

German Mobile Telecommunication Research Programme (DMF) - Final Report

The results of the German Mobile Telecommunication Research Programme (DMF) were summarized in a final report which includes also an evaluation of the results by BfS. The whole final report can be ordered at the Wirtschaftsverlag NW / Verlag für neue Wissenschaft GmbH, Postfach 10 11 10, Bürgermeister-Smidt-Straße 74-76, 27568 Bremerhaven (BfS-SG-08/2008, ISBN 978-3-86509-826-9)

German Mobile Telecommunication Research Programme (DMF) - – Health Risk Assessment of Mobile Communications

Summary

High frequency electromagnetic fields from radio frequency transmitters such as mobile telephone base stations or mobile end devices (cell phones) are suspected to cause adverse health effects in man. Indications that electromagnetic fields can cause biological effects even at exposure levels below the German limit values result in uncertainties when assessing the health risk to the general public using such technologies.

In order to further reduce gaps in knowledge and to improve the scientific database for risk evaluation, the German Mobile Telecommunication Research Programme (DMF) was initiated. Co-ordinated by the Federal Office for Radiation Protection (BfS) a total of 54 research projects in the fields of biology, dosimetry, epidemiology and risk communication were carried out between 2002 and 2008.

In the last few years the degree of concern within the general public with respect to mobile telephony remained constant at a low level compared with other health risks. Only for some groups this issue was of great interest.

Despite the increasing application of the technology the exposure of the public in everyday life remained far below the German limit values. Exposures near the limit values occurs only when using some mobile end devices near the body (e. g. cell phones).

The previous indications of possible health effects due to high frequency electromagnetic fields have not been reproduced. These concerns include the influence on sleep, cognition, blood-brain-barrier, immune parameter, reproduction, development, the processing of visual or acoustical signals, as well as the development of cancer, tinnitus or headache. No new indications concerning possible health effects were found, in particular no athermal mechanism.

In summary, the DMF results significantly improved risk assessment and communication with the public. However, two questions could not be answered satisfactorily eg the questions on health risks from long-term use of mobile telephones and if children could be more exposed or more sensitive to high frequency electromagnetic fields than adults. Thus, the careful use of wireless communication technologies is still warranted. It is indispensable to retain the appropriate precautionary measures formulated by the BfS and the German Commission for Radiation Protection (SSK, 2006), especially with regard to children and young ones.