



Recent scientific publications relevant to mobile telephony

April 2010

Details

Australia: Predictors of mobile telephone use and exposure analysis in Australian adolescents, [Inyang et al., Journal of Paediatrics and Child Health](#), Published Online: 10 Mar 2010.

'...There is a high prevalence of MP use amongst Australian adolescents (94%). Males were significantly younger than females at age of first uptake of MP (P= 0.02). Participants without siblings were significantly younger at age of first uptake...'

Australia: Cordless telephone use: implications for mobile phone research, [Redmayne et al., Journal of Environmental Monitoring](#), 12(4):809 - 812, 9 April 2010.

'...Taken together, this increases total RF exposure and its ratio in high-to-low mobile users. Therefore, the design and analysis of future epidemiological telecommunication studies need to assess cordless phone exposure to accurately evaluate total RF telephone exposure effects.'

Denmark: No effect of TETRA hand portable transmission signals on human cognitive function and symptoms, [Riddervold et al., Bioelectromagnetics](#), Published Online: 8 Mar 2010.

'...No statistically significant differences... between the TETRA and sham conditions were found for either TMB... or any of the remaining cognitive tasks or symptoms. In conclusion, we found no evidence that brief exposure to hand-held TETRA transmitters' affects human cognitive function or subjective symptoms.'

Germany: Occupation and risk of glioma, meningioma and acoustic neuroma: Results from a German case-control study (Interphone Study Group, Germany), [Samkange-Zeeb et al., Cancer Epidemiology](#), 34(1):55-61, February 2010.

'...We did not observe an increased risk of glioma or meningioma for occupations in the agricultural, construction, transport, chemical, electrical/electronic and metal sectors. The number of 'significant' odds ratios is consistent with an overall 'null-effect'.'

Greece: Bioeffects of mobile telephony radiation in relation to its intensity or distance from the antenna, [Panagopoulos et al., International Journal of Radiation Biology](#), 86(5):345-357, May 2010.

'...GSM bioactivity is highest for intensities down to less than 10 μ W/cm² and still evident until 1 μ W/cm² exhibiting 'window' effects.'

Greece: The identification of an intensity 'window' on the bioeffects of mobile telephony radiation, [Panagopoulos et al., International Journal of Radiation Biology](#), 86(5):358-366, May 2010.

'...The bioactivity window seems to be due to the intensity of radiation-field (10µW/cm², 0.6–0.7V/m) at 30 or 20cm from the GSM 900 or 1800 mobile phone antenna, respectively.'

India: Audiologic disturbances in long-term mobile phone users, [Panda et al., Journal of Otolaryngology-Head And Neck Surgery](#), 39(1):5-11, 1 February 2010.

'...There was no significant difference between users and controls for any of the audiologic parameters. However, trends for audiologic abnormalities were seen within the users...A large sample size would be required to reach definitive conclusions.'

India: Mutagenic response of 2.45 GHz radiation exposure on rat brain, [Kesari et al., International Journal of Radiation Biology](#), 86(4):334-343, April 2010.

'...The study concludes that the chronic exposure to these radiations may cause significant damage to brain, which may be an indication of possible tumour promotion...'

Japan: 2-GHz Band CW and W-CDMA Modulated Radiofrequency Fields Have No Significant Effect on Cell Proliferation and Gene Expression Profile in Human Cells, [Sekijima et al., Journal of Radiation Research](#), Published online: 9 March 2010.

'...These results suggest that RF exposure up to the limit of whole-body average SAR levels as specified in the ICNIRP guidelines is unlikely to elicit a general stress response in the tested cell lines under these conditions.'

Japan: Acute Dosimetry and Estimation of Threshold-Inducing Behavioral Signs of Thermal Stress in Rabbits at 2.45-GHz Microwave Exposure, [Hirata et al., IEEE Transactions on Biomedical Engineering](#), 57(5):1234-1242, May 2010.

'...a core temperature elevation of 1 degC is an estimate of the threshold-inducing complex behavioral signs of MW-induced thermal stress in rabbits for different whole-body average SARs and exposure time durations...'

Japan: Temperature elevation in the fetus from electromagnetic exposure during magnetic resonance imaging, [Satoru et al., Physics in Medicine and Biology](#), 55(8):2411-2426, 21 April 2010.

'...the temperature elevations in the intrinsic tissues of the woman and fetal tissues were 0.85 and 0.61 °C, respectively, at a whole-body averaged specific absorption rate of 2.0 W kg⁻¹...these values are below the temperature elevation of 1.5 °C that is expected to be teratogenic...'

Poland: Environmental factors and semen quality, [Jurewicz et al., International Journal of Occupational Medicine and Environmental Health](#), 22(4):305-329, Online: January 06, 2010.

'...Mobile phones might adversely affect the quality of semen by decreasing mostly motility but also the sperm counts, viability and morphology. In spite of their consistent results, most of the studies are rather small...'

South Africa: The effect of pulsed 900-MHz GSM mobile phone radiation on the acrosome reaction, head morphometry and zona binding of human spermatozoa, [Falzone et al., International Journal of Andrology](#), Published Online: 7 Mar 2010.

'...This study concludes that although RF-EMF exposure did not adversely affect the acrosome reaction, it had a significant effect on sperm'

morphometry. In addition, a significant decrease in sperm binding to the hemizona was observed...

Switzerland: Impact of pinna compression on the RF absorption in the heads of adult and juvenile cell phone users, [Christ et al., Bioelectromagnetics](#), Published Online: 30 Mar 2010.

'...The average distances of the pinnae to the heads and their standard deviations showed no major differences between the two age groups: 10.5 ± 2.0 mm for children (6-8 years) and 9.5 ± 2.0 mm for adults.'

Tunisia: GFAP expression in the rat brain following sub-chronic exposure to a 900 MHz electromagnetic field signal, [Ammari et al., International Journal of Radiation Biology](#), 86(5):367-375, May 2010.

'...Our results show that sub-chronic exposures to a 900 MHz EMF signal for two months could adversely affect rat brain (sign of a potential gliosis).'

UK: Repeated exposure to low-level extremely low frequency-modulated microwaves affects cortex-hypothalamus interplay in freely moving rats: EEG study, [Vorobyov et al., International Journal of Radiation Biology](#), 86(5): 376-383, May 2010.

'...These results are in line with evidence that repeated low-level exposure to ELF-MW affects brain functioning and provide an additional approach when analysing underlying mechanisms.'

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