WHO International EMF Project
International Advisory Committee Meeting

16-17 May 2011

Report on Activity in Finland in 2010

General research activities related to EMF health

A national research programme on mobile phones and health, titled "Wireless communication devices and human health (WIRECOM)", started in 2009 and will continue until 2012. The programme is coordinated by the Finnish Institute of Occupational Health (FIOH) and jointly funded by the National Agency for Technology and Innovations (TEKES) and telecommunication enterprises. The sub-projects (and the responsible institutes) are the following:

1) Thermal effects of RF fields (FIOH)
2) *Prospective cohort study on mobile phone use and health-COSMOS* (STUK)
3) Mobile phone radiation and human brain: PET-study (University of Turku)
4) *RF dosimetry for biomedical studies* (STUK)

Another EMF-related research project carried out by FIOH is titled *"Safe return to work after cardiac pacemaker implantation",* aiming to evaluate and manage EMF interference risks for workers with a pacemaker at various work places. The project is funded by the Finnish Work Environment Fund (TSR).

A new research proposal concerning safety and well-being of MRI personnel at their work was submitted to TSR in 2010, and the project shall start in 2011.

Finland is a participating country in the COST Action (BM0704) “Emerging EMF Technologies and Health Risk Management”, and in its working groups.

New policies and legislations regarding EMF exposure

The protection of workers' health against the negative impact of electromagnetic fields is covered by the provisions of a European directive regarding the exposure of workers to the risks of electromagnetic fields (2004/40/EC). However, the Commission has decided to postpone the implementation of the EMF directive, in order to evaluate social, economic and environmental impact of the directive. This study was carried out by a European consortium FICETTI, coordinated by Finland (FIOH). The project provided the European Commission with information on the impact of various policy options related to a possible amendment of the EMF directive.

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Areas of public concern and national responses

Finnish Radiation and Nuclear Safety Authority (STUK) has prepared a position paper, according to which children's mobile phone use should be restricted for example by favouring text messages instead of talking. Although research to date has not demonstrated health effects from mobile phone's radiation, precaution is recommended for children as all of the effects are not known. STUK position paper notes that the children's mobile phone use could be, restricted in the following ways:

- favouring the use of text messages rather than calls,
- parents limiting the number of calls and their duration,
- children can be advised in the use of hands-free devices, which reduces the exposure significantly. When communicating on the hands-free device the phone should be kept a couple of centimetres away from the body,
- talking in an area with low connectivity or in a moving car or a train should be avoided.

However STUK does not deem it justified to ban children's use of mobile phones altogether. Mobile phones also promote security, since they facilitate easy communication with parents.

Recent EMF-related publications

Toivonen T. Microwave dosimetry in biological exposure studies and in practical safety evaluations. Doctoral dissertation. STUK - A243, April 2010, Helsinki. 81 p + app.

Kwon MS, Hamalainen H. Effects of mobile phone electromagnetic fields: Critical evaluation of behavioural and neurophysiological studies. Bioelectromagnetics 32:253-272, 2011

Jokela K, Saunders R. Physiologic and dosimetric considerations for limiting electric fields induced in the body by movement in a static magnetic field. Health Physics 100(6):641-653, 2011

Alanko T, Puranen L, Hietanen M. Assessment of exposure to intermediate frequency electric fields and contact currents from a plasma ball, Bioelectromagnetics 33, (Published on-line 2 May 2011).

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