

**GOVERNMENT OF INDIA
HEALTH AND FAMILY WELFARE
LOK SABHA**

UNSTARRED QUESTION NO:3345

ANSWERED ON:01.08.2014

ADVERSE HEALTH EFFECTS OF MOBILE PHONE TOWER

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Will the Minister of HEALTH AND FAMILY WELFARE be pleased to state:

- (a) whether exposure to radiation from mobile phones and towers causes adverse health effects including male infertility and, if so, the details thereof;
- (b) whether the Government has carried out any study/survey in this regard and if so, the details along with the outcome thereof; and
- (c) the corrective measures taken/proposed to be taken by the Government to address the issue?

Answer

THE MINISTER OF HEALTH AND FAMILY WELFARE (DR. HARSH VARDHAN)

(a): Indian Council of Medical Research (ICMR) has informed that there are no conclusive data available on the issue of Health Hazards due to radiation emitted from cell phone and cell phone tower.

The growing body of scientific evidences indicates some bio-effects and possible adverse health effects of Radio Frequency Radiation (RFR). ICMR has informed that WHO/International Agency for research on Cancer has classified radio frequency electromagnetic field as possible carcinogenic agent to humans.

(b): ICMR has informed that they have initiated a multi-disciplinary cohort study in Delhi and National Capital Region (NCR) to find out adverse effects of Radio Frequency Radiation (RFR), if any, emitted from cell phone on adult Indian population. Under this study efforts are going on to examine whether use of cell phone is associated with reproductive dysfunctions, infertility, neurological disorders (cognitive behavior, sleep related disorders, depression etc.), cardiovascular disorders, Otorhinolaryngology (ENT) disorders and promote cancer, if any in human volunteers.

In addition to the above the ICMR has also funded few studies in India to address this issue. The significant finding of the studies in India in this area is at Annexure.

(c): India has adopted Electro Magnetic Field (EMF) radiation limits prescribed by International Commission on non-ionising Radiation Protection (ICNIRP). Further, Department of Telecommunication (DoT) has prescribed stricter precautionary limits for EMF radiation from mobile tower which is one-tenth (1/10th) of the limits prescribed internationally by ICNIRP.

In order to ensure compliance to the prescribed EMF radiation limits from mobile tower in India, self-certificates are required to be submitted by telecom service providers as per the guidelines issued by Department of Telecom. To cross check these, audit of Base Transceiver Station (BTS) sites is carried out by Telecom Enforcement Resource & Monitoring (TERM) field units. This is regularly done by TERM units for the purpose of monitoring that the EMF radiation exposure is within prescribed norms. In case, any BTS site is found to violate the prescribed EMF norms, as per the prescribed procedure, actions are taken by imposing a penalty of Rs.10 lakh per BTS per incidence.

ANNEXURE

Significant findings of the Studies being conducted in India on the issues related to Health effects, including male infertility due to Radiations emitted from mobile Phone & mobile Phone Tower. 1. Studies reported cytogenetic damage in tissues of some individuals using cell phone over a period of time.

2. An animal study indicated significant reduction in testicular size, weight and in sperm counts after chronic exposure to Radio Frequency Radiation (RFR) imitated from cell phone which may lead to infertility.

3. A study reported headache, dizziness, numbness in the thigh, and heaviness in the chest among mobile phone users.

4. A study reported that long term and intensive mobile phone use may cause inner ear damage.

5. A study reported an increase in peak heart rate, serum total cholesterol, VLDL cholesterol and triglycerides concentration in acute RFR exposed male students in comparison to control students.

6. Microwave radiation caused an increase in erythrocyte and leukocyte counts, a significant DNA strand break in brain cells and the loss of spatial memory in mice.

7. A study reported that microwave exposure adversely affects male fertility.

8. A study indicated that a reduction in melatonin or an increase in caspase-3, creatine kinase, and calcium ion may cause significant damage in rat brain due to chronic exposure of microwave radiations. These biomarkers indicate possible health implications of such

exposures.

9. A study also reported that chronic exposure to non-ionizing Microwave radiation may lead to infertility.

10. The data of the animal study concluded that 3G mobile phone radiations affect the brain function and cause several neurological disorders. The data of the study also indicated testicular impairment in male Wistar rats due to long-term exposure of Microwave.