “The exposures such as pesticides, chemtrails, harvesting of forests and urban sprawl are not causes competing with EMR – they are additive and synergistic causes. They are insults to the system that requires strong biological compensation to overcome. EMR depletes that ability to compensate, and thus the person or species succumbs to the effects of the environmental insult more severely and more rapidly.” [[Chemtrails Confirmed 2010](#) by William Thomas]



JUMPING SHIP Based on the growing evidence from laboratories and epidemiologic studies, two leaders of the WHO Interphone study on cell phones have recently broken ranks and are now calling for such precautions to be taken broadly. Professors Elisabeth Cardis and Siegal Sadetzki note the growing biological evidence that microwave radiation from phones has impacts and that epidemiologic studies find increased risks of brain cancer after a decade of heavy use. “There are now more than 4 billion people, including children, using mobile phones,” they write. “Even a small risk at the individual level could eventually result in a considerable number of tumours and become an important public-health issue. [JAMA Feb/11; bmedreport.com Feb 23/11]



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