

INTERNATIONAL  
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# Cloud of worry gathers over wireless health risks

By Doreen Carvajal September 23, 2007

**PARIS:** While major cities around the world rush to blanket neighborhoods with free wireless Internet access, critics are questioning the health risks that might be created by a wired London or a Paris transformed from the City of Light to City of Hot Spots.

The nagging fear is that electromagnetic waves emitted by wireless technology could become the tobacco smoke of the 21st century.

Some environmentalists are already demanding restrictions, and government officials in some countries are issuing warnings to limit use and seeking reviews of the long-term health impact of exposure to wireless networks and mobile telephones.



While studies to date have been less than definitive, critics say that the increases in electronic magnetic "pollution" have been coupled with an insufficient knowledge of the health risks over the long term. (Frank Polich/Bloomberg)

"The exposure to electromagnetic fields is rising, and it's widespread," said Jacqueline McGlade, executive director of the European Environmental Agency, a European Union institution. "So, come what may, we should be anticipating that even with a low dose, but with wide exposure, this will require much more inspection."

The agency, which last week issued a statement urging caution, is paying close attention to the results of an ongoing World Health Organization study called Interphone that is evaluating cellphone use by almost 7,000 brain tumor patients in 13 countries, among them Japan, Canada, Germany and France.

For the most part, national studies have detected no consequences from the use of mobile phones for a period of up to 10 years. But last spring, Interphone published the results of studies of 1,500 brain cancer patients in the south of England and Nordic countries

"They found a significantly increased risk of brain cancer for use of a period of more than 10 years on the same side of the head where the tumor developed," said Elisabeth Cardis, Interphone coordinator and director of the International Agency for Research on Cancer in Lyon, France. She said that larger numbers of long-term users needed to be studied to give the findings greater validity.

Wireless-network technology developed too recently to be included in existing major studies of the health impact from exposure to electromagnetic fields from mobile phones, say scientists, who note it is likely to be less harmful because it emits less electromagnetic energy than mobile phones placed directly on the ear.

But school officials are looking for reassurance. Teacher associations in Britain are demanding further analysis before schools introduce wireless computer networks, and the city of Frankfurt is being even more cautious - school officials there decided last year not to install wireless systems until there was more health research.

This month, the French Health Ministry ordered the country's Agency for Environmental and Occupational Health Safety to prepare a review of available scientific information about the effects of exposure to electromagnetic fields from cellphones and Wi-Fi.

Members of the Green Party in the German Parliament have also pressed the government with similar questions this summer. In response, the Federal Office for Radiation Protection advised limiting use of mobile phones and wireless networks as a precaution until more is known.

"Our main concern is to keep the total exposure of electric magnetic fields as low as possible, especially in schools and kindergartens," said Sylvia Kotting-Uhl, a member of the German Bundestag and spokesman for the Green Party on the issue. "We will force the government to take their own warnings seriously and to favor cable-based technology."

Scientists are pressing for more information about the impact of heavy usage and also on the effect on children, concerned that developing brains may react differently to exposure.

This month, Mobile Telecommunications and Health Research, an £8.8 million, or \$17.8 million, study funded by the British government and the telecommunications industry, ruled out short-term adverse effects of mobile phone use on the brain and cell functions of adults who were the subjects of the study.

But these researchers also cautioned that further study was needed of children and people who have been exposed for more than 15 years, a critical period because brain cancer symptoms typically take that long to emerge.

The group is helping to start a long-term surveillance study called Cosmos, looking at 200,000 cellphone users, beginning this year. It will track light and heavy users of mobile phones in Britain, Denmark, Sweden and Finland over the next 25 years.

Its earlier study, which was paid for by the British government and the mobile phone industry, was coordinated by an independent group so as not to be influenced by its backers.

Scientists note that mobile phones have not been around long enough to find a sufficient number of consumers who have been exposed for more than 15 years, a hurdle that is even greater when it comes to Wi-Fi networks.

"You're restricted by reality," said Joachim Schuz, a German researcher with the Institute of Cancer Epidemiology in Copenhagen who is participating in the Cosmos study. "So the reason that there are no studies on long-term users is because at the moment the long-term users are just becoming a bigger group."

Schuz, who also participated in the Interphone study in Germany, said that researchers in the Cosmos study would have access to telephone records, health records and questionnaires filled out by telephone users. With that information, researchers will be looking for associations between phone use and a wide range of illnesses, including cancer, Parkinson's disease, migraine headaches, depression, sleep disturbances and tinnitus, the clinical name for ringing in the ears.

The Interphone study, which is expected to be released next year, focuses in particular on people with brain and neck tumors. Nearly half of the electromagnetic energy is absorbed by the tissues on the side of the head closest to the handheld phone, scientists say.

While cancer researchers look for answers, others are growing impatient. In August an international group of cancer researchers and public health experts issued a review of available studies on electromagnetic fields called BioInitiative that urged precautions.

The European Environmental Agency contributed a chapter about historical lessons learned from asbestos that showed that exposure could be harmful even before there is convincing evidence of harm.

"We don't want to wait until you have definitive proof before you start taking actions," said David Carpenter, who helped write the report and a physician and professor of environmental health and toxicology at State University of New York at Albany, where the report was issued.

Thus far, Carpenter noted, most of the discussion and research on the issue is taking place in Europe and not in the United States.

"Our concern is that the health risks are rarely part of the debate" in the United States, he said. "If there's a downside, that needs to be put on the table."

The French environmental group Priartém decided not to wait. This month, it successfully pressed two French supermarket chains, Carrefour and Auchan, to shun a special telephone, Kiditel, with GPS tracking technology, that is marketed for young children.

"We were concerned that these are telephones that have to be illuminated all the time," said Jeanine Le Calvez, president of Priartém.

But industry groups like CTIA, an international association for wireless telecommunications based in Washington, steadfastly maintain that the "overwhelming majority of research studies that have been published in scientific journals around the globe show that wireless phones do not pose a health risk."

Le Calvez, though, remains wary. This month, her group met with French Health Ministry officials to push for a ban on telephones marketed for children. She also takes a dim view of the free wireless hot spots in Paris, which number at least 400.

"A catastrophe," she declared. "The new system increases electronic magnetic pollution and we have such insufficient knowledge of the health risks."