

RF EM exposure: the issues, the debate and the realities

ABSTRACT

Rapid development in the field of telecommunication industries and the lagging phase to which the exposure assessment results, calls for immediate intervention by scientist and engineers. In order to respond to public outcry, who are daily exposed to various sort of electromagnetic field radiations, a critical look on the electromagnetic field exposure guidelines and assessment of its effectiveness revealed that the guidelines are conservatives and are based only on Short-term immediate health effects. In order to accommodate for the unforeseen, a lower limit of 1w/kg instead of 4w/kg of the SAR is recommended with a safety margin of 100 for occupational and 10 for the general public. Possible solutions to the gap identified were also provided.

Keyword: Radio frequency electromagnetic field (RF EMF); Exposure guidelines; Specific absorption rate (SAR); GSM base-station; Radiation; Mobile phones