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WELL

Experts Revive Debate Over Cellphones and Cancer

By [TARA PARKER-POPE](#)

What do brain surgeons know about cellphone safety that the rest of us don't?

Last week, three prominent neurosurgeons told the CNN interviewer [Larry King](#) that they did not hold cellphones next to their ears. "I think the safe practice," said Dr. Keith Black, a surgeon at Cedars-Sinai Medical Center in Los Angeles, "is to use an earpiece so you keep the microwave antenna away from your brain."

Dr. Vini Khurana, an associate professor of [neurosurgery](#) at the Australian National University who is an outspoken critic of cellphones, said: "I use it on the speaker-phone mode. I do not hold it to my ear." And CNN's chief medical correspondent, Dr. Sanjay Gupta, a neurosurgeon at [Emory University](#) Hospital, said that like Dr. Black he used an earpiece.

Along with Senator [Edward M. Kennedy](#)'s recent diagnosis of a glioma, a type of [tumor](#) that critics have long associated with cellphone use, the doctors' remarks have helped reignite a long-simmering debate about cellphones and [cancer](#).

That supposed link has been largely dismissed by many experts, including the [American Cancer Society](#). The theory that cellphones cause [brain tumors](#) "defies credulity," said Dr. Eugene Flamm, chairman of neurosurgery at [Montefiore Medical Center](#).

According to the [Food and Drug Administration](#), three large epidemiology studies since 2000 have shown no harmful effects. CTIA — the Wireless Association, the leading industry trade group, said in a statement, "The overwhelming majority of studies that have been published in scientific journals around the globe show that wireless phones do not pose a health risk."

The F.D.A. notes, however, that the average period of phone use in the studies it cites was about three years, so the research doesn't answer questions about long-term exposures. Critics say many studies are flawed for that reason, and also because they do not distinguish between casual and heavy use.

Cellphones emit non-ionizing radiation, waves of energy that are too weak to break chemical bonds or to set off the DNA damage known to cause cancer. There is no known biological mechanism to explain how non-ionizing radiation might lead to cancer.

But researchers who have raised concerns say that just because science can't explain the mechanism doesn't mean one doesn't exist. Concerns have focused on the heat generated by cellphones and the fact that the radio frequencies are absorbed mostly by the head and neck. In recent studies that suggest a risk, the [tumors](#) tend to occur on the same side of the head where the patient typically holds the phone.

Like most research on the subject, the studies are observational, showing only an association between cellphone use and cancer, not a causal relationship. The most important of these studies is called Interphone, a vast

research effort in 13 countries, including Canada, Israel and several in Europe.

Some of the research suggests a link between cellphone use and three types of tumors: glioma; cancer of the parotid, a salivary gland near the ear; and [acoustic neuroma](#), a tumor that essentially occurs where the ear meets the brain. All these cancers are rare, so even if cellphone use does increase risk, the risk is still very low.

Last year, The American Journal of Epidemiology published data from Israel finding a 58 percent higher risk of parotid gland tumors among heavy cellphone users. Also last year, a Swedish analysis of 16 studies in the journal Occupational and Environmental Medicine showed a doubling of risk for acoustic neuroma and glioma after 10 years of heavy cellphone use.

“What we’re seeing is suggestions in epidemiological studies that have looked at people using phones for 10 or more years,” says Louis Slesin, editor of Microwave News, an industry publication that tracks the research. “There are some very disconcerting findings that suggest a problem, although it’s much too early to reach a conclusive view.”

Some doctors say the real concern is not older cellphone users, who began using phones as adults, but children who are beginning to use phones today and face a lifetime of exposure.

“More and more kids are using cellphones,” said Dr. Paul J. Rosch, clinical professor of medicine and psychiatry at New York Medical College. “They may be much more affected. Their brains are growing rapidly, and their skulls are thinner.”

For people who are concerned about any possible risk, a simple solution is to use a headset. Of course, that option isn’t always convenient, and some critics have raised worries about wireless devices like the Bluetooth that essentially place a transmitter in the ear.

The fear is that even if the individual risk of using a cellphone is low, with three billion users worldwide, even a minuscule risk would translate into a major public health concern.

“We cannot say with any certainty that cellphones are either safe or not safe,” Dr. Black said on CNN. “My concern is that with the widespread use of cellphones, the worst scenario would be that we get the definitive study 10 years from now, and we find out there is a correlation.”

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