

Botswana Telecommunications Authority WORKSHOP on “THE HUMAN EXPOSURE TO ELECTROMAGNETIC FIELD (EMF) FROM WIRELESS TECHNOLOGIES”

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Abstract of Presentation

Current epidemiologic evidence on the health effects of mobile phones

Mobile phones use radio frequency electromagnetic fields (RF) to communicate speech or data with their base stations. Due to the widespread use of mobile phones, possible adverse health effects related to exposure to RF is a topic of a number of scientific investigations.

Studies on the association between the use of mobile phones and cancer risk will be the main focus of the presentation. Results of case control, cohort and incidence studies will be discussed. The few studies analyzing cancer risk in relation to the proximity of base stations and TV Towers will also be presented.

The presentation will briefly summarize results of studies on hypersensitivity and symptoms such as fatigue and migraine and studies on other diseases including central nervous system diseases (Alzheimer, Multiple sclerosis, Parkinson diseases).

Finally, studies on the effect of mobile phone use while driving a car will be sketched.

This presentation owes a lot to the report on health effects of exposure to EMF from the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR – opinion 2009), whose conclusions are reproduced below.

Cancer

It is concluded from three independent lines of evidence (epidemiological, animal and in vitro studies) that exposure to RF fields is unlikely to lead to an increase in cancer in humans. However, as the widespread duration of exposure of humans to RF fields from mobile phones is shorter than the induction time of some cancers, further studies are required to identify whether considerably longer-term (well beyond ten years) human exposure to such phones might pose some cancer risk.

Subjective Symptoms

Regarding non-carcinogenic outcomes, several studies were performed on subjects reporting subjective symptoms. (...) Although an association between RF exposure and single symptoms

was indicated in some new studies, taken together, there is a lack of consistency in the findings. Therefore, the conclusion that scientific studies have failed to provide support for an effect of RF fields on self-reported symptoms still holds. Scientific studies have indicated that a nocebo effect (an adverse non-specific effect that is caused by expectation or belief that something is harmful) may play a role in symptom formation. There is no evidence supporting that individuals, including those attributing symptoms to RF exposure, are able to detect RF fields. There is some evidence that RF fields can influence EEG patterns and sleep in humans. However, the health relevance is uncertain and mechanistic explanation is lacking. Further investigation of these effects is needed. Other studies on functions/aspects of the nervous system, such as cognitive functions, sensory functions, structural stability, and cellular responses show no or no consistent effects.

(...)

Other diseases

No convincing data are available that indicate any other health effects on human health.

Children

From the risk assessment perspective it is important to recognise that information on possible effects caused by RF fields in children is limited.

SCENIHR (Scientific Committee on Emerging and Newly Identified Health Risks). Health Effects of Exposure to EMF. 19 January 2009, European Commission, Brussels, Belgium.

http://ec.europa.eu/health/ph_risk/committees/04_scenihhr/docs/scenihhr_o_022.pdf

Disclaimer- The statements of this presentation are those of the authors and do not represent the official IARC position. The association between mobile phones and cancer risk will be evaluated by IARC during the monograph meeting on Radiofrequency fields to be held in May 2011.