

Microwaves-Impact on our living!

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INTRODUCTION

Electromagnetic Field (EMF) radiation is the flow of photons through space. Each photon contains a certain amount of energy, and the different types of radiations are defined by the amount of energy found in the photons. The electromagnetic spectrum is the range of all types of EM radiation. X-rays used in hospitals or the radio waves from a radio station are all part of this spectrum. Even when a building of height is 18 m, with its location at a horizontal distance of 19 m from a 10 m tower (with an antenna at a height of 8 m) mounted in the rooftop of a building, 10 m high, the region is still in the safe zone.

The calculated EMF power density is 0.432 Watts/sq.m. On 24 August 2010, the DoT Inter-Ministerial Committee (IMC) was set up consisting of officers from DoT, Indian Council of Medical Research (Ministry of Health), Department of Biotechnology and Ministry of Environment and Forest to observe the effects of Electro Magnetic Field radiation from base stations and mobile phones.

IMPORTANT OBSERVATIONS

1. Permissible Electro Magnetic Field – EMF- limit is 450 milliwatts/square meters.- as per TERM-Telecom Enforcement Resource and Monitoring Cell in India.
2. Department of Telecommunications-DoT- says that every cellular operator must certify all public areas around a tower will be within safe EMF exposure limits after the antennas start radiating and get an acknowledgement

from TERM but no strict implementation is being done in our country similar to all laws!

3. If any Base Transceiver station-BTS-violates, DoT is enhanced a fine of Rs.10 from 5 Lakhs. No verification and confirmation records are available with operators as per news reports.
4. Help line number: 9969555000, Email: emr.termcellmumbai@gmail.com
5. WHO- world health organization-released information during October 2014..” A large number of studies are performed during last TWO decades and the conclusions are: “No adverse health effects have been established as being caused by mobile phone use.”
6. As per news in our country, Government has taken up mega research on mobile tower radiation-identified 16 premier institutions-like...National institute of Mental health and neuro science, Bengaluru AIIMS-New Delhi, and Uttarakhand, IIT-Delhi, Madras and Kharaghpur (KGP) and SV institute of medical sciences of A.P.
7. No relation with existing research being conducted through DST-department of science and technology and Tata Memorial Centre and Indian Council of Medical Research.

CAUSES

Radio signals are emitted by natural sources like the sun, the Earth and the ionosphere, and by artificial sources such as: mobile phone base stations, broadcast towers, radar facilities, and remote

controls, medical, electrical and electronic equipment has become everyday life.

The Radio frequency/ microwave radiation are continuously transmitted by different sources like AM, FM radio towers, TV towers, cell phone towers, etc. There was exponential rise in the level of EMF from causes, by increasing attractiveness of wireless technology such as cell phones, cordless phones, Wi-Fi (Wireless Internet), Wi-max and other wireless devices.

EFFECTS

When a human body is exposed to the electromagnetic radiation, it absorbs radiation, because human body contains 70% of liquid. It is similar to that of cooking in the microwave oven. As height of human is much superior than the wavelength of cell tower that transmits frequencies Therefore numerous resonances in the body are create localized heating within the body resulting boils, drying of fluids around eyes, brain, joints, heart, and abdomen. The small term effects from cell tower radiation exposure may include headaches, sleep disorders,

Most Common Complaints:

- | | |
|----------------------------|-------------------|
| •Dizziness | •Sleep disruption |
| •Palpitations of the heart | •Headache |
| •Visual disorders | •Concentration |
| •Cardiovascular problems | •Forgetful memory |
| •Buzzing in the head | •Depression |
| •Altered reflexes | •Fatigue |

“Member Scientist, ICMR has indicated that the hot tropical climate of the country, low body mass index (BMI), low fat content of an average Indian as compared to European countries and high environmental concentration of radio frequency radiation may place Indians under risk of radio frequency radiation adverse effect.”

Before finalizing the report the IMC has surveyed 90 international and national

poor memory, mental excitation, confusion, anxiety, depression, appetite disturbance and listlessness. Radiation from cell phone towers has been associated with greater increase in brain tumor. This is due to the damage in the blood brain barrier and the cells in the brain which are concerned with learning, memory and movement. Weak electromagnetic fields release calcium ions from cell membranes. Leakage of calcium ions into the cytosol acts as a metabolic stimulant, which accelerates growth and healing, but it also promotes the growth of tumors. Loss of calcium ions causes leaks in the membranes of lysosomes releasing DNA's that causes DNA damage.

Chronic Exposure Of Individuals To Low Levels Of Radiation Is Believed To Produce The Following Effects:

1. Increase in the incidence of neoplasia.
2. Specific increase in the incidence of squamous cell carcinoma.
3. Increase in the frequency of occurrence of leukemia.
4. Premature aging.

studies/reference papers related to EMF radiation. In the report it was specified that maximum laboratory studies were not able to catch a direct link amid exposure to radio frequency radiation and health. Also the scientific studies still have not been able to check an origin and consequence relationship between radio frequency radiation and health.

The effect of emission from cell phone towers is not known yet with certainty.

Nevertheless, the IMC recommended lowering the mobile towers' EMF exposure limits to 1/10 of the existing prescribed limit as a matter of abundant precaution. Subsequently, the Department of Telecommunications has accepted the recommendations of the IMC and amended the Clause 43.6 A of Unified

Access Services License on 10.01.2013, to include the revised limits/levels:

Consequential to this revision by DoT, **Indian standards are now 10 times more strict than many countries (like USA, Canada, Japan and Australia) in the world which follow ICNIRP guidelines).**

- A number of countries have specified their own radiation levels keeping in view the environmental and physiological factors.
- The power density limits vary from 0.001 to 12 Watt/ m² at 1800 MHz operating frequency.
- In India the prescribed reference level at 1800 MHz is 0.92 Watt/ m² and at 900 MHz is 0.45 Watt/m².

Disclaimer:

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