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EMF* and Health: The Growing Body of Scientific Evidence



* EMF = Electromagnetic Field.

A field representing the joint interplay of electric and magnetic forces with frequency 0 to 300 GHz. Radio signals are one form of EMF.



“... exposures to RF radiation below NRPB and ICNIRP guidelines do not cause adverse health effects...”¹

“...exposure to RF fields, such as those emitted by mobile phones and their base stations, is unlikely to induce or promote cancers [...] reported other effects of using mobile [...] have no apparent health significance.” “None of the recent reviews have concluded that exposure to the RF fields from mobile phones or their base stations cause any adverse health consequence.”²

“Based on voluminous findings [...], exposure [...] guideline [...] has been developed with a safety margin enough to protect human health from adverse effects of radio waves.”¹

“[...] no established health effects from EMF exposures below the international guidelines limits.”¹

“...no substantiated evidence that exposure to low level RF EME causes adverse health effects.”¹

“...levels of power used in mobile telephony, [...] is not ‘genotoxic’”²

“The scientific evidence does not show a danger to users of wireless phones, including children and teenagers.”³

“Overall, [...] research[...] does not give cause for concern and [...] does not suggest that there are adverse health effects from exposures to RF fields below guideline levels”¹

“... WHO concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields.”²

“[...] no reason to recommend limiting the use of mobile phones by children.”³

“[...] the scientific research, when taken together, does not indicate a significant association between cell phone use and health effects.”¹

“The scientific studies examined in the risk dialogue do not support suspicions that mobile telephony has harmful effects on health.”²

“... insufficient contemporary proof with regard to increased cancer risk to change mobile phoning habits.”³

“...for adult brain tumours there is no association with mobile phone use for at least up to, say, ten years of use. For longer latency the majority of the evidence also speaks against an association, but the data are still sparse. [...] exposure from transmitters is unlikely to be a health risk.”¹

“... provided mobile phones do not exceed the limits of recognised standards, there will be no harmful effects. [...] no substantiated evidence that there are adverse health effects resulting from the emissions of mobile phone towers or base stations.”²

“... no firm evidence to date that RF emissions from cell phones cause ill health.”³

“Reviews of all the research have not found clear, consistent evidence of any adverse effects.”¹

“...no evidence that mobile phones bring hazards to health when used under normal operating conditions.[...] Despite densely-packed transmitters on some rooftops in residential areas [...], the buildings are absolutely safe to live in.”²

“... no adverse short or long-term health effects have been found”³

“... present guidelines provide adequate protection against any adverse effect established so far.”⁴

“With reference to radio frequency, available data do not show any excess risk of brain cancer and other neoplasms associated with the use of mobile phones.”¹

“Over the past 15 years [...] hundreds of studies looking at the biological effects of the radiofrequency energy emitted by cell phones[...]. The majority of studies published have failed to show an association between exposure to radiofrequency from a cell phone and health problems.”²

“There is insufficient evidence to indicate a causal association between cell phone use and intracranial tumours.”³

“The overall conclusion is that exposure from transmitters is unlikely to be a health risk.”⁴

“It is concluded from three independent lines of evidence (epidemiological, animal and in vitro studies) that exposure to RF fields is unlikely to lead to an increase in cancer in humans....”¹

1980: 1002 scientific publications related to EMF (status 25. May 2009)

2000 ¹U.K. Independent Expert Group on Mobile Phones (IEGMP) (2000), IEGMP, "Mobile Phones and Health," Independent Expert Group on Mobile Phones, c/o National Radiological Protection Board, Chilton, Didcot, Oxon, UK. www.iegmp.org.uk ²World Health Organization (2000), Fact Sheet N93, http://www.who.int/docstore/peh-emf/publications/facts_press/efact/efs93.html ³Ministry of Public Management, Home Affairs, Posts and Telecommunications (MPHPT) (2001), Interim Report by Committee to Promote Research on the Possible Biological Effects of Electromagnetic Fields (30 January 2001), MPHPT Communications News, Vol. 11, No. 23, http://www.soumu.go.jp/joho_tsusin/eng/Releases/NewsLetter/Vol11/Vol11_23.pdf ⁴2002 ¹Singapore Health Sciences Authority (2002), Pulse@HSA (Health Sciences Authority), Frequently Asked Questions about EME & Mobile Phones http://www.hsa.gov.sg/docs/fullversion.pdf ²2003 ¹Australian Government, Australian Radiation Protection and Nuclear Safety Agency, Committee on Electromagnetic Energy Public Health Issues (2003), Fact Sheet EME Series No 1 "Electromagnetic Energy and Its Effects", http://www.warpsa.gov.au/pubs/eme_comitee/facts.pdf | ²French Environmental Health and Safety Agency (AFSSE) (2003), AFSSE Statement on Mobile Phones and Health, http://afsse.fr/upload/bibliotheque/99459757624024866333826568793/statement_mobile_phones_2003.pdf | ³U.S. Food and Drug Administration (2003), Cell Phone Facts. Consumer Information on Wireless Phones, Radiofrequency Energy, Questions and Answers, http://www.fda.gov/cellphones/qa.html#3 ⁴2004 ¹U.K. National Radiological Protection Board (NRPB), Advisory Group on Non-Ionizing Radiation (AGNIR) (2004), "Review of the Scientific Evidence for Limiting Exposure to Electromagnetic Fields (0 – 300 GHz)," Documents of the NRPB, Vol. 15, No. 3, NRPB, Chilton, Didcot, Oxfordshire, U.K., http://www.hpa.gov.uk/radiation/publications/documents_of_nrp/abstracts/absd15-3.html | ²World Health Organization (2004), Electromagnetic Fields (EMF), Summary of health effects, http://www.who.int/peh-emf/about/whatisEMF/en/index.html | ³Health Council of the Netherlands (2004), Electromagnetic Fields Committee. Mobile Phones and Children: Is Precaution Warranted? Bioelectromagnetics 25:142-144. ⁴2005 ¹U.S. Department of Health and Human Services, Centers for Disease Prevention and Control (2005), CDC Fact Sheet: Frequently Asked Questions about Cell Phones and Your Health, http://www.cdc.gov/nceh/radiation/factsheets/cellphone_facts.pdf | ²German Research Centre Jülich, Programme Group Humans, Environment, Technology (MUT) (2005), http://www.fz-juelich.de/portal/index.php?index=721&jahr=2005&cmd=show&mid=288 | ³European Cancer Prevention Organization (2005), During annual symposium on Cell Phones and Cancer in Blankenberge, Belgium on November 4-5, 2005, a consensus statement was developed about the health effects of electromagnetic fields from cell phones, http://www.ecpo.org/2006 ⁴Swedish State Radiation Protection Authority (SSI) (2006), Recent Research on EMF and Health Risk, Fourth annual report from SSI's Independent Expert Group on Electromagnetic Fields http://www.ssi.se/ssi_rapporter/pdf/ssi_rapp_2007_4.pdf | ²Australian Communications and Media Authority (2006), Mobile Phones, Your Health and Regulation of Radiofrequency Electromagnetic Energy http://emr.acma.gov.au/mobile_phone_health.pdf | ³Health Canada (2006), It's Your Health, Safety and Safe Use of Mobile Phones, http://www.hc-sc.gc.ca/vih-vsiv/prod/cell_e.html ⁴2007 ¹New Zealand Ministry of Health, National Radiation Laboratory (2007), Safety of Cell Phones, http://www.nzml.govt.nz/faq/cellphonesandcellsites.asp | ²Hong Kong, Office of the Telecommunications Authority (2007), "Know More about Radiofrequency Electromagnetic Radiation", http://www.ofta.gov.hk/en/freq-spec/radiation.pdf | ³Ireland Expert Group on Health Effects of Electromagnetic Fields (2007), http://www.dcmn.gov.ie/NR/rdonlyres/9E29937F-1A27-4A16-ABC3-F403A623300C/0/ElectromagneticReport.pdf | ⁴Paolo Vecchia, Chairman, ICNIRP, Scientific Rationale of ICNIRP Guidelines, Abstract, WHO/ICNIRP/EMF-NET Joint Workshop on Current Trends in Health and Safety Risk Assessment of Work-Related Exposure to EMFs, Milan, Italy, February 14-16, 2007, http://www.icnirp.de/joint/VecchiaAbstract.pdf ⁵2008 ¹International Agency for Research on Cancer (World Cancer Report 2008), http://www.iarc.fr/en/Publications/PDFs-online/World-Cancer-Report | ²United States Food and Drug Administration (October 2008), http://www.fda.gov/cdrh/wireless/index.html | ³Canadian National Collaborating Centre for Environmental Health (September 2008), http://www.nceeh.ca | ⁴Swedish Radiation Safety Authority (SSI) (April 2008), http://www.stralsakerhetsmyndigheten.se ⁵2009 ¹SCENHIR Opinion (February 2009), http://ec.europa.eu/health/ph_risk/committees/04_scenhir/docs/scenhir_o_022.pdf