

## **Mobiles pose health risk, says govt panel**

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NEW DELHI: Radiation from mobile phones and towers poses serious health risks, including loss of memory, lack of concentration, disturbance in the digestive system and sleep disturbances, according to an inter-ministerial committee formed by the ministry of communications and information technology to study the hazards posed by mobile phones.

The committee has also attributed the disappearance of butterflies, bees, insects and sparrows vanishing from big cities to mobile phone-related radiation.

The eight-member committee, which included representatives from the health ministry, department of biotechnology and member secretary, DoT, has recommended that mobile phones not adhering to standard levels of specific absorption rate (SAR) - a measure of the amount of radiofrequency energy absorbed by the body while using a phone -- should be barred.

It has said mobile towers should not be installed near high density residential areas, schools, playgrounds and hospitals. "The localized SAR value as per the Indian guidelines standard is 2 watt per kg, averaged over a six minute period and using a 10 gram average mass. With higher SAR values of mobile handsets the public could potentially receive much higher radiofrequency exposure. We have recommended that SAR levels to be lowered down to 1.6 watt/kg, as prescribed by the Federal Communication Commission of US," said a member.

Dr R S Sharma, ICMR scientist who represented the health ministry on the committee, said the findings are based on case studies presented by different experts. He added that the recommendations would be used to formulate a national policy and guidelines on electromagnetic frequency (EMF) radiation for telecom towers.

"In the case of a person using a cellphone, most of the heating occurs on the surface of the head, causing its temperature to increase by a fraction of a degree. The brain blood flow is capable of disposing this excess by increasing the local blood flow and increasing body temperature," states the report. It says that the non-thermal effects of cellphone use — attributed to the induced electromagnetic effects inside the body's biological cells — are more harmful.

"People who are chronically exposed to low-level wireless antenna emissions and users of mobile handsets have reported feeling several unspecific symptoms during and after its use, ranging from burning and tingling sensation in the skin of the head, fatigue, sleep disturbances, dizziness, lack of concentration, ringing in the ears, reaction time, loss of memory, headache, disturbance in digestive system and heart palpitation," the report says.

The committee was chaired by Ram Kumar, advisor (technology), department of telecommunications, and had Arvind Duggal from the department of biotechnology and R N Jindal from the environment ministry among its other members.

Member scientist, ICMR R S Sharma said that compared to Europeans, Indian cellphone users are more at risk for adverse affect of radiation due the country's hot tropical climate, low body mass index, and

low fat content. "We have recommended amendment in the Indian Telegraph Act 1885 and rules so that only mobile handsets satisfying radiation standards should be permitted in the country," he said.

The report suggests that children, adolescents and pregnant women should avoid excessive use of cellphones. People in general should use hands-free technologies to minimize the contact of the head with cell phone. "People having active medical implants should keep their cellphone at least 30 cm away from the implant," it adds.

Said Girish Kumar, professor in the department of electrical engineering at IIT Bombay, whose research on hazards of cellphone use was taken as a reference for the committee decision, "There is a 400% increase in the risk of brain cancer among teenagers using cell phones for long periods. The younger the child, the deeper is the penetration of electromagnetic radiation as children`s skulls are thinner.

Another government-funded study on radiation from mobile phones and towers at the Jawaharlal Nehru University ( JNU) found that the exposure to radiation from mobile towers and mobile phones could have an adverse impact on male fertility and pose health hazards by depleting the defence mechanism of cells.