

A review of the effect of non-ionizing microwave radiation on human health

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Abstrak

The rapidly increasing concern of non-ionizing microwave radiations affecting human health adversely has been gaining much of attention. a large volume of research studies have been published in the past decade. most of the previous review literature in this key research area are limited to a certain domain leading to questionable gaps that still need to be filled. this paper, therefore, investigates and analyses all possible gaps, which are left in recent literature related to this issue and aims to provide an inclusive up-to-date overview of evidences and epidemiological studies on different parts of human body, in both adult and children. based on the literature review, it is evident that the rise in the Specific Absorption Rate (SAR) above its maximum value due to the exposure from non-ionizing radiation can cause severe effect on human body such as a cataract formation in the eye, a shortfall in sperm count in men etc. specific Anthropomorphic Mannequin (SAM) model, which is used as a certification technique for cell phone, is found to be overestimating the adult and child head exposure by using same geometric model for child and adult head types. It has also been observed that the electromagnetic radiation has both positive and negative effect on the human life, depending on the context of its application. It is envisaged that human can gain from the positive side and avoid the negative effect. A step by step example of numerical simulation model is illustrated to support future researchers in developing further work in this research area.