

Statements von Expertengruppen und unabhängigen Organisationen zu gesundheitlichen Effekten durch Hochfrequenz-Felder

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1. Weltweite Organisationen

1.1 World Health Organization (WHO)

Publikationsjahr: 1993
Titel: Environmental Health Criteria 137
Electromagnetic Fields (300 Hz to 300 GHz)

“There is evidence from a number of studies that weak-field interactions exist. Different mechanisms for such interactions have been postulated, but the precise mechanism(s) has not been elucidated. An occupational RF guideline of 0.4 W/kg SAR leaves a margin of protection against complications due to thermally unfavourable environmental conditions.

Pulsed fields: It has been shown, under a number of conditions, that the thresholds for biological effects at frequencies above several hundred MHz are decreased when the energy is delivered in short (1-10 μ s) pulses. A safe limit for such pulses cannot be identified on the basis of available evidence.

It is not possible to conclude that RF exposure has any effect on the incidence of cancer in humans.”

1.2 World Health Organization (WHO)

Publikationsjahr: 2000
Titel: Fact Sheet:
Electromagnetic fields and public health: mobile telephones and their base stations

“All established health effects of RF exposure are clearly related to heating. While RF energy can interact with body tissues at levels too low to cause any significant heating, no study has shown adverse health effects at exposure levels below international guideline limits.

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.”

<http://www.who.int/mediacentre/factsheets/fs193/en/>

1.3 World Health Organization (WHO)

Publikationsjahr: 2000
Titel: Elektromagnetische Felder und öffentliche Gesundheit
Mobiltelefone und ihre Basisstationen
Fact Sheet Nr. 193

„Keine der jüngst durchgeführten Überprüfungen des wissenschaftlichen Erkenntnisstandes ergab, dass Hochfrequenzexpositionen durch Mobiltelefone oder ihre Basisstationen zu schädlichen Auswirkungen auf die Gesundheit geführt haben. Jedoch wurde festgestellt, dass Wissenslücken bestehen, die durch weitere Untersuchungen geschlossen werden müssen.“

http://www.who.int/docstore/peh-emf/publications/facts_press/gfact/gfs193.htm

1.4 World Health Organization (WHO)

Publikationsjahr: 2005
Titel: Expert Group and Independent Authority Reports Related to Radiofrequency (RF) Safety

„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). The ICNIRP guidelines were developed to limit human exposure to EMF under conditions of maximum absorption of the fields, which rarely occurs, and the limits incorporate large safety factors to protect workers and even larger safety factors to protect the general public, including children. Thus, the limits in the ICNIRP guidelines are highly protective and are based on all the available scientific evidence.“

<http://www.gsmworld.com/using/health/reports.shtml>

1.5 World Health Organization (WHO), Joe Elder, USA

Publikationsjahr: 2005
Titel: Review of 30 Studies Investigating Cancer in Laboratory Animals Exposed to Radiofrequency Energy

„None of the recent reviews have concluded that exposure to the RF fields from mobile phones or their base stations causes any adverse health consequences.“

<http://www.ecpo.org/activities.htm>

1.6 International Commission on Non-Ionizing Radiation Protection (ICNIRP)

Publikationsjahr: 1996
Titel: Health Issues Related to the Use of Hand-Held Radiotelephones and Base Transmitters

„Although most data do not relate specifically to hand-held radiotelephonhe use, they do not provide information relevant to a health risk assessment... Most of the established biological effects of exposure to RF are consistent with responses to induced heating, resulting in rises in tissue or body temperature. ... The results of published epidemiological studies do not form a basis for health hazard assessments of exposure to RF fields, and neither can they be used for setting a quantitative restriction on human exposure.“

<http://www.icnirp.de/documents/radiotelephones.pdf>

1.7 International Commission for Non-Ionizing Radiation Protection (ICNIRP), Standing Committee on Epidemiology: Anders Ahlbom, Adele Green, Leeka Kheifets, David Savitz, Anthony Swerdlow

Publikationsjahr: 2004

Titel: Epidemiology of Health Effects of Radiofrequency Exposure,
Review of the Epidemiologic Literature on RF and Health

„Review of epidemiologic studies about the effects of radiofrequency fields on human health in order to summarize the current state of knowledge: Results of these studies to date give no consistent or convincing evidence of a causal relation between RF exposure and any adverse health effect. On the other hand, the studies have too many deficiencies to rule out an association. A key concern across all studies is the quality of assessment of RF exposure. Despite the ubiquity of new technologies using RFs, little is known about population exposure from RF sources and even less about the relative importance of different sources. Other cautions are that mobile phone studies to date have been able to address only relatively short lag periods, that almost no data are available on the consequences of childhood exposure, and that published data largely concentrate on a small number of outcomes, especially brain tumor and leukemia.”

<http://www.icnirp.de/documents/epiRFreviewPublishedinEHPDec04.pdf>

2. Europäische Organisationen

2.1 EMF-NET, European Fast Response Team on EMF and Health

Publikationsjahr: 2005

Titel: MOBILE PHONES AND HEALTH 2004 REPORT BY THE BOARD OF NRPB EFRT
COMMENTS ON THE ISSUES ON CHILDREN

„Recommendation for a precautionary approach to the use of mobile phone technologies in general, and not just for children. Additional knowledge was elaborated, which did not justify further alarming, although enough evidence for weakening precaution was not gathered either.”

<http://www.jrc.cec.eu.int/emf-net/doc/EFRTDocuments/EMF-NET EFRT Report of NRPB 2004 and children.pdf>

2.2 EMF-NET, European Fast Response Team on EMF and Health

Publikationsjahr: 2005

Titel: Comments on health and safety of mobile communication equipment and
monitoring regulatory policy and development

„To date, there is little scientific evidence of risks to health due to radiofrequency and microwave exposure when the exposure levels are below ICNIRP guidelines.”

<http://www.jrc.cec.eu.int/emf-net/doc/EFRTDocuments/EMF-NET EFRT Mobile handsets 11NOV2005 WS.pdf>

2.3 EUROPEAN COMMISSION DIRECTORATE-GENERAL HEALTH AND CONSUMER PROTECTION, Scientific Committee on Toxicity, Ecotoxicity and the Environment (CSTEE)

Publikationsjahr: 2001

Titel: Possible effects of Electromagnetic Fields (EMF), Radio Frequency Fields (RF) and Microwave Radiation on human health

„The additional information which has become available on carcinogenic and other nonthermal effects of radiofrequency and microwave radiation frequencies in the last years does not justify a revision of exposure limits set by the Commission on the basis of the conclusions of the 1998 opinion of the Steering Scientific Committee.”

http://europa.eu.int/comm/food/fs/sc/sct/out128_en.pdf

2.4 European Commission Joint Research Centre European Environment Agency

Publikationsjahr: 2005

Titel: Environment and health

EEA Report No 10/2005

„Experimental studies on animals nor epidemiological studies have come to any conclusive results. On the basis of current scientific knowledge it is not possible to answer 'yes' or 'no' to the question of whether the use of mobile phones poses an increased risk of cancer.”

http://reports.eea.europa.eu/eea_report_2005_10/en/EEA_report_10_2005.pdf

2.5 Rat der europäischen Gesundheitsminister

Publikationsjahr: 1999

Titel: EMPFEHLUNG DES RATES vom 12.Juli 1999 zur Begrenzung der Exposition der Bevölkerung gegenüber elektromagnetischen Feldern (0 Hz - 300 GHz), (1999/519/EG);
Amtsblatt der Europäischen Gemeinschaften L 199/59

„Grenzwertempfehlungen der ICNIRP als maßgeblich für die gesundheitliche Bewertung von EMF anerkannt und den Mitgliedsländern die Übernahme der Richtlinien in nationales Recht empfohlen“

3. Australia

3.1 Australian Mobile Telecommunications Association (AMTA); AMTA CEO Chris Althaus

Publikationsjahr: 2006

Titel: Mobile towers safe according to science

„On the basis of the most recent proven scientific evidence sourced from internationally renowned bodies such as the WHO there is no adverse health risks linked to using mobile phones or living or working near mobile phone base stations. There is no credible scientific evidence of health effects from living or working near a mobile phone base station.”

<http://www.amta.org.au/default.asp?Page=769>

3.2 Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), The Committee on Electromagnetic Energy Public Health Issues

Publikationsjahr: 2005
Titel: EME Series No. 1:
Electromagnetic energy and its effects

„It is now well established that exposure to sufficiently high levels of RF EME can heat biological tissue and potentially cause tissue damage. Damage results because the human body is unable to cope with the excessive heat generated by very high RF exposure.

Studies have shown that environmental levels of RF EME routinely encountered by the public, however, are far below the levels needed to produce significant heating and increased body temperature. Among other established health effects is electrostimulation of excitable tissue at lower frequencies (between 3 to 100 kHz). At low levels of exposure to RF EME (ie field intensities lower than those that would produce measurable heating), the evidence for production of harmful biological effects is ambiguous and unproven. Although there have been studies reporting a range of biological effects at low levels, there has been no indication that such effects might constitute a human health hazard, even with regard to long-term exposure.”

http://www.arpansa.gov.au/pubs/eme_comitee/fact1.pdf

3.3 Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), The Committee on Electromagnetic Energy Public Health Issues

Publikationsjahr: 2005
Titel: EME Series No.9 :
What about base stations and telecommunication towers – are there any health effects?

“There is no substantiated evidence that RF emissions associated with living near a mobile phone base station or telecommunications tower poses a health risk. In this context questions have been posed and research will be required to answer.”

http://www.arpansa.gov.au/pubs/eme_comitee/fact9.pdf

3.4 Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), The Committee on Electromagnetic Energy Public Health Issues

Publikationsjahr: 2006
Titel: EME Series No.11 :
Mobile phones and children

“At present, there is insufficient evidence in the science to substantiate the hypothesis that children maybe more vulnerable to RF EME emissions from mobile phones than adults.”

http://www.arpansa.gov.au/pubs/eme_comitee/fact11.pdf

3.5 Victorian government, RADIATION ADVISORY COMMITTEE

Publikationsjahr: 2005

Titel: THE ANNUAL REPORT OF THE RADIATION ADVISORY COMMITTEE FOR THE YEAR ENDING SEPTEMBER 2005

„There is no substantive evidence to suggest that exposure to radiofrequency radiation can increase the risk of chronic health effects such as cancer. However, the Committee acknowledges the current controversy over mobile phones and base stations and will continue to review the relevant research literature.

<http://www.health.vic.gov.au/environment/downloads/ar05.pdf>

4. Austria

4.1 Austrian Research Centers Seibersdorf, Wissenschaftlicher Beirat Funk, Norbert Vana, Christian Wolf, Alfred Barth, Gerhard Lechner, Heinz Ludwig, Georg Neubauer, Cornelia Sauter, Josef Zeitlhofer

Publikationsjahr: 2004

Titel: Bericht über die Konsensus-Konferenz 2004 'Mobilfunk und Gesundheit':
Nach derzeitigem Stand der Wissenschaft kein Nachweis für eine Gefährdung der Gesundheit durch Mobilfunk

„Problem in der öffentlichen Diskussion, dass viele Studien keineswegs wissenschaftlichen Standards entsprechen. Es gilt zwischen (Aus)wirkungen des Mobilfunks auf den menschlichen Organismus und gesundheitsbeeinträchtigenden oder -schädigenden Einflüssen zu unterscheiden. Nach derzeitigem Stand der Wissenschaft gibt es keinen Nachweis für eine Gefährdung der Gesundheit durch elektromagnetische Felder des Mobilfunks unterhalb der von der WHO/ICNIRP empfohlenen Grenzwerte. Die von den Handymasten ausgehende Exposition ist um den Faktor 1.000 bis 10.000 geringer als beim Telefonieren selbst.

Hirnstromaktivität (EEG): Die bisherigen Untersuchungen – auch wenn sie teilweise geringe Veränderungen beschreiben – lassen keinen Schluss auf eine gesundheitsschädigende Wirkung zu.

Schlaf: Geringe Veränderungen einzelner Parameter, jedoch keine, die eine Störung der Schlafqualität oder ein Gesundheitsrisiko darstellen.

Tumor: Derzeit kein eindeutiger Zusammenhang zwischen Mobilfunk und erhöhter Tumorfrequenz zu erkennen. Endgültige Beurteilung erst nach Vorliegen der Ergebnisse laufender Studien möglich.
Befindlichkeit: Derzeit keine nachweisbare Kausalität.

http://www.wbf.or.at/uploads/docs/041104_WBF_PK-Medienunterlage.pdf

4.2 Das Bundesministerium für Gesundheit und Frauen (BMGF)

Publikationsjahr: 2006

Titel: Wie gefährlich sind Handystrahlen wirklich?

„Nach den vorliegenden Ergebnissen ist eine Gesundheitsschädigung durch Handys derzeit nicht beweisbar.“

<http://www.bmgf.gv.at/cms/site/detail.htm?thema=CH0118&doc=CMS1135774544808>

4.3 Zentrum für Public Health der Medizinischen Universität Wien, Michael Kundi

Publikationsjahr: 2005

Titel: Gesundheitliche Auswirkungen der Handy-Nutzung,
Eine Übersicht über die vorliegende Evidenz zur Frage der Kanzerogenität, der
Fertilität und der Auswirkungen auf den kindlichen Organismus

„Krebs: Weder die vorliegenden epidemiologischen Studien noch die experimentellen Befunde lassen derzeit die Aussage zu, dass von Mobiltelefonen kein Risiko ausgeht. Andererseits ist aber auch trotz der vorhandenen und sich gegenseitig stützenden Befunde aus epidemiologischen, tierexperimentellen und in vitro Untersuchungen über einen Zusammenhang zwischen Mobiltelefonnutzung und Krebs das Risiko nicht abschließend beurteilbar. Es gibt jedoch Hinweise auf einen solchen Zusammenhang.

Fertilität: Die vorliegenden Untersuchungen an Menschen und Versuchstieren zeigen Hinweise auf eine Beeinflussung der Spermien und der Spermatogenese durch Mobilfunkexposition, die allerdings aufgrund methodischer Mängel für eine Risikobeurteilung nicht ausreichen.

Kinder: Keine empirischen Befunde, eine evidenzbasierte Aussage zum Risiko für Kinder kann daher nicht getroffen werden.

http://www.bmgf.gv.at/cms/site/attachments/8/9/2/CH0118/CMS1135774544808/osr_wisshintergrund_kundi.pdf

5. Canada

5.1 Health Canada

Publikationsjahr: 2005

Titel: Safety and Safe Use of Cellular Phones

„So far, there is currently no convincing evidence, from animal or human studies, that the energy from cell phones is enough to cause serious health effects, such as cancer, epileptic seizures or sleep disorders. Some scientists have reported that cell phone use may cause changes in brain activity, reaction times, or the time it takes to fall asleep. But these findings have not yet been confirmed.

http://www.hc-sc.gc.ca/iyh-vsv/prod/cell_e.html

5.2 The Royal Society of Canada (RSC),

Expert Panel:

**Craig V. Byus; Barry W. Glickman; Daniel Krewski; W. Gregory Lotz;
Rosemonde Mandeville; Mary L. McBride; Frank S. Prato; Donald F. Weaver**

Publikationsjahr: 1999

Titel: A Review of the Potential Health Risks of Radiofrequency Fields from Wireless
Telecommunication Devices

„Scientific studies performed to date suggest that exposure to low intensity non-thermal RF fields do not impair the health of humans or animals. However, the existing scientific evidence is incomplete, and inadequate to rule out the possibility that these non-thermal biological effects could lead to adverse health effects.”

http://www.rsc.ca/files/publications/expert_panels/RF//RFreport-en.pdf

5.3 The Royal Society of Canada (RSC), Expert Panel:

Publikationsjahr: 2004
Titel: Report on the Potential Health Risks of Radiofrequency Fields from Wireless
Telecommunication Devices, 1999
And Update

„All of the authoritative reviews completed within the last two years have concluded that there is no clear evidence of adverse health effects associated with RF fields from mobile phones. At the same time, these same reviews support the need for further research to clarify the possible associations between RF fields and adverse health outcomes that have appeared in some reports.”

http://www.rsc.ca/files/publications/expert_panels/RF//expert_panel_radiofrequency_update2.pdf

6. France

6.1 Agence française de sécurité sanitaire environnementale (AFSSE)

Publikationsjahr: 2005
Titel: Summary on Mobile Phones and Health

“The AFSSE observes that no new scientific data published since the previous expert review reveal a health risk relating to radiation from mobile phones base stations.”

http://www.afsse.fr/documents/Afsse_opinion_on_mobile_telephony.pdf

6.2 Direction Generale de la Sante

Publikationsjahr: 2001
Titel: Téléphonie mobile (Champs électromagnétiques - radiofréquences)
3. Rapports scientifiques
Rapport Zmirou (2001)

“Scientific data indicate, with relative certainty, that, during exposure to RF from a mobile phone, a variety of biological effects occur (eg. electroencephalogram profile, reaction time, etc.) at energy levels that do not cause any local increase in temperature. However, in the current state of knowledge of these non-thermal effects, it is not yet possible to determine whether they represent a health hazard. Although this assertion is backed up by little scientific argument, the hypothesis that certain medical effects are caused by the low-level RF fields associated with mobile telephones cannot be completely excluded, in the current state of knowledge. However, in view of the exposure levels observed, the group of experts does not back the hypothesis that there is a health risk for populations living in the vicinity of base stations.”

<http://www.sante.gouv.fr/htm/dossiers/>

6.3 Direction Generale de la Sante

Publikationsjahr: 2005
Titel: Téléphones mobiles, leurs stations de base et la santé
janvier 2001 (actualisation septembre 2005)

“Il existe un seuil à partir duquel les champs électromagnétiques peuvent avoir un effet sur la santé humaine. C'est un effet thermique (effet micro ondes) qui est immédiat et qui peut engendrer de graves brûlures. Cet effet, qui est le seul effet sanitaire avéré, survient lors de l'exposition à des champs électromagnétiques très supérieurs aux valeurs limites d'exposition fixées par le décret n°2002-775 du 3 mai 2002. Les champs électromagnétiques émis par les téléphones mobiles et leurs antennes relais ne permettent pas d'observer de tels effets. Il convient de bien différencier les

expositions dues aux antennes relais, des expositions dues aux téléphones mobiles. En effet, selon le cas, les niveaux d'exposition aux ondes électromagnétiques sont très différents. l'hypothèse d'un risque pour la santé des populations vivant à proximité de ces stations ne pouvait être retenue. Bien qu'aucune preuve scientifique ne permette de démontrer que l'utilisation des téléphones mobiles présente un risque pour la santé, cette hypothèse ne peut définitivement être exclue.»

<http://www.sante.gouv.fr/htm/dossiers/>

7. Germany

7.1 Deutsche Strahlenschutzkommission (SSK)

Publikationsjahr: 2001

Titel: Grenzwerte und Vorsorgemaßnahmen zum Schutz der Bevölkerung vor elektromagnetischen Feldern

“Die Bewertung der neueren wissenschaftlichen Literatur hat gezeigt, dass keine neuen Nachweise vorliegen, die das Schutzkonzept der ICNIRP bzw. der EU-Ratsempfehlung von 1999 und damit die bestehenden Grenzwerte in Frage stellen. Das Schutzkonzept ist geeignet und flexibel genug, um vor den im Alltag vorkommenden Expositionen zu schützen. Auch unter Berücksichtigung des Umfangs und des Ausmaßes der Verdachtsmomente lässt sich ein über die bisher bekannten gesundheitlichen Beeinträchtigungen zusätzliches Risiko nicht angeben.“

<http://www.ssk.de/werke/kurzinfo/2001/ssk0103.htm>

7.2 Deutsche Strahlenschutzkommission (SSK)

Publikationsjahr: 2004

Titel: Neue Technologien - Schutz der Bevölkerung vor elektromagnetischen Feldern
Zusammenfassung und Bewertung der Klausurtagung 2003 der
Strahlenschutzkommission
Band 54 der Reihe „Veröffentlichungen der Strahlenschutzkommission“

“Auch wenn die Emissionen einzelner Quellen gering sind, könnte deren Anhäufung besonders in reflektierenden Innenräumen nicht mehr vernachlässigbar sein. Dabei können zunehmend außer dem Kopf auch andere Körperregionen gegenüber elektromagnetischen Feldern lokal exponiert sein. Aus der Analyse der neuen Technologien ergibt sich, dass nicht nur die Frequenzen, sondern auch die Exposition gegenüber elektromagnetischen Feldern als ein nur begrenzt verfügbares Gut angesehen werden müssen.“

<http://www.ssk.de/werke/kurzinfo/2004/ssk0402.htm>

7.3 Deutscher Umweltrat

Publikationsjahr: 2002

Titel: Umweltgutachten 2002, Bundestagsdrucksache 14/8792, Seite 39

“Die Ergebnisse bisheriger wissenschaftlicher Untersuchungen deuten nicht auf einen begründeten Verdacht für ein Gesundheitsrisiko hin. So geben die im Umkreis von Mobilfunk-Sendeanlagen durchgeführten und bislang veröffentlichten Studien keine Hinweise auf relevante gesundheitliche Risiken.“

7.4 Research Center Jülich

PROGRAMMGRUPPE MENSCH, UMWELT, TECHNIK (MUT):

Gminski, Schlatterer, Fitzner, Simkó; Dasenbrock, Lerchl; Blettner, Jöckel, Stang;

Achermann, Regel; Ullsperger; Seitz, Stinner, Eikmann; Röösl; Hossmann, Stögbauer

Publikationsjahr: 2005

Titel: Risk evaluation of the health effects of mobile phone communication.
Results of a scientific dialogue

“The present research studies provide no indication that high-frequency electromagnetic fields of mobile phone communication cause cancer in animal experiments or promote cancer growth. The studies of the blood-brain-barrier also find no indications of effects from electromagnetic fields by mobile phone communication. Furthermore, the experts concluded that the experimentally determined effects of mobile phone communication on the central nervous system do not pose a recognizable health disadvantage. The same applies to the indications of genetic damage. Since this does not result in damage to the cells, it does not support the derivation of a health endangerment, according to the opinion of the experts. For most impairments of well-being - the exception being headaches - the experts view the weight-of-evidence as so weak, that an evaluation is hardly feasible. However, from the perspective of the experts, the few existing research findings don't indicate a link to exposure with HF EMF. Admittedly, the experts see an indication of a link between headaches and mobile phone usage. However, it remains uncertain whether this proves a relationship between electromagnetic fields and headache, or whether the cause could simply be telephone stress. The issue of a special sensitivity (electromagnetic hypersensitivity) of certain persons to the EMF of mobile phone communication could not be conclusively clarified. Altogether, in light of the six topic areas investigated, support for the hypothesis that EMF of mobile phone communication exhibits unhealthy effects was not strengthened.”

http://www.emf-risiko.de/projekte/ergeb_bewlit_e.html

8. Italia

8.1 International School of Bioelectromagnetics “Alessandro Chiabrera”, Director of the school: F. Bersani (University of Bologna,I) Second Course (Scarfi, Vijayalaxmi)

Publikationsjahr: 2005

Titel: Electromagnetic Fields and Genotoxicity,
Short report on the state of art of the genotoxic effects of EMFs,
conclusions of the report committee

“No definite conclusions can be drawn from the scientific findings concerning the potential of EMFs to induce genotoxicity. The current “positive” findings require an extended confirmation.”

<http://www.ebea.org/journal.htm>

9. Netherlands

9.1 Health Council of the Netherlands

Publikationsjahr: 2000

Titel: GSM base stations. The Hague: Health Council of the Netherlands, Juni 2000;
publication no. 2000/16E., ISBN: 90-5549-331-7

“The chance of health problems occurring among people living and working below base stations as a result of exposure to electromagnetic fields originating from the antennas is, in the Committee's opinion, negligible.”

9.2 Health Council of the Netherlands, Gezondheidsraad

Publikationsjahr: 2002
Titel: Mobile telephones,
An evaluation of health effects

“The Committee finds no reason in the scientific data concerning non-thermal effects presented to apply the precautionary principle and lower the SAR limits for partial body exposure.”

<http://www.gr.nl/pdf.php?ID=377>

9.3 Health Council of the Netherlands, Gezondheidsraad

Publikationsjahr: 2004
Titel: Electromagnetic Fields:
Annual Update 2003

“De commissie concludeert dat er geen overtuigende aanwijzingen zijn dat bij proefdieren de incidentie van lymfomen en andere typen tumoren wordt beïnvloed door een levenslange vrijwel dagelijkse blootstelling aan elektromagnetische velden zoals gebruikt in mobiele telecommunicatie. Klachten van uiteenlopende aard die door sommigen aan blootstelling aan elektromagnetische velden worden toegeschreven, kunnen op grond van onderzoek niet oorzakelijk met een dergelijke blootstelling in verband gebracht worden.”

<http://www.gezondheidsraad.nl/pdf.php?ID=886&p=1>

9.4 Health Council of the Netherlands, The Electric Fields Committee

Publikationsjahr: 2004
Titel: Mobile phones and children: Is precaution warranted?

“No major changes in head development occur after the second year of life that might point at a difference in electromagnetic susceptibility between children and adults.”

<http://www3.interscience.wiley.com/cgi-bin/abstract/107061133/ABSTRACT?CRETRY=1&SRETRY=0>

9.5 Health Council of the Netherlands

Publikationsjahr: 2005
Titel: Update 2005 on Electromagnetic Fields

“There are no scientific grounds at present for supposing that physical complaints can be directly caused by exposure to EM fields.”

<http://72.14.221.104/search?q=cache:3JAnRZwLSIEJ:www.mmfai.org/public/docs/eng/Research%2520Update%2520Feb06.pdf+research+emf+%22mobile+phone%22+2006&hl=de&ct=clnk&cd=8>

10. New Zealand

10.1 Interagency Advisory Committee on the Health Effects of Electromagnetic Fields, Interagency Committee on the Health Effects of Non-Ionising Fields

Publikationsjahr: 2004

Titel: Report to Ministers

„No new research has been reported which would cause it to change the previous advice to Ministers, and the Committee continues to endorse the application in New Zealand of exposure guidelines published by the International Commission on Non-Ionizing Radiation Protection.”

<http://www.nrl.moh.govt.nz/ELF-RFReporttoMinisters.pdf>

11. Scandinavia

11.1 Norwegische Strahlenschutzbehörde

Publikationsjahr: 2003

Titel: Mobiltelefon og helse

„Studies of the population in recent years do not suggest that there is any link between the use of mobile phones or human proximity to base stations and health risks.
(Inoffizielle Übersetzung des MMF)“

http://www.nrpa.no/fpinternet/Tema/Mobiltelefon_helse_010503.pdf

11.2 Danish National Board of Health (Sundhedsstyrelsen); Radiation and Nuclear Safety Authority of Finland (STUK) (Säteilyturvakeskus); Icelandic Radiation Protection Institute (Geislavarnir Ríkisins); Norwegian Radiation Protection Authority (Statens strålevern); Swedish Radiation Protection Authority (Statens strålskyddsinstitut)

Publikationsjahr: 2004

Titel: Mobile Telephony and Health –
A common approach for the Nordic competent authorities

„There is no scientific evidence for any adverse health effects from mobile telecommunication systems, neither from the base stations nor from the handsets, below the basic restrictions and reference values recommended by the International Commission on Non-Ionizing Radiation Protection (ICNIRP). However, certain knowledge gaps exist that justifies more research in this field. It is important to note that biological effects do not necessarily imply health hazard.”

http://www.ssi.se/ickejoniserande_stralning/mobiltele/NordicMobilPress2004.pdf

11.3 Swedish Radiation Protection Authority (SSI) SSI's Independent Group on Electromagnetic Fields

Publikationsjahr: 2004
Titel: Recent Research on Mobile Telephony and Health Risks.
Second annual report from SSI's Independent Expert Group on Electromagnetic Fields.

„Symptoms: The number of studies available today is too small to allow conclusions as to whether such fields can cause various symptoms.

Cognitive functions/neurophysiology: Changes in cognitive functions have been reported but the results are inconsistent and no single clear effect on cognitive function can be identified.

EEG and sleep: The relevance of minor alterations on EEG and sleep on health is not significant.

Memory: While new data have not provided evidence that memory of rodents is affected by exposure to RF fields, the data are still inconclusive in humans but possible effects do not seem to be detrimental.

Combined effects with environmental carcinogens: Cocarcinogenic effects of RF fields are not likely. Exposure of children: It may be tempting to conclude that children are not more susceptible than adults to RF exposure. However, the absence of an observed effect does not necessarily mean that exposure is harmless, especially if crucial studies focusing on children are yet to be done.”

http://www.ssi.se/english/EMF_exp_Eng_2004.pdf

11.4 Statens strålskyddsinstitut (SSI); International independent expert group (IEG) for electromagnetic fields (EMF) and health: Anders Ahlbom; Jukka Juutilainen; Bernard Veyret; Harri Vainio; Leeka Kheifets; Anssi Auvinen; Richard Saunders

Publikationsjahr: 2005
Titel: Recent Research on EMF and Health Risks.
Third annual report from SSI's Independent Expert Group on Electromagnetic Fields.

“Evidence for some key issues: Possibility that some individuals are particularly sensitive and react with symptoms to exposure to EMF: While these symptoms are very real and some subjects suffer severely, there are hardly any data that suggest that EMF exposure is a causal factor. Exposure to the general population that results from transmitters: The overall conclusion is that exposure is unlikely to be a health risk. Cancer risk: Short-term use of mobile phones does not appear to be associated with cancer risks in adults. However, other outcomes have not been studied, no studies on children or adolescents have been done, and long-term use has not been fully evaluated. In particular for acoustic neuroma there is a concern about long-term mobile phone use.”

http://www.ssi.se/PdfUpload/SSI_EMF_2005.pdf

12. Switzerland

12.1 BUWAL Bundesamt für Umwelt, Wald und Landschaft

Publikationsjahr: 2003

Titel: Umweltmaterialien Nr. 162,
„Hochfrequente Strahlung und Gesundheit“

„Neue gesicherte gesundheitliche Effekte im Dosisbereich unterhalb der von der ICNIRP empfohlenen Grenzwerte und damit auch unterhalb der Immissionsgrenzwerte der NISV liegen nicht vor.“

<http://www.umwelt-schweiz.ch/buwal/shop/files/pdf/php1Rr5fL.pdf>

12.2 Schweizerische Eidgenossenschaft, BUWAL Bundesamt für Umwelt, Wald und Landschaft, Martin Rösli, Regula Rapp, Ursula Ackermann-Liebrich

Publikationsjahr: 2004

Titel: Hochfrequente Strahlung und Gesundheit

„At present, insufficient scientific data are available to enable the risk to public health of high frequency non-ionising radiation at low dose levels to be assessed.

Acoustic perception (microwave hearing) was consistently identified for pulsed radiation exceeding a given energy quantity per pulse. For radar installations, this phenomenon can also occur where the exposure limit values are not exceeded, but there is no indication of this for GSM radiation.

It is regarded as probable that exposure to mobile telephones lowers reaction times and leads to changes in the electric activity of the brain. The most consistent effect observed was an increase in amplitude of the electroencephalogram alpha-band. In several studies, sleep phases (as identified on the basis of brain activity) were found to alter under exposure to mobile telephones. The effects occurred at very low radiation intensities, and may not therefore be explained by the conventional thermal model. For frequent use of mobile telephones, an increase in unspecific symptoms (e.g. headaches, sensitivity to pain, discomfort, fatigue, dizziness and burning skin) was identified in several reports. If, and to what extent, factors other than radiation may have contributed to these symptoms could not be determined from the studies.

Where other effects of low-level high frequency radiation on health are concerned, the scientific basis is too limited to permit assessment.

Nachtrag A:

Es können keine neuen Wirkungen im Niedrigdosisbereich als gesichert gelten. Die wissenschaftliche Datenlage für die Beurteilung der Gesundheitsgefährdung der Bevölkerung durch hochfrequente nichtionisierende Strahlung im Niedrigdosisbereich ist immer noch sehr lückenhaft. Experimentelle Studien belegen unmittelbare Wirkungen der Hochfrequenzstrahlung, die nicht mit dem Erwärmungsansatz erklärt werden können. Langzeitstudien an Menschen in ihrer natürlichen Umgebung gibt es nur wenige. Die spärlichen Studien zu Gesundheitseffekten bei Menschen in der Nähe von Mobilfunkbasisstationen haben schwere methodische Mängel.

<http://www.umwelt-schweiz.ch/imperia/md/content/luft/nis/gesundheit/UM-162-D.pdf>

13. United Kingdom

13.1 Health Protection Agency, National Radiological Protection Board (NRPB), Advisory Group on Non-Ionising Radiation (AGNIR)

Publikationsjahr: 2001

Titel: Report on Possible Health Effects from Terrestrial Trunked Radio (TETRA)

„AGNIR has noted that the signals from base stations are not pulsed whereas those from hand portables and from terminals built into vehicles are. AGNIR has concluded that although areas of uncertainty remain about the biological effects of low-level RF radiation in general, including modulated signals, current evidence suggests that it is unlikely that the special features of signals from TETRA hand portables and terminals mounted in vehicles pose a hazard to health.”

http://www.hpa.org.uk/hpa/news/nrpb_archive/press_releases/2001/press_release_10_01.htm

13.2 Health Protection Agency, National Radiological Protection Board (NRPB), Advisory Group on Non-Ionising Radiation (AGNIR)

Publikationsjahr: 2003

Titel: Advice on Limiting Exposure to Electromagnetic Fields (0-300 GHz)

„In aggregate the research published since the IEGMP report does not give cause for concern. The weight of evidence now available does not suggest that there are adverse health effects from exposures to RF fields below guideline levels, but the published research on RF exposures and health has limitations, and mobile phones have only been in widespread use for a relatively short time.”

http://www.hpa.org.uk/radiation/publications/documents_of_nrpb/pdfs/doc_15_2.pdf

13.3 Health Protection Agency, National Radiological Protection Board (NRPB)

Publikationsjahr: 2004

Titel: Doc. NRPB 15(2) 2004, ISBN 0-85951-532-X

„The Board of NRPB has recommended the adoption in the UK of the guidelines of the International Commission on Non-Ionizing Radiation Protection (ICNIRP) for limiting exposure to electromagnetic fields (EMFs) between 0 and 300 GHz. This follows a thorough review of current scientific knowledge on the effects of EMFs and an extensive consultation exercise.”

http://www.hpa.org.uk/radiation/publications/documents_of_nrpb/pdfs/doc_15_2.pdf

13.4 Health Protection Agency, National Radiological Protection Board (NRPB)

Publikationsjahr: 2004
Titel: Doc. NRPB 15(5)
Mobile Phones and Health

„Since (the Stewart Report), the widespread developments in the use of mobile phones world-wide has not been accompanied by associated, clearly established increases in adverse health effects. Within the UK, there is a lack of hard information showing that the mobile phone systems in use are damaging to health. It is important to emphasise this crucial point.”

http://www.hpa.org.uk/radiation/publications/documents_of_nrpbfdfs/doc_15_5.pdf

13.5 Health Protection Agency, National Radiological Protection Board (NRPB)

Publikationsjahr: 2004
Titel: Doc. NRPB 15(5)
Mobile Phones and Health 2004: Report by the Board of NRPB

„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. There is now scientific evidence, however, which suggests that there may be biological effects occurring at exposures below these guidelines. We conclude therefore that it is not possible at present to say that exposure to RF radiation, even at levels below national guidelines, is totally without potential adverse health effects, and that the gaps in knowledge are sufficient to justify a precautionary approach.”

http://www.hpa.org.uk/radiation/publications/documents_of_nrpbfabstracts/absd15-5.htm

13.6 Health Protection Agency, National Radiological Protection Board (NRPB)

Publikationsjahr: 2005
Titel: Mobile Phones and Health

„There is no hard evidence at present that the health of the public, in general, is being affected adversely by the use of mobile phone technologies, but uncertainties remain and a continued precautionary approach to their use is recommended until the situation is further clarified.”

http://www.hpa.org.uk/hpa/news/nrpbfarchive/press_releases/2005/press_release_02_05.htm

13.7 Health Protection Agency, National Radiological Protection Board (NRPB), Z J Sienkiewicz and C I Kowalczyk

Publikationsjahr: 2005
Titel: A Summary of Recent Reports on Mobile Phones and Health (2000–2004)
Doc NRPB-W6

„Most of the 26 reports examined here have reached similar conclusions and have made comparable recommendations. Overall, the reports acknowledge that exposure to low level RF fields may cause a variety of subtle biological effects on cells, animals or humans, particularly on brain activity during sleep, but the possibility of exposure causing adverse health effects remains unproven.”

http://www.hpa.org.uk/radiation/publications/w_series_reports/2005/nrpbfw65.htm

13.8 Independent Expert Group on Mobile Phones (IEGMP), Chairman Sir William Stewart

Publikationsjahr: 2000
Titel: Mobile Phones and Health,
The Stewart Report,
Scientific Evidence

„There is one substantial established risk to health from mobile phone technology, namely through the increased incidence of motor vehicle accidents when drivers use mobile phones.

There is also good evidence that exposure to mobile phone signals at intensities within existing ICNIRP guidelines has direct, short-term effects on the electrical activity of the human brain and on cognitive function. These could have their origin in a variety of biological phenomena, for which there is some evidence from experiments on isolated cells and animals. There is an urgent need to establish whether these direct effects on the brain have consequences for health. It is also important to determine whether these effects are caused by local elevation of temperature or, as seems possible, by some other, “non-thermal”, mechanism.

The epidemiological evidence currently available does not suggest that RF exposure causes cancer. However, mobile phones have not been in use for long enough to allow comprehensive epidemiological assessment.

Experimental studies on cells and animals do not suggest that mobile phone emissions below guidelines have damaging effects on the heart, on blood, on the immune system or on reproduction and development.

The balance of evidence indicates that there is no general risk to the health of people living near to base stations where the exposures are only small fractions of guidelines.”

<http://www.iegmp.org.uk/report/text.htm>

13.9 Institution of Engineering and Technology (IET), formerly the Institution of Electrical Engineers (IEE), The IET's Biological Effects Policy Advisory Group on Low-level Electromagnetic Fields

Publikationsjahr: 2006
Titel: Biological Effects of Low-Level, Electromagnetic Fields:
The Possible Harmful Biological Effects of Low-level
Electromagnetic Fields of Frequencies up to 300 GHz
IET Position Statement

„ 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”).”

<http://www.iee.org/Policy/Areas/BioEffects/POSTAT02final.pdf>

14. USA

14.1 American Cancer Society

Publikationsjahr: 2006
Titel: Cellular Phones

„There is now considerable epidemiologic evidence that shows no consistent association between cellular phone use and overall risk of brain cancer. Some uncertainty remains regarding a possible association with acoustic neuromas. Several large studies now in progress will add markedly to the evidence within a few years. Animal and Laboratory Evidence Suggestions: Most but not all laboratory studies have reported a lack of RF-induced DNA damage. The risk of lymphoma after radiation in rodents genetically altered to be especially sensitive to cancer-causing influences was increased following whole-body RF exposure. To date, no claims have been made that cell phones are responsible for any other health problems.”

http://www.cancer.org/docroot/PED/content/PED_1_3X_Cellular_Phones.asp?sitearea=PED

14.2 American Cancer Society

Publikationsjahr: 2006
Titel: Cellular Phone Towers,
Do Cellular Phone Towers Cause Cancer? Do Cellular Phone Towers Cause Any
Other Health Problems?

„Cell phone antennas or towers are unlikely to cause cancer. While high levels of radiofrequency waves can cause a warming of tissues, cellular phone towers do not yield exposure at levels sufficient to cause this effect. There is no evidence in published scientific reports that cell phone towers cause any other health problems.”

http://www.cancer.org/docroot/PED/content/PED_1_3X_Cellular_Phone_Towers.asp?sitearea=PED

14.3 Federal Communications Commission (FCC), Office of Engineering & Technology

Publikationsjahr: 1999
Titel: Questions and Answers about Biological Effects and Potential Hazards of
Radiofrequency Electromagnetic Fields,
OET BULLETIN 56
Fourth Edition

“While the possibility of "non-thermal" biological effects may exist, whether or not such effects might indicate a human health hazard is not presently known. Further research is needed to determine the generality of such effects and their possible relevance, if any, to human health. In the meantime, standards-setting organizations and government agencies continue to monitor the latest experimental findings to confirm their validity and determine whether alterations in safety limits are needed in order to protect human health.”

http://www.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet56/oet56e4.pdf

14.4 Federal Communications Commission (FCC)

Publikationsjahr: 1999

Titel: response to media assertions that some mobile phones exceed the maximum level of emitted radiation permitted

„Guidelines "already incorporate a large margin of safety between allowed levels of exposure and exposure thresholds that have been identified with known adverse health effects." The excess levels of exposure reported by the media were "well within that safety margin, and, therefore, there is no indication of any immediate threat to human health from these phones.""

http://www.cancer.org/docroot/PED/content/PED_1_3X_Cellular_Phones.asp?sitearea=PED

14.5 Federal Communications Commission (FCC)

Publikationsjahr: 2005

Titel: Mobile Phones and Health Concerns

„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.”

<http://ftp.fcc.gov/cgb/consumerfacts/mobilephone.html>

14.6 Federal Communications Commission (FCC)

Publikationsjahr: 2006

Titel: Radio Frequency Safety, FAQ:
CAN PEOPLE BE EXPOSED TO LEVELS OF RADIOFREQUENCY RADIATION
AND MICROWAVES THAT COULD BE HARMFUL?

“Studies have shown that environmental levels of RF energy routinely encountered by the general public are typically far below levels necessary to produce significant heating and increased body temperature. However, there may be situations, particularly workplace environments near high-powered RF sources, where recommended limits for safe exposure of human beings to RF energy could be exceeded.”

<http://www.fcc.gov/oet/rfsafety/rf-faqs.html - Q6>

14.7 National Council on Radiation Protection & Measurements (NCRP), Om P. Gandhi, John D'Andrea, Kenneth R. Foster, Arthur W. Guy, Don R. Justesen, Indira Nair, Asher R. Sheppard

Publikationsjahr: 2003

Titel: Commentary No. 18 -
Biological Effects of Modulated Radiofrequency Fields

“Pulsed RF energy can be more effective in producing biological effects under some circumstances than continuous wave energy of the same average incident power density. These studies do not suggest a hazard that might be present under exposure conditions allowed by the current limits. There is some evidence, both theoretical and experimental, that very intense RF pulses, which increase the temperature of tissue by several degrees within a second, can lead to adverse effects through a mechanism that relates to the rate of heating. Exposures to such pulses are, in principle, permissible under some contemporary exposure guidelines. However, such exposures are associated with specialized military weapon systems. Human beings are very unlikely to experience inadvertent exposures to such intense pulsed RF energy. This Commentary concludes that the scientific literature related to modulation-dependence of biological effects of RF energy is not sufficient to draw any conclusions about possible modulation-dependent health hazards of RF fields, nor is there any apparent biophysical basis from which to anticipate such hazards apart from exposure to very intense RF pulses produced by some specialized military equipment.”

<http://www.ncrppublications.org/index.cfm?fm=Product.AddToCart&pid=4191384437>

14.8 National Institute of Environmental Health Sciences (NIEHS)

Publikationsjahr: 2002

Titel: EMF Questions & Answers,
Evaluating Potential Health Effects

“In most cases, it is not clear how EMF actually produces the effects observed in some experiments. Without understanding how the effects occur, it is difficult to evaluate how laboratory results relate to human health effects. Many biological effects are within the normal range of variation and are not necessarily harmful. Laboratory studies thus far have not shown any consistent evidence of adverse health effects, nor have results of experimental studies revealed a plausible biological explanation for such an association.”

<http://www.niehs.nih.gov/emfrapid/booklet/effects.htm>

14.9 U.S. Food and Drug Administration (FDA) Center for Devices and Radiological Health (CDRH)

Publikationsjahr: 1999

Titel: Consumer Update on Mobile Phones
(including cellular phones)

“The available science does not allow us to conclude that mobile phones are absolutely safe, or that they are unsafe. However, the available scientific evidence does not demonstrate any adverse health effects associated with the use of mobile phones.”

http://www.cancer.org/docroot/PED/content/PED_1_3X_Cellular_Phones.asp?sitearea=PED

14.10 U.S. Food and Drug Administration (FDA)

Publikationsjahr: 2006

Titel: Radiofrequency Energy, Questions & Answers:
Do wireless phones pose a health hazard?

“The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones are absolutely safe. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects may occur, but such findings have not been confirmed by additional research. In some cases, other researchers have had difficulty in reproducing those studies, or in determining the reasons for inconsistent results.”

<http://www.fda.gov/cdrh/wireless/ga.html> - 3a

14.11 U.S. Food and Drug Administration (FDA)

Publikationsjahr: 2006

Titel: Radiofrequency Energy, Questions & Answers:
What biological effects can be caused by RF energy?

“Large amounts of RF energy can heat tissue. This can damage tissues and increase body temperatures. Two areas of the body, the eyes and the testes, are particularly vulnerable to RF heating because there is relatively little blood flow in them to carry away excess heat. The amount of RF radiation routinely encountered by the general public is too low to produce significant heating or increased body temperature.

Effects of low levels of RF energy: It is generally agreed that further research is needed to determine what effects actually occur and whether they are dangerous to people.”

<http://www.fda.gov/cdrh/wireless/ga.html> - 3a