

## National Activity Report – ISRAEL 2015

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## **General Research Activities Related to EMF**

### **Non-ionizing radiation measurements in schools**

A study performed by the Ministry of Environmental Protection and by the Education Ministry has found that in more than 60% of the schools in Israel at least one classroom had magnetic fields exceeding 0.4  $\mu$ T. Consequently, it was decided to conduct thorough measurements of EMF radiation in all 4800 schools in Israel. The measurement reports (n=1,500 so far), are published on the website of the Ministry for Environmental Protection (<http://www.sviva.gov.il/subjectsenv/radiation/non-ionizing-measurements/pages/schoolradiationprevention.aspx>). Measures to reduce exposure were carried out in schools in which exposure to magnetic fields was found to be higher than 0.4  $\mu$ T.

### **SAR Measurements of mobile phones**

In a study conducted by the Ministry for Environmental Protection and the Holon Institute of Technology, the SAR of 10 types of mobile phones was measured using phantoms. The phones' transmitting powers ranged from 1% to 100% of the maximum rated power. The results of this study showed that the measured SAR exceeded the SAR declared by the manufacturer, when the phone was held close to the head and in bad reception mode (100% of the maximum power).

### **GERoNiMo (Generalised EMF Research using Novel Methods) Study**

The Cancer and Radiation Epidemiology Unit at the Gertner Institute, Tel Hashomer is participating in a 5 year multi-national project aimed at closing gaps of knowledge on health effects of EMF including risk assessment and evaluation of attitudes of policy making. The Cancer and Radiation Epidemiology Unit is participating in the epidemiology task aimed at exploring the role of intermediate frequency (IF) and RF in the risk for developing brain tumor in young people. The Unit is also a part of the integration task which involves assessment of population health impacts of EMF, and input for future risk management and communication processes and advice on non-technological means to reduce exposure.

(<http://www.crealradiation.com/index.php/en/geronimo-home>)

### **MobiKids Study**

The Cancer and Radiation Epidemiology Unit at the Gertner Institute, Tel Hashomer is currently participating in the international Mobikids study aimed at evaluating the potential risk of environmental exposures on the development of brain tumors in children and adolescents. The study, which is now in its fifth year, is being executed within the 7<sup>th</sup> Framework Program of the European Union. Data analysis is planned to begin soon. A paper describing the considerations needed to cope with the challenges of investigating this complex issue especially among children, adolescents, and young adults was recently published (Sadetzki et al. The MOBI-Kids Study Protocol: Challenges in Assessing Childhood and Adolescent Exposure to Electromagnetic Fields from Wireless Telecommunication Technologies and Possible Association with Brain Tumor Risk Front Public Health. 2014 Sep 23;2:124). In the framework of the study, several validation studies assessing the accuracy of reporting mobile phone usage were performed.

### **Educated mobile phone use among adolescents: an intervention program in Israeli schools (Dor Nayad"-Mobile Generation)**

The Cancer and Radiation Epidemiology Unit at The Gertner Institute, Tel Hashomer has initiated an educational program for adolescents. Aimed at reducing exposure to RF radiation, the program includes lessons in the fields of physics, biology as well as social aspects and guidelines for educated use of cellular technology.

To evaluate the effectiveness of the program and to characterize mobile phone use among secondary school students, the program was accompanied by a survey of approximately 1600 participants. The results of the survey showed that at least 95% of adolescents use mobile phones on a regular basis; 16% of them started using mobile phones before the age of 8 years; 11% talk more than 2 hours a day and 37% send more than 30 text messages every day.

## **TransExpo: International Study of Childhood Leukemia and Residences near Electrical Transformer Rooms**

The Israeli branch of a multi-national study of childhood leukemia among children, who lived in apartment buildings with built-in transformers, is in its final data analysis stage. Israeli results are expected within the next year, but since the study is multi-national it will take a few more years until the results from other countries will be combined and analyzed. Participating countries are Bulgaria, Finland, Hungary, Italy, the Netherlands and Switzerland. The study is funded by the Electric Power Research Institute (EPRI).

## **New Policies and Legislations Regarding EMF Exposure**

### **A settlement agreement between a cellular operator and a plaintiff on information regarding mobile phones**

According to a settlement agreement accepted by the Tel Aviv-Yafo District Court in February 2014, cellular operators have to inform buyers of new mobile phone about the radiation safety instructions as formulated by the manufacturer, including the minimum distances from the head and the body. In addition, cellular operators must provide a hand-free kit with every new mobile phone and have on hand for sale, at a cost not higher than 2 Euros, a hand-free kit suitable for all the types of mobile phones that were sold by the operator in the last 10 years. Each cellular operator has to provide information on the safe use of mobile phones on its website. The cellular operator must also provide, for a fee, comparative radiation measurements for each repaired, damaged or upgraded mobile phone (i.e., measurements of the electric field at different points from the phone).

### **Guidelines for the installation and operation of Wi-Fi networks in schools**

Following a petition by the National Parents' Leadership and the Organization for "Sensible" Use of Cellular Technology to the Israeli Supreme Court requesting the Ministry of Education to ban the use of Wi-Fi in Schools, an inter-ministerial committee has issued a Ministry of Education Director General's Circular for the use of Wi-Fi in schools. Guided by the precautionary principle, the Circular establishes guidance and restrictions for minimizing exposure in schools. This includes limiting the age of exposure (use of Wi-Fi is prohibited in kindergartens) and the hours of use in schools, installing equipment such that exposure would be as low as possible, and monitoring RF radiation levels.

## **Areas of Public Concern and National Responses**

### **Distribution substations**

Indoor and outdoor distribution substations and overhead lines continue to be a public concern. New substations, designed to minimize extremely low frequency (ELF) radiation were presented and approved by the Ministry of Environmental Protection.

### **New Public Information Activities**

#### **National radiofrequency monitoring program**

The Ministry of Environmental Protection has implemented and now operates a national RF monitoring system. The system consists of stationary monitoring stations (currently 14 stations are in operation) that continuously measure the entire range of RF and transmit the data to a central computer that analyzes and displays the results of measurements. The information can be accessed online at <http://www.monitem.co.il/gmap/index.html>.

#### **Activities of Israeli National Information Center for Non-Ionizing Radiation (TNUDA)**

**Launch of the TNUDA website ([www.tnuda.org.il](http://www.tnuda.org.il))** – Launched in September 2014, the site serves as the main channel of communication between the Center and its target audiences (the general public, government offices, researchers and the industry). The site includes many articles aimed at guiding the public and decision-makers on the educated use of technology that involves non-ionizing radiation. At the time of launching, there were more than 100 articles on the site, on a variety of subjects concerning non-ionizing radiation including physics, health effects and implications, policy and legislation, and populations-at-risk. The site also includes answers to frequently-asked questions and links to other leading web sites on non-ionizing radiation.

Users of the website can approach the TNUDA Center with questions. Currently, over 150 questions, most of them from the public have been processed. In addition, Monthly newsletters are sent out to a mailing list. Following the wide interest in the website and its content expressed by various bodies abroad, the website is currently being translated into English and is planned to be online in the next couple of months.