

IMPACT OF MOBILE PHONE ON HEALTH

A. Tihon

*Department of Hygiene State University of Medicine and Pharmacy "Nicolae Testemitanu"
Chisinau, Republic of Moldova*

*E-mail: aliona.tihon@usmf.md

Public concerns about the possible health effects of mobile phone usage receive a lot of attention. There has been much debate surrounding the possible health effects of cell phone use. People can avoid the health hazards by understanding what the risks are and how to avoid them. Medical researchers continue to examine any health risks associated with mobile phone use.

With so many people using cell phones, it's easy to see why. The International Telecommunication Union reported nearly 6 billion mobile phone. That's 86 out of every 100 people worldwide. Mobile phones support a variety of technical functions, most basically voice and short message services (SMS or text messages) enabling two-way communication in real time or near-real time. Several aspects of the impact of mobile phones on personal health are self-evident, for example, the greater ease with which health professionals and patients can reach and leave messages for one another because of fewer barriers related to time of day or location. Possible health hazards from mobile phones arise from the use of the phones themselves and via the base stations that relay signals. Except for an increase in traffic accidents induced by the use of mobile phones in cars the evidence for a health hazard is at most indirect, but it cannot be entirely dismissed; the phones have not been widely used for sufficiently long for direct epidemiological studies to have high sensitivity for detecting any induced incidence of cancer, for example. Because mobile phones are often accessible only by a single individual, outreach for sensitive medical issues can be improved, such as reminders for medical appointments or information on lab results. The increased use of mobile phones also raises concerns about risks they pose to health and quality of life. Perhaps the most substantial risk is the use of mobile phones while driving. A recent review of experimental studies of mobile phones and simulated driving situations found slower reaction time to be the most common effect, particularly among drivers aged 50–80 years. As reported by the World Health Organisation (WHO), mobile phones emit radiofrequency (RF) fields a 1000 times greater than what is emitted from base stations. It's obvious that this increased emission is likely to have some adverse effect on health of users. Although there is no clear evidence suggesting that exposure to RF fields increases the risk of cancer, but the International Agency for Research on Cancer has classified RF as a possible carcinogen in humans. It suggests that development of brain tumour due to mobile use may take at least 20-25 years. And no one has really used a mobile phone for that long.

Conclusion. The technologies that underlie mobile phones are becoming more powerful and cheaper, and evidence is beginning to emerge about the value of mobile phones for the delivery of healthcare services and the promotion of personal health.

- [1] Plunkett Research Ltd. Plunkett's wireless, Wi-Fi, RFID & cellular industry almanac. 2008. www.plunkettresearch.com/Industries/WirelessCellularRFID/WirelessCellularRFIDTrends/tabid/264/Default.aspx.
- [2] National Research Council. Identification of research needs relating to potential biological and adverse health effects of wireless communication devices. Washington DC: The National Academies Press; 2008. Available at: www.nap.edu.
- [3] Tsai C, Lee G, Raab F, et al. Usability and feasibility of PmEB: a mobile phone application for monitoring real time caloric balance. *Mobile Netw Appl.* 2007;12:173–184.