

Do cell phones increase brain cancer risk?

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Major research initiatives are needed immediately to assess the possibility that using cellular phones may lead to an increased risk of brain tumors, according to an editorial in the November issue of the journal *Surgical Neurology*, published by Elsevier.

Recent studies have raised concerns that long-term exposure to electromagnetic fields (ELF) from cell-phone handsets can increase the risk of brain cancers and other nervous system tumors, according to the editorial by Dr. Ron Pawl, a neurosurgeon at Lake Forest Hospital, Lake Forest, Ill. He calls for collaborative research initiatives to determine whether the link between cell phones and brain cancer is real.

Scientists have long been concerned over the possibility that ELF exposure may increase the risk of brain cancers. Until recently, however, research has shown no clear link between cell phone use and brain tumors.

Earlier this year, a Swedish research group published an epidemiologic study suggesting an increased risk of brain cancers (gliomas) as well as acoustic nerve tumors (neuromas) in people using cell phones for ten years or longer. Tumors were more likely to develop on the same side as the cell phone was used. Other studies by the same group suggested that the use of wireless handsets in cordless home phones posed the same risk.

After reviewing the evidence, one author even suggested that long-term cell phone use is "more dangerous to health than smoking cigarettes."

Other recent commentators have raised similar concerns.

The findings are alarming in light of the exponential growth of cell phones—now including widespread use by children and teenagers. The damaging effects of ELF, if any, might be even greater in the developing brain.

If the link is real, then rates of brain cancers should have increased over the last two decades. Some studies have reported that this is the case, particularly for the most malignant brain cancers. However, other studies have found a stable tumor rate.

Some commentators have suggested that apparent increases in the number of brain cancers might reflect the use of sophisticated imaging techniques like computed tomography and magnetic resonance imaging. "However, the fact that the incidence of gliomas, especially the more malignant varieties, is increasing [...] warrants action on this issue," Dr. Pawl writes.

The problem, according to Dr. Pawl, is that no other research groups have performed actual studies showing a clear relationship between brain tumors and ELF. He calls on scientific societies to play a leading role in designing and conducting studies that will definitively determine the risks of brain cancer associated with ELF exposure, particularly from cell phones. "It seems that a cooperative effort by both the scientific community and state governing bodies will be needed," writes Dr. Pawl. "Some spearhead is now necessary in view of the magnitude and seriousness of the situation."

Paper link: <http://www.surgicalneurology-online.com>

Source: Elsevier

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