



Recent scientific publications relevant to mobile telephony

January 2014

Details

Australia: A measurement and modeling study of temperature in living and fixed tissue during and after radiofrequency exposure, [Bermingham et al., Bioelectromagnetics](#), Published online: 3 January 2014.

'...There is reasonable agreement between modeling and both probe measurement and dye estimation of temperature. The dye method also permits measurement of regional temperature rise (due to RF)...'

Austria: Possible risks due to exposure of workers and patients with implants by TETRA transmitters, [Cecil et al., Bioelectromagnetics](#), Published online: 16 January 2014.

'...a compliance distance of 30cm between implant and transmitter is sufficient to exclude any influence on the examined implants. All examined exposure conditions demonstrated that the levels were well below recommended limits. If a user wants to minimize their exposure, use of transmitters in front of the mouth leads to somewhat lower exposure when compared to typical mobile phone like use.'

China: Generation of a head phantom according to the 95th percentile Chinese population data for evaluating the specific absorption rate by wireless communication devices, [Ma et al., Radiation Protection Dosimetry](#), Published online: October 17, 2013.

'...The results show that the simulated SAR from the SAM head is similar..It can also provide the information for the SAR variability due to physical difference, which will benefit the maintenance and the harmonisation of the standards.'

International: Commentary: Mobile Phones and Cancer: Next Steps After the 2011 IARC Review, [Samet et al., Epidemiology](#), 25(1):23-27, January 2014.

'...The 2B classification for radiofrequency electromagnetic fields by IARC continues to receive worldwide media attention, and it remains of great interest to the public, reflecting the increasing use of mobile phones in our lives. There are diverse opinions about this classification, with deep skepticism from those who see no possibility of carcinogenesis by radiofrequency electromagnetic fields based on biophysical principles or from those who find the epidemiologic findings less convincing...'

Iran: Pathological changes associated with experimental 900-MHz electromagnetic wave exposure in rats, [Sepehrimanesh et al., Comparative Clinical Pathology](#), 1-3, Published on line 15 November 2013.

'...the use of GSM-like EMF at these intensities and duration can induce pathological lesions in the heart, liver, or kidney, but these are not EMF specific.'

Japan: Association between mobile phone use and depressed mood in Japanese adolescents: a cross-sectional study, [Ikeda et al., Environmental Health and Preventive Medicine](#), 1-7, 2013/12/18.

'...Increased duration of mobile phone use is associated with unfavorable psychological mood, in particular, a depressed mood. Decreasing mobile phone use may help maintain appropriate mental health in very long-duration users.'

Spain: Subjective symptoms related to GSM radiation from mobile phone base stations: a cross-sectional study, [Gómez-Perretta et al., BMJ Open](#), 3(12):December 1, 2013.

'...the incidence of most of the symptoms was related to exposure levels - independently of the demographic variables and some possible risk factors. Concerns about adverse effects from exposure, despite being strongly related with sleep disturbances, do not influence the direct association between exposure and sleep.'

Spain: Analysis of Exposure to Electromagnetic Fields in a Healthcare Environment: Simulation and Experimental Study, [de Miguel-Bilbao et al., Health Physics](#), 105(5):S209-S222, November 2013.

'...maximum value obtained is much lower than the 3 V m^{-1} that is established in the International Electrotechnical Commission Standard of Electromedical Devices. Results show a high correlation in terms of E-field cumulative distribution function (CDF) between the experimental and simulation results...'

Sweden: Long-term Mobile Phone Use and Acoustic Neuroma Risk, [Pettersson et al., Epidemiology](#), Published online: 15 January 2014.

'...The findings do not support the hypothesis that long-term mobile phone use increases the risk of acoustic neuroma. The study suggests that phone use might increase the likelihood that an acoustic neuroma case is detected and that there could be bias in the laterality analyses performed in previous studies.'

Sweden: Extensive frequency selective measurements of radiofrequency fields in outdoor environments performed with a novel mobile monitoring system, [Estenberg et al., Bioelectromagnetics](#), Published online: 27 December 2013.

'...The median power density was $16 \mu\text{W}/\text{m}^2$ in rural areas, $270 \mu\text{W}/\text{m}^2$ in urban areas, and $2400 \mu\text{W}/\text{m}^2$ in city areas. In urban and city areas, base stations for mobile phones were clearly the dominating sources of exposure.'

Turkey: Evaluation of mobile phone addiction level and sleep quality in university students, [Sahin et al., Pakistan Journal of Medical Sciences](#), 29(4):913-918, 2013.

'...referring the students with suspected addiction to advanced healthcare facilities, performing occasional scans for early diagnosis and informing the students about controlled mobile phone use would be useful.'

UK: Broadband Measurement of Absorption Cross Section of the Human Body in a Reverberation Chamber, [Melia et al., IEEE Transactions on Electromagnetic Compatibility](#), 55(6):1043-1050, December 2013.

'...The average ACS of nine subjects was measured at frequencies over the range 1-8.5 GHz. For a 75-kg male, the ACS varied between 0.18 and 0.45 square meters over this range...'

USA: The relationship between cell phone use, academic performance, anxiety, and Satisfaction with Life in college students, [Lepp et al., Computers in Human Behavior](#), 31:343-350, February 2014.

'...Cell phone use/texting was negatively related to GPA and positively related to anxiety; in turn, GPA was positively related to SWL while anxiety was negatively related to SWL...'

USA: Radiofrequency contact currents: Sensory responses and dosimetry, [Kavet et al., Radiation Protection Dosimetry](#), Published online: December 8, 2013.

'...A major factor in this analysis relates to whether current density is uniformly distributed across the contact area or whether an electrode's 'edge effects' enhance currents with a net effect of decreasing apparent thresholds, when expressed as the bulk current entering a subject...'

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The GSM Association (GSMA) is the global trade association that exists to promote, protect and enhance the interests of GSM mobile operators throughout the world. www.gsma.com/mobile-and-health

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