



Responding to Scientific Uncertainty

Research on the safety of radio signals has been underway for more than 50 years and international guidelines have been developed that provide protection for all persons against established health effects. Although scientific uncertainty remains, continuing research has reduced the knowledge gaps. Industry has responded through voluntary initiative such as supporting research, compliance with standards and provision of information.

Uncertainty in Context

While existing safety guidelines are regarded as protective of all persons, uncertainties are often highlighted by media referring to single studies claiming effects at levels of exposure below accepted safety guidelines. Often these studies have not been published in a peer-reviewed journal, lack independent replication or have not used best practice scientific methodology. The steps of study, publication and independent confirmation are key parts of establishing reliable scientific evidence. The scientific process can never deliver an absolute guarantee of safety, however, the World Health Organization (WHO) says that the scientific knowledge in this area is more extensive than for most chemicals and:

'With more and more research data available, it has become increasingly unlikely that exposure to electromagnetic fields constitutes a serious health hazard, nevertheless, some uncertainty remains.'

The mobile communications industry is a significant supporter of independent research, aligned with WHO recommendations, with the objective of further reducing remaining scientific uncertainties.

International Safety Guidelines

Drawing on more than fifty years of research the International Commission on Non-Ionizing Radiation Protection (ICNIRP) has developed safe exposure guidelines that are endorsed by the WHO. These include substantial safety factors to provide protection for all persons against established health hazards and are reviewed on an ongoing basis. There have been many independent expert reviews of current research and the WHO reflects the consensus in this July 2005 statement:





'To date, all expert reviews on the health effects of exposure to RF fields have reached the same conclusion: There have been no adverse health consequences established from exposure to RF fields at levels below the international guidelines on exposure limits published by the International Commission on Non-Ionizing Radiation Protection...'

Industry Voluntary Response

The mobile communications industry takes public concern about possible health risks from using mobile phones or living near base stations seriously. Beyond supporting independent research the industry is addressing these concerns by taking further voluntary actions on mobile phones and base stations.

Mobile Phone Usage

Mobile phones are tested for compliance with safety standards when operating at maximum power and manufacturers have made this information available in handbooks or websites. During a call the phone power is automatically adjusted to operate on the lowest level needed for call quality. Also, text messages result in lower exposure due to their short duration. Individuals who are concerned can use a personal handsfree device, which significantly reduces exposure to the head.

Location of Base Stations

Base stations must be located where people want to use their phones, with more being needed in urban areas where more calls are made. The location of base stations and their operating powers are adjusted to minimise interference between sites. As networks evolve additional sites, operating at lower powers are needed to support more phone users. Measurement surveys generally show maximum levels from base stations in public areas are generally less than 1% of the international guidelines and that mobile communications contributes only a small part of the total environmental radio signals. In selecting locations, many operators engage in extensive consultation processes through local planning authorities and a variety of information tools have been developed.

Where to go for more information

GSM Association: <http://www.gsmworld.com/using/health/index.shtml>

World Health Organization: <http://www.who.int/peh-emf/>

International Commission on Non-Ionising Radiation Protection: <http://www.icnirp.de/>

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