

# New health risks in the information era?

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## **Abstract**

Epidemiological studies give some support for the fear that electromagnetic radiation may be a risk to health – headaches, sleep disturbances, depression, stress, tiredness and impairment of short-term memory. A study conducted at Tallinn Technical University with students showed increased awareness of health being affected by different frequencies of electromagnetic fields (EMF), and that information influences choice of EMF products.

## **Background**

In this era of information new risks to health have emerged. Nowadays devices that produce electromagnetic fields (EMF) are used in traffic, at the workplace, and at home. For example, extensive use of mobile phones is very common during work and leisure time.

From the moment Estonia regained independence deaths due to transport accidents were the highest in 1994, 0.05% of the inhabitants died in traffic. After this year the percentage has gone down, and in 2001 nearly 0.02% of the inhabitants died in traffic accidents. One reason for so many accidents was the use of very old cars – the majority of these being over 10 years of age. Another reason was that the number of cars has been rising very rapidly. In the year 2000 a new law was adopted, the use of a handheld mobile phone was no longer allowed. In this paper the focus is on direct effects of exposure to EMF to human health.

## **Objective**

A previous study at Tallinn Technical University (TTU) concerning work with visual display units (VDU) revealed that 13.5% of 111 students suffered from headaches. Therefore in the laboratory of ergonomics of TTU the level of EMF of different types of mobile phones (ca 100) and VDU were measured. This was done in order to increase the awareness of students of different frequencies of electromagnetic radiation levels and norms, and at the same time to explain uncertainties and difficulties associated with EMF research concerning influence on

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