

Mobile Phones to Unleash Tumor Epidemic

Lyle Loughry, August 2008

A new review of more than 100 studies on the safety of mobile phones has concluded that cellular devices are poised to cause an epidemic of brain tumors that will kill more people than smoking or asbestos.

The review was conducted by neurosurgeon Vini Khurana, who has received more than 14 awards in the past 16 years, and who has made headlines, worldwide, with his warnings. He called upon the industry to immediately work to reduce people's exposure to the radiation from mobile phones.

According to Khurana, research demonstrates that long-term use of mobile handsets, more than 10 years, can double the risk of contracting brain cancer. While a number of studies have concluded that there is no such risk, Khurana said that most of those studies only examined short-term use. But because a brain tumor can take 10 years to develop, studies without a long follow-up period are largely meaningless.

"There is a significant and increasing body of evidence for a link between mobile phone usage and certain brain tumors," Khurana said, a link that will be "definitively proven" within 10 years.

Khurana urged people to minimize their use of mobile phones, particularly handsets. He also urged the industry to act immediately to reduce exposure to radiation from the devices.

While mobile phones may save lives in certain emergency situations, Khurana said, **brain cancer is "a life-ending diagnosis."**

"It is anticipated that this danger has far broader public health ramifications than asbestos and smoking," Khurana said. While one billion people worldwide smoke tobacco, three times as many now use mobile phones.

Smoking is responsible for five million deaths each year.

While the United Kingdom's **Independent** newspaper described Khurana's study as "the most devastating indictment yet published of the health risks" of mobile phones, his warning is not the first. A Swedish study in 2006 concluded that people who used mobile phones for an hour or more each day had a 240 percent higher brain tumor risk than non-users. Tumors were significantly more

likely to develop on the side of the head where the phone was most often used.

Inspired in part by such studies, France has warned against mobile phone use (especially in children), Germany urges people to minimize their use of mobile handsets, and the European Environment Agency has called for minimizing exposure to cellular radiation.

The mechanisms by which mobile phones increase cancer risk are not well understood, but several possibilities are suspected. Electromagnetic radiation (EMR) is known to directly heat up the head and brain, and can also cause thermoelectric effects on cells and DNA. According to Khurana, even bluetooth devices and unshielded headsets merely turn the head into an antenna that bombards itself with radiation. Children, with thinner skulls than adults, are particularly at risk.

"EMR rays in general cause irritation, concentration lapses and in many cases even proliferation of cells which cause cancer," said Dr Rajeev Ranjan, a New Delhi neurologist. Radiation can also interfere with the functioning of medical devices like pacemakers.

EMR also "affect[s] the DNA and cause[s] problems in cell recovery and cell growth," said New Delhi neurologist Anshu Rohatgi.

Khurana warned that if immediate measures are not taken, mobile phones will soon be responsible for a massive public health crisis.

"We are currently experiencing a reactively unchecked and dangerous situation," he said.

Because mobile phone use began in the mid-1980s and it can take up to 20 years to diagnose a malignant solid brain tumor, he said, "In the years 2008-2012, we will have reached the appropriate length of follow-up time to begin to definitively observe the impact of this global technology on brain tumor incidence rates."

"Malignant brain tumor incidence and its associated death rate will be observed globally to rise within a decade from now," Khurana said, "by which time it may be far too late to meaningfully intervene."

Sources for this story include: www.independent.co.uk, www.dnaindia.com, www.stuff.co.nz.