

## **MOBILE PHONE TOWER RADIATION - FAQ**

### **'Reduce the power or remove the tower'**

Disrupted sleep, headaches, dizziness, altered reflexes, depression, fatigue, joint pains, heart disorders, Alzheimer's, Parkinson, DNA damage and cancers are just some of the health hazards of exposure to cell tower radiation.

### **Are towers destroying our health, with or without phone usage?**

Yes, of course. After 20 minutes of using cell phones, you feel a warm sensation near the ear. This is because the temperature of the earlobes increases by one degree Celsius. A maximum of 6 minutes of cell phone usage is recommended during the day since a cell phone transmits 1 to 2 watts of power, which are very high and dangerous.

In the US, users are told this, but in India, there are no such warnings despite the fact that we adopted radiation norms specified by ICNIRP (International Commission on Non-Ionizing Radiation Protection) guidelines of 1998.

### **Do studies prove that exposure to EMF has a direct health impact?**

The World Health Organisation (WHO)'s INTERPHONE study in 2000 done over 10 years in 13 countries showed that heavy cellphone users (1 to 2 hours a day) have a risk of glioma (brain or spine tumour). This risk is 55% for those using it over 10 years. They found 5,117 brain tumour cases in the study.

Several studies done in various countries such as Germany, Austria, Brazil, Israel, etc have reported increase in cancer cases in 5 to 10 years, where radiation level was more than 1 mW/m<sup>2</sup>.

Cancer is the last stage and before that, people living close to mobile phone towers have reported sleep disturbances, headaches, memory loss, lack of concentration, fatigue, joint pains, vision distortion, miscarriage, heart problems, etc.

In India too, there are many complaints of such health problems among people who are heavy cell phone users and stay near cell towers. Cell phone users start with feeling dizzy and even develop ear problems. This was acknowledged by the Government of India in its Jan 2011 Inter-Ministerial Committee report.

### **What are the norms for cellphone radiation in India and what is the ideal level of exposure?**

Recently new radiation norms were adopted by India and the Department of Telecommunication (DoT) had set September 1 as the deadline for the telecom operators to adhere to them. As per the new norms, the operators were mandated to reduce the radiation levels by 1/10th of the current levels, thus making it 0.9 watt/m<sup>2</sup>. Furthermore, it was announced that operators who are found flouting these rules would be heavily penalized.

### **Do mobile phone towers cause cancer?**

Mobile phones work on electromagnetic radiation technology. The spectrum of electromagnetic radiation is large with varying frequencies and amplitude across the spectrum (for instance – radio that you listen to is also a form of electromagnetic radiation with different frequency and amplitude). The highest end of the spectrum is called ionising

radiation and is used for therapeutic radiation to treat cancer, while the lower end of the spectrum is known as radio frequency (RF waves). Just next step to the radio frequency waves are the microwave waves. Mobile phone technology uses this microwave end of the spectrum, which is roughly about 300 MegaHertz and falls in the non-ionising category. Similarly, radiations emitted by mobile phone towers lie in the non-ionising part of the electromagnetic spectrum.

### **Effects of mobile tower radiation**

Mobile phones and towers emit electromagnetic radiation having health effects which can be divided into thermal and non-thermal. Thermal effects refer to heating effect which you observe if you hold the phone for long near your ear.

Non-thermal effects on the cells, genes and the DNA and are more harmful than thermal effects.

Excessive use of mobiles can lead to headache, sleep disturbance, lack of concentration, memory loss, tinnitus (ringing in the ears) and increased risk of brain cancer.

Having mobile towers in your neighbourhood can also pose health problems like severe headache, sleep disturbance, constant body pain, memory problems, joint pains etc. The more severe health effects noted include infertility, miscarriage, neurodegenerative disorders (Alzheimer's, Parkinson's, etc.), heart problems and cancer.