

23.5.2014

WHO International EMF Project Report on activities in Finland from July 2013 to June 2014

General research activities related to EMF health

An international epidemiological follow-up study on health effects of mobile phone use (COSMOS; Cohort Study of MOBILE phone uSe and health) was started in 2009. Radiation and Nuclear Safety Authority (STUK) is the national coordinator of the project in Finland. Finnish cohort comprises of approximately 15,500 participants recruited during years 2009, 2010 and 2011. Roughly 13,100 of them also completed a questionnaire at the start of the follow-up. An invitation to fill in a repeated questionnaire was sent in November 2013 for all the participants (N=3,329) who initially participated Finnish COSMOS during the year 2009 and completed the baseline questionnaire. Among them, 1,568 (47%) filled in the repeated questionnaire. Both baseline and repeated questionnaire included questions for example on mobile phone use, health, medication, sleeping habits and various symptoms. The first analysis on the data is being planned.

STUK and Finnish Institute of Occupational Health (FIOH) are collaborating in a research project on safety and well-being of MRI personnel at their work. The project was started in 2011 and it consists of a questionnaire study and magnetic field and motion velocity measurements near MRI devices. A practical guide for the personnel will be written based on project results and literature. The project will continue until the end of 2014. The project is funded by the Finnish Work Environment Fund.

University of Eastern Finland (UEF) and FIOH participate in an international multidisciplinary research program (GERoNiMO; Generalized EMF research using novel methods) which was started in the beginning of 2014. Finland is responsible for the biological module of the program. European Union has given financial support for the program.

New policies and legislations regarding EMF exposure

No new policies or legislations regarding EMF exposure during the time period.

Areas of public concern and national responses

Possible health effects from base stations, wireless local area networks (WLAN) and mobile phones were the main areas of public concern. These issues have also been the topic of several newspaper articles and couple of TV and radio programs. Especially the radiation safety of wireless networks and base stations in school premises has been questioned. STUK has been interviewed by the media on these topics. Some parliament members have given written questions on these issues to Finnish Government. Minister of Health and Social Services answered to the written questions with the expert help given by STUK.

Municipal authorities requested comments from STUK on several planned power lines and planned residential areas near existing lines. STUK assessed the magnetic fields near power lines and gave recommendations for spatial planning. STUK recommends that premises where the presence of children is permanent should not be located so that the average magnetic flux density exceeds 0.4 μ T.

23.5.2014

New public information activities

The Nordic radiation safety authorities released a statement in December 2013 on exposure to radio frequency (RF) fields from mobile phones, base stations and wireless networks. The main message of the statement was that the scientific literature does not show adverse health effects from exposure to RF fields below exposure limits adopted in Nordic countries. However, the authorities stated that it is important to continuously monitor any potential impact of RF fields from mobile phones on public health. Since the exposure from WLANs and mobile phone base stations is far below the exposure limits, there is no need to further limit the exposure from these sources.

A measurement campaign on general public's exposure to RF fields from mobile phone base stations was carried out by STUK during 2010-2012. The measured RF fields were very low compared to the national regulations. The measurement results will be published in a technical report (in Finnish) during spring 2014.

STUK published a guide for base station antenna installations in April 2014. The guide gives advice on antenna installations so that the exposure of the general public or workers to radio frequency radiation from the antennas is kept within limits. The guide gives instructions on how to prepare a safety assessment for a base station and how to follow the obligations given in the European EN standards. There is also guidance on proper usage of warning signs for base station antennas.

Ministry of Social Affairs and Health has suggested ICD-10 (International Classification of Diseases) classification for environmental intolerances, including electromagnetic hypersensitivity. The classification is in process.

Some recent publications

Tiikkaja M. Environmental electromagnetic fields: interference with cardiac pacemakers and implantable cardioverter-defibrillators. Doctoral Thesis, Helsinki 2014. Available at:

http://epublications.uef.fi/pub/urn_isbn_978-952-261-419-3/urn_isbn_978-952-261-419-3.pdf

Tiikkaja M, Hietanen M, Alanko T, Lindholm H. Working in electromagnetic fields with a cardiac pacemaker. Finnish Institute of Occupational Health, 2013. 16 p. Available at:

http://www.tsr.fi/c/document_library/get_file?folderId=13109&name=DLFE-9022.pdf

Alanko T, Lindholm H, Jungewelter S, Tiikkaja M, Hietanen M. Operating model for managing accidental over-exposure to RF-fields. Finnish Institute of Occupational Health, 2014. 25 p. Available at:

http://www.ttl.fi/en/publications/Electronic_publications/Documents/RF-overexposure.pdf