

Display Settings:
Abstract
Send to:

Exp Oncol. 2010 Jul;32(2):54-60.

Risks of carcinogenesis from electromagnetic radiation of mobile telephony devices.

Yakymenko I, Sidorik E.

Source

Bila Tserkva National Agrarian University, Soborna square 8/1, Bila Tserkva 09117, Ukraine.
iyakymen@gmail.com

Abstract

Intensive implementation of mobile telephony technology in everyday human life during last two decades has given a possibility for epidemiological estimation of long-term effects of chronic exposure of human organism to low-intensive microwave (MW) radiation. Latest epidemiological data reveal a significant increase in risk of development of some types of tumors in chronic (over 10 years) users of mobile phone. It was detected a significant increase in incidence of brain tumors (glioma, acoustic neuroma, meningioma), parotid gland tumor, seminoma in long-term users of mobile phone, especially in cases of ipsilateral use (case-control odds ratios from 1.3 up to 6.1). Two epidemiological studies have indicated a significant increase of cancer incidence in people living close to the mobile telephony base station as compared with the population from distant area. These data raise a question of adequacy of modern safety limits of electromagnetic radiation (EMR) exposure for humans. For today the limits were based solely on the conception of thermal mechanism of biological effects of RF/MW radiation. Meantime the latest experimental data indicate the significant metabolic changes in living cell under the low-intensive (non-thermal) EMR exposure. Among reproducible biological effects of low-intensive MWs are reactive oxygen species overproduction, heat shock proteins expression, DNA damages, apoptosis. The lack of generally accepted mechanism of biological effects of low-intensive non-ionizing radiation doesn't permit to disregard the obvious epidemiological and experimental data of its biological activity. Practical steps must be done for reasonable limitation of excessive EMR exposure, along with the implementation of new safety limits of mobile telephony devices radiation, and new technological decisions, which would take out the source of radiation from human brain.

PMID:

20693976

[PubMed - indexed for MEDLINE]

[Publication Types. MeSH Terms](#)

Publication Types

Research Support, Non-U.S. Gov't

Review

MeSH Terms

Animals

Brain/radiation effects

Cellular Phone*/instrumentation

Humans

Neoplasms/epidemiology*

Neoplasms/etiology*

Radiation, Nonionizing/adverse effects*

Risk Factors

Time

[LinkOut - more resources](#)

Full Text Sources

MORION LLC

Other Literature Sources

Labome Researcher Resource - ExactAntigen/Labome

Medical
Cancer - MedlinePlus Health Information