

LONG-TERM CELL PHONE USE LINKED TO BRAIN TUMOR RISK

Pauline Anderson, November 13, 2014,
www.medscape.com



Children Face the Highest Health Risk From Cell Phones

Long-term use of both mobile and cordless phones is associated with **an increased risk for glioma, the most common type of brain tumor**, the latest research on the subject concludes.

The new study shows that the risk for glioma was tripled among **those using a wireless phone for more than 25 years and that the risk was also greater for those who had started using mobile or cordless phones before age 20 years.**

"Doctors should be very concerned by this and discuss precautions with their patients," study author Lennart Hardell, MD, PhD, professor, Department of Oncology, University Hospital, Örebro, Sweden, told *Medscape Medical News*.

Such precautions, he said, include using hands-free phones with the "loud speaker" feature and text messaging instead of phoning.

The study was published online October 28 in *Pathophysiology*.

Pooled Data

The recent worldwide increase in use of **wireless communications has resulted in greater exposure to radiofrequency electromagnetic fields (RF-EMF)**. The brain is the main target of RF-EMF when these phones are used, with the **highest exposure being on the same side of the brain where the phone is placed.**

The new study pooled data from two case-control studies on **histopathologically confirmed malignant brain tumours**. The first included patients aged 20 to 80 years diagnosed from 1997 to 2003, and the second included those aged 18 to 75 years diagnosed between 2007 and 2009. Cases came from six oncology centers in Sweden.

Cases were matched with controls of the same sex and approximate age who were randomly drawn from the Swedish Population Registry.

All patients with glioma were included in the study. Details of the study are available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4141111/>

years diagnosed from 1997 to 2003, and the second included those aged 18 to 75 years diagnosed between 2007 and 2009. Cases came from six oncology centers in Sweden.

Cases were matched with controls of the same sex and approximate age who were randomly drawn from the Swedish Population Registry.

All participants filled out a questionnaire detailing exposure to mobile phones and cordless desktop phones.

The analysis included 1498 cases of malignant brain tumors; the mean age was 52 years. Most patients (92%) had a diagnosis of glioma, and just over half of the gliomas (50.3%) were the most malignant variety — astrocytoma grade IV (glioblastoma multiforme). Also included were 3530 controls, with a mean age of 54 years.

The analysis showed an increased risk for glioma associated with use for more than 1 year of both mobile and cordless phones after adjustment for age at diagnosis, sex, socioeconomic index, and year of diagnosis. The highest risk was for those with the longest latency for mobile phone use over 25 years.

Table. Glioma Risk With Mobile and Cordless Phone Use

Phone Use	Odds Ratio (95% Confidence Interval)
Mobile phone use > 1 year	1.3 (1.1 - 1.6)
Cordless phone use > 1 year	1.4 (1.1 - 1.7)
Mobile phone use > 25 years	3.0 (1.7 - 5.2)

The risk was increased the more that wireless phones were used. The odds ratios steadily rose with increasing hours of use.