Statements from Governments and Expert Panels Concerning Health Effects and Safe Exposure Levels of Radiofrequency Energy (2000-2007)

1. U.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

  - *"The balance of evidence to date suggests that exposures to RF radiation below NRPB and ICNIRP guidelines do not cause adverse health effects to the general population..." (p. 3).*

2. World Health Organization (2000)

- Fact Sheet N193

  http://www.who.int/docstore/peh-emf/publications/facts_press/efact/efs193.html

  - *"Cancer: Current scientific evidence indicates that exposure to RF fields, such as those emitted by mobile phones and their base stations, is unlikely to induce or promote cancers."*
  - *"Other health risks: Scientists have reported other effects of using mobile phones including changes in brain activity, reaction times, and sleep patterns. These effects are small and 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 causes any adverse health consequence."*

3. Ministry 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

  - *"Research into the effects of radio waves on the human body has been conducted for more than 50 years in countries around the world, including Japan. Based on voluminous findings from those studies, exposure guidelines including the Japanese guideline of the 'Radio Radiation Protection Guidelines for Human Exposure to Electromagnetic Fields' has been developed with a safety margin enough to protect human health from adverse effects of radio waves." (summary point 1, p. 3)*

4. Singapore Health Sciences Authority (2002)

- Pulse@HSA (Health Sciences Authority), Frequently Asked Questions about EME & Mobile Phones http://www.hsa.gov.sg/docs/fullversion.pdf

  - *"Up to the present time, all international and national committees that have evaluated this whole body of evidence have reached the same conclusions: that there are no established health effects from EMF exposures below the international guidelines limits." (p. 12)*

5. Australian 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.arpansa.gov.au/pubs/eme_comitee/fact1.pdf

  - *"The weight of national and international scientific opinion is that there is no substantiated evidence that exposure to low level RF EME causes adverse health effects."*

6. French Environmental Health and Safety Agency (AFSSE) (2003)

- AFSSE Statement on Mobile Phones and Health http://afsse.fr/upload/bibliotheque/994597576240248663335826568793/statement_mobile_phones_2003.pdf

  - *"With regard to the risk of cancer, we can accept that with the levels of power used in mobile telephony, radiation does not have an effect on our cells' genes (**it is not 'genotoxic'**). Work carried out on animals using long-term exposure does not indicate a risk of cancer; it shows neither an actual 'initiator' effect nor a promoter' effect for cancers caused by carcinogenic agents." (p.4)*
  - *"At present, the scientific data available **does not indicate that children are particularly susceptible** to radiation caused by telephones **nor do they have a higher exposure** in comparison to adults." (p. 5)*

7. U.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#31

  - "*What about children using mobile phones?*
    The scientific evidence does not show a danger to users of wireless phones, including children and teenagers."

8. U.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.org.uk/radiation/publications/documents_of_nrpb/abstracts/absd15-3.htm

  - "*Overall, AGNIR concluded that, in aggregate, the research published since the IEGMP[2] report does not give cause for concern and that the weight of evidence now available does not suggest that there are adverse health effects from exposures to RF fields below guideline levels*" (p. 8).

[2]IEGMP: U.K. Independent Expert Group on Mobile Phones (see first item on page 1)

9. World Health Organization (2004)

- Electromagnetic Fields (EMF). Summary of health effects http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html

  - *"Conclusions from scientific research*
    In the area of biological effects and medical applications of non-ionizing radiation approximately 25,000 articles have been published over the past 30 years. Despite the feeling of some people that

more research needs to be done, scientific knowledge in this area is now more extensive than for most chemicals. Based on a recent in-depth review of the scientific literature, the WHO concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields. However, some gaps in knowledge about biological effects exist and need further research."

10. Health Council of the Netherlands (2004)

- Electromagnetic Fields Committee. Mobile Phones and Children: Is Precaution Warranted? Bioelectromagnetics 25:142-144.

- "*The Health Council therefore sees no reason to recommend limiting the use of mobile phones by children*." (p. 142)

11. U.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

- *"In the last 10 years, hundreds of new research studies have been done to more directly study possible effects of cell phone use. Although some studies have raised concerns, the scientific research, when taken together, does not indicate a significant association between cell phone use and health effects."* (p. 1)

12. German Research Centre Jülich, Programme Group Humans, Environment, Technology (MUT) (2005)

- This program brought together 25 leading experts from Germany and Switzerland in a risk dialogue to assess the results of recent scientific studies on mobile phones and base stations http://www.fz-juelich.de/portal/index.php?index=721&jahr=2005&cmd=show&mid=288

- Dr. Peter Wiedemann, head of the Jülich MUT Programme Group, concluded that *"The scientific studies examined in the risk dialogue do not support suspicions that mobile telephony has harmful effects on health."*

13. Swedish 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*

- Mobile phone: *"Recently published studies on mobile phone use and cancer risk do not change the earlier overall assessment of the available evidence from epidemiological studies. In particular an extended follow up of a cohort study from Denmark does not alter the conclusions. Currently available evidence suggests that 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. The same conclusion holds for short-term use and acoustic neuroma. However, for long-term use and acoustic neuroma there is a concern, and more information is required."* (p. 5)
- Base station: *"The overall conclusion is that exposure from transmitters is unlikely to be a health risk."* (p. 36)

14. Australian Communications and Media Authority (2006)

- Mobile Phones, Your Health and Regulation of Radiofrequency Electromagnetic Energy *http://emr.acma.gov.au/mobile_phone_health.pdf*

  - *Mobile phone: "The weight of national and international scientific opinion is that there is no substantiated evidence that using a mobile phone causes harmful health effects. Although there have been studies reporting biological effects at low levels, there has been no indication that such effects might constitute a human health hazard, even with long-term exposure...The general consensus of scientific opinion is that, provided mobile phones do not exceed the limits of recognised standards, there will be no harmful effects."* (p. 8)
  - *Base station: "The weight of national and international expert opinion is that there is no substantiated evidence that there are adverse health effects resulting from the emissions of mobile phone towers or base stations."* (p. 9)

15. Health Canada (2006)

- It's Your Health, Safety and Safe Use of Mobile Phones http://www.hc-sc.gc.ca/iyh-vsv/prod/cell_e.html

  - *"There is no firm evidence to date that RF emissions from cell phones cause ill health."*

16. U.S. Federal Communications Commission (2006)

- Mobile Phones and Health Concerns http://ftp.fcc.gov/cgb/consumerfacts/mobilephone.html

  - *"There is no scientific evidence that proves that wireless phone usage can lead to cancer or a variety of other problems, including headaches, dizziness or memory loss."*

17. European 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/

  - The consensus statement includes the conclusion that *"The European Cancer Prevention Organization states that, in 2005 there is insufficient contemporary proof with regard to increased cancer risk to change mobile phoning habits."*

18. UK Institution of Engineering and Technology, Biological Effects Policy Advisory Group on Low-level Electromagnetic Fields (2006)

- The Possible Harmful Biological Effects of Low-Level Electromagnetic Fields of Frequencies up to 300 GHz http://www.theiet.org/publicaffairs/bepag/postat02final.pdf

  - "…the balance of scientific evidence to date does not indicate that harmful effects occur in humans due to low-level exposure to electromagnetic fields ("EMF")." (p. 1)

19. New Zealand Ministry of Health, National Radiation Laboratory (2007)

- Safety of Cell Phones http://www.nrl.moh.govt.nz/faq/cellphonesandcellsites.asp

- *"The balance of current research evidence suggests that exposures to the radiofrequency energy produced by cellphones do not cause health problems provided they comply with international guidelines. Reviews of all the research have not found clear, consistent evidence of any adverse effects."*

20. Hong Kong, Office of the Telecommunications Authority (2007)

- "Know More about Radiofrequency Electromagnetic Radiation" http://www.ofta.gov.hk/en/freq-spec/radiation.pdf

- *"Is it safe to use held-held mobile phones?"*

"Many studies have concluded that there is no evidence that mobile phones bring hazards to health when used under normal operating conditions."

- *"Is it safe to live close to radiofrequency transmitters?"*

"Operators of radio stations are required to ensure that the levels of electromagnetic radiation of their radio transmitters including those on rooftops in residential areas are within the limits stipulated in the Code of Practice. Despite densely-packed transmitters on some rooftops in residential areas, therefore, the buildings are absolutely safe to live in."

21. Health Council of the Netherlands (*2007)*

- *"UMTS[3] and DECT[4] are systems for mobile communication. Some people wonder whether exposure to the radio waves of UMTS antennae or DECT base stations and handsets used at home may cause health problems. Recent research does not give any indications for this, however. This is the message of the Health Council of the Netherlands in its fourth Annual Update on Electromagnetic Fields…"*
  http://www.healthcouncil.nl/pdf/Press%20release%20200706%20site.pdf

[3]UMTS: Universal Mobile Telecommunications System (UMTS) is one of the third-generation (3G) mobile phone technologies

[4]CT: Digital Enhanced Cordless Telecommunication is a European Telecommunications Standard Institute standard for digital cordless phones

22. Ireland Expert Group on Health Effects of Electromagnetic Fields (2007)
http://www.dcmnr.gov.ie/NR/rdonlyres/9E29937F-1A27-4A16-A8C3-F403A623300C/0/ElectromagneticReport.pdf

- *"So far no adverse short or long-term health effects have been found from exposure to the RF signals produced by mobile phones and base station transmitters."* (p. 3)
- *"There are no data available to suggest that the use of mobile phones by children is a health hazard."* (p. 3)
- *"The ICNIRP guidelines provides adequate protection for the public from any EMF sources."* (p. 4)

23. International Commission on Non-ionizing Radiation Protection (ICNIRP) (2007)

- *"It is however the opinion of ICNIRP that present guidelines provide adequate protection against any adverse effect established so far."* Paolo 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)

24. European Commission Scientific Committee on Emerging and Newly Identified Health Risks

- Possible Effects of Electromagnetic Fields (EMF) on Human Health (2007) http://ec.europa.eu/health/ph_risk/committees/04_scenihr/docs/scenihr_o_007.pdf

- *"RF field exposure has not convincingly been shown to have an effect on self-reported symptoms or well-being."* (p.6)
- *"In conclusion, no health effect has been consistently demonstrated at exposure levels below the limits of ICNIRP (International Commission on Non Ionising Radiation Protection) established in 1998."* (p. 6)

25. World Health Organization (2007)

- *"Despite extensive research, to date there is no evidence to conclude that exposure to low level electromagnetic fields is harmful to human health."* (Key Point #6) *http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html*
- *"To date, all expert reviews on the health effects of exposure to RF fields have reached the same conclusion: There have been no adverse health consequences established from exposure to RF fields at levels below the international guidelines on exposure limits published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP, 1998)."* Children and Mobile Phones: Clarification statement (second paragraph) http://www.who.int/peh-emf/meetings/ottawa_june05/en/index4.html
  - Fact Sheet #304: Electromagnetic fields and public health: Base stations and wireless technologies http://www.who.int/mediacentre/factsheets/fs304/en/index.html
- "Conclusions: *Considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak RF signals from base stations and wireless networks cause adverse health effects."*