

WHO International EMF Project International Advisory Committee Meeting

6-7 June 2013

Report on Activity in Finland in 2012

General research activities related to EMF health

A national research programme on mobile phones and health, titled **"Wireless communication devices and human health (WIRECOM)"**, was finished in 2012. The programme was coordinated by the Finnish Institute of Occupational Health (FIOH) and jointly funded by the National Agency for Technology and Innovations (TEKES) and the telecommunication enterprises. The sub-projects (and the responsible institutes) were 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)**

The results of the study indicated that RF exposure from the mobile phone may affect the brain metabolism and cerebral blood flow. However, conflicting reports have recently been published by other research groups on the brain glucose metabolism after the RF exposure. Hence, there is a need for replication of the present results and to determine possible dose-response relations using different RF exposure intensities. As the changes in the brain are very difficult to measure, the research should be designed to use independent methodologies (e.g. PET and NIRS). Also higher SAR values should be used to study the dose-dependence of the changes in metabolism.

Another EMF-related research project was on going and carried out by FIOH, 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 funded by the TSR, **"Safety and well-being of MRI personnel at their work"**, was started 2011 and was actively proceeding in 2012.

Finland was a participating country in the COST Action (BM0704) "Emerging EMF Technologies and Health Risk Management", and in its working groups until the end of the Action.

New policies and legislations regarding EMF exposure

A project carried out by a European consortium FICETTI, and coordinated by Finland (FIOH) provided the European Commission with information on the impact of various policy options related to the amendment of the EMF Directive. As a result of the project, the European Commission published a Staff Working Paper Impact Assessment as an accompanying document to the proposal for a new EMF Directive:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SEC:2011:0750:FIN:EN:PDF>

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.

Contacts for further information:

Research Professor Maila Hietanen, maila.hietanen@ttl.fi

Research Professor Kari Jokela, kari.jokela@stuk.fi