

Propositions accompanying the thesis

Exploring the safety margin in current guidelines for electromagnetic exposure

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1. The current IEEE/ICNIRP guidelines for electromagnetic (EM) exposure are surrounded by a mantle of precaution. These guidelines are over conservative by incorporating large safety factors between the established functional limits above which tissue damage takes place and the current restrictions.
2. The pioneering data on exposure of humans to intense electromagnetic fields (EMF) during hyperthermia treatment of cancer shows no indication of a serious acute effect upon exceeding the guidelines.
3. The intense applied EMF in some medical applications provide unique opportunity to investigate the “potential” adverse health effect of EMF and to create a very valuable library of the requested dose-response human data for tailoring the EM safety guidelines.
4. Estimation of local SAR in the brain must be based upon real morphology and not upon generic phantoms. One size does not fit all.
5. Thermal dose model, despite of higher uncertainty, is a better surrogate for protecting against tissue damage rather than SAR limits.
6. Time will tell the truth about the existence of non-thermal health effects caused by the exposure to modern sources of electromagnetic radiation. The same applies to pickled vegetables, genetically modified food, inadequately tested medications, and environmental degradation.
7. The exposure to EMF may be a harmless situation that causes harm because you believe it is harmful. Any idea may be placed in the mind through repetition of thought.
8. Treat the poor as a charity opportunity not as an opportunity for predatory lending.
9. You must be the change you wish to see in the world (Mahatma Ghandi).
10. Democracy cannot succeed unless those who express their choice are prepared to choose wisely. The real safeguard of democracy, therefore, is education (Franklin D. Roosevelt).
11. Patience ensures victory (Ali Ibn Abu-Talib).