PRESS RELEASE

FCC Cell Phone Safety Guidelines Underestimate Harmful Radiation Absorbed by Children and Small Adults, Says New Analysis

October 17, 2011, Boulder, CO. A new paper published online today in *Electromagnetic Biology and Medicine* demonstrates children and small adults absorb significantly more cell phone radiation than had been previously understood by using the conventional and widely used assessment methodology, the Specific Anthropomorphic Mannequin (i.e. plastic model of a brain, or SAM), to assess the "Specific Absorption Rate", known as the SAR.

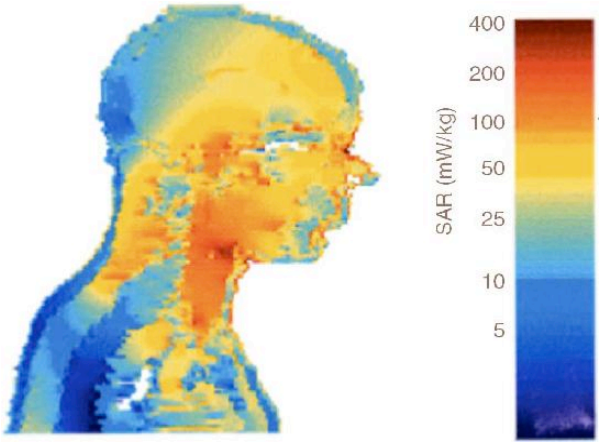
- This study is important because it calls into question present cell phone exposure guidelines from an engineering, not health, point of view.
- Computer simulation of radiation penetration, in contrast to estimating radiation exposure using the fluid-filled plastic mannequin, demonstrates much greater radiation exposures, particularly for children and small adults, than previously understood.
- The study shows that when phones are placed in the pocket or against the body the current FCC guidelines for radiation heating effects are presently being violated, and suggests that different SAR exposure guidelines should be established for people who are smaller than the mannequin, including children and smaller adults.
- Experts say it is unlikely many cell phones on the market today would pass the FCC certification process with the amount of radiation now being demonstrated with this methodology.
- The computer simulation methodology, known as Finite Difference Time Domain (FDTD), is an FCC-approved SAR assessment methodology. It offers 3 orders of magnitude higher resolution in the brain than the present methodology and can be used to measure radiation impacts on different parts of the body, as well, including especially sensitive tissues, such as the testes and the eyes.
- The higher resolution SAR assessment methodology, the FDTD, is presently used widely in research settings, including at the FDA.
- The authors of the new study (http://snurl.com/19xis1) recommend this more accurate cell phone radiation exposure methodology replace the SAM mannequin methodology.
- It is important to understand that globally accepted physics metrics are now indicating common cell phone use exposes users to radiation levels sufficiently powerful to cause tissue damage from heating.
- Previously, the focus of the cell phone safety debate has been on biological effects from the less well understood, but equally important, 'non-heating' effects from the radiation, which are not addressed by either of the above risk assessment methodologies, and are a separate subject.
- Another issue, rarely discussed, is that our prevalent method of cell phone use (phone placed against the head) uses more energy from battery drain than

communications using a wired headset. Using wired headsets not only will greatly reduce health risk, the subject of the current paper in *Electromagnetic Biology and Medicine*, but will also be more energy efficient on a very significant scale, given there are 5 billion cell phone users worldwide. On both grounds, governments have a mandate to act now to reconsider the mode in which we as a society use cellular communications.

- It is expected that governments globally will want to reassess the extent of cell phone proliferation, and especially use of cell phones by children, and to recommend wired headset use in light of this important re-analysis of cell phone radiation risk.

Download "Exposure Limits: The underestimation of absorbed cell phone radiation, especially in children" by Om P. Gandhi, L. Lloyd Morgan, Alvaro Augusto de Salles,Yueh-Ying Han, Ronald B. Herberman & Devra Lee Davis (Corresponding author is L. Lloyd Morgan at 510-841-4362 or Lloyd.L.Morgan@gmail.com) here: **http://snurl.com/19xis1**

Below is Figure 5 from the report, a simulated SAR distribution to the head and neck using the proposed, superior FDTD risk assessment methodology.



Alvaro Augusto de Salles, Ph.D., Professor, Electrical Engineering Dept., Federal University of Rio Grande do Sul, Porto Alegre, Brazil and one of the paper's authors, says:

"The higher risk of tissue damage from common cell phone use demonstrated in this study using the computer simulation method of SAR assessment suggests prudent public health policies, globally, would call for cell phones to be manufactured without the ability to use the phone against the head, nor with a speakerphone, but only allow communication with a wired headset. This would dramatically lower risk of biological, and genetic, damage to the population, and to children and other especially vulnerable populations, such as pregnant women, by keeping the radiation, thereby, away from both the head and body."

READ FULL POST FROM ELECTROMAGNETICHEALTH.ORG HERE
http://snurl.com/r25vo

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