

Mobile Telephony and Health – Manufacturer Response

a report by

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Over the past decade, mobile phones have become such an important communication tool that, in some countries, more than half the population owns a handset. With such widespread use, it is not surprising that issues and questions have been raised about the potential health effects.

Despite the existence of numerous international scientific reviews that consistently maintain that there is no scientific evidence of any adverse health effect or effects from the use of mobile phones or from their base stations, some people remain concerned. It is an issue that the industry takes seriously and is committed to addressing responsibly.

The effects of mobile phone use is one of the more complex public health issues to emerge in recent times. It combines the legacy of past health debates with the iconic status of mobile technology and is complicated by the complexity of the science of electromagnetic fields. This presents a challenge for industry, governments and consumers. Much of the debate focuses on how to address these concerns in a way that is consistent with a science-based assessment of the risks.

The greatest difficulty to deal with, for both industry and government, is the inability of science to prove that something is safe – that is, to prove a negative. Science can only ever test the hypothesis that it is investigating at the time, but the public demands comprehensive guarantees of safety. This is the fundamental disconnection that industry, government and consumers must come to terms with.

That said, the industry is confident in the safety of its products because the potential impacts on humans of radio frequency (RF) energy have been studied in great detail over the past 50 years. More recently, substantial numbers of studies that specifically address mobile telephony have either been completed or are under way. In fact, there are more than 350 such studies specifically investigating the emissions from mobile phones.

As *Table 1* shows, numerous national and international expert panels from around the world

have recently reviewed and evaluated this large body of scientific literature, covering laboratory, clinical and epidemiological research.

These experts have consistently concluded that no public health risks have been demonstrated or been indicated with regard to the use of mobile phones. Recent expert assessments confirming scientific consensus on mobile phone safety include: the World Health Organization (WHO) (2000); a specially formed expert group of eminent scientists in the UK (2000); and the governments of Canada (1999), Britain (1999), France (2001) and Germany (2001).

The most recent scientific advice comes from the Health Council of the Netherlands (GR). In announcing its review of the research in January 2002, GR stated:

“The electromagnetic field of a mobile telephone does not constitute a health hazard, according to the present state of scientific knowledge. Therefore, there are no reasons for a revision of the exposure limits.”

The WHO's current advice states:

“None of the recent reviews have concluded that exposure to the RF (radio frequency) fields from mobile phones and their base stations cause any adverse health consequences.

Present scientific information does not indicate the need for any special precautions for use of mobile phones.”

In March 2001 the American Cancer Society (ACS) presented the findings of its review of the research on mobile phone technology and cancer. The review concluded:

“In summary, there is now considerable epidemiological evidence that shows no consistent association between cellular phone use and brain cancer.

...the lack of ionizing radiation and the low energy

Table 1: Independent Expert Group Reviews

National Radiological Protection Board (NRPB)	1993, 1999	http://www.nrpb.org.uk
The International Commission on Non-Ionizing Radiation Protection (ICNIRP)	1996, 1998	http://www.icnirp.de
European Commission Expert Group:	1996	http://europa.eu.int
The Royal Society of Canada	1999, 2001	http://www.rsc.ca
Independent Expert Group on Mobile Phones (IEGMP) Stewart Report (UK)	2000	http://www.iegmp.org.uk
Health Council of the Netherlands	2000, 2002	http://www.gr.nl
Zmirou (France)	2001	http://www.sante.gouv.fr
Campos Electromagnéticos y Salud Pública (Comité de Expertos Independientes) (Spain)	2001	http://www.msc.es
Commission for Radiation Protection/ Strahlenschutzkommission (SSK) (Germany)	2001	http://www.ssk.de
European Committee on Toxicology, Eco-toxicology and the Environment (CSTEE)	2001	http://europa.eu.int

level emitted from cell phones and absorbed by human tissues makes it unlikely that these devices cause cancer.”

These statements provide the essential starting point for the industry’s response to this issue. The industry builds on this with its commitment to continuing to fund further independent research that addresses the WHO research agenda. In other words, this research is designed to ensure that any identified gaps in knowledge are addressed and that any new scientific issues that are raised are addressed through the proper peer-reviewed scientific process. Over time, this process will assist public health agencies such as the WHO to make even more definitive statements for the benefit of consumers.

To supplement the scientific process, communication clearly plays a vital role in addressing consumers’ immediate need for information. Here, the MMF plays a number of roles: the co-operation with governments and consumers alike to address information needs, as well as working within the industry to ensure that it is providing all relevant and useful information regarding mobile phones.

A clear example of this approach is the reporting of specific absorption rate (SAR) values for mobile phones. SAR is the unit of measurement for the amount of energy absorbed by the body when using a mobile phone. It is a complex measurement designed to demonstrate compliance with exposure standards and, recently, consumers have begun to request more information about it.

To address this need – and to demonstrate the commitment of the industry to respond to consumer questions – mobile phone manufacturers within the MMF have been voluntarily reporting SAR values (with an explanation of what it is and how it is derived) on company websites and in product

documentation since October 2001. As a result of this voluntary initiative, around 300 million consumers will now have access to SAR information. Several governments have now sought to regulate this voluntary programme to ensure that manufacturers outside of the MMF also adopt the same approach.

The WHO has responded to public concerns by initiating a large-scale multinational research project to further advance the science, and to provide and recommend reliable and accurate information to assist people to make informed choices regarding mobile technology and health. The WHO has estimated that in excess of US\$100 million is being spent on the various research projects that form part of its co-ordinated programme.

Consumers should have access to the very latest and the most authoritative sources of information to respond to their questions and address their concerns. The WHO fulfils this role in a variety of ways, with one example being its provision of consumer-friendly ‘fact sheets’, which summarise the most recent reviews of the science and the conclusions that can reasonably be drawn. The WHO also provides consumers with some practical measures that they can take if they are concerned about the issue. This approach is based on a ‘precautionary approach’, which is separate from and does not undermine the science-based safety standards that the WHO itself recommends and that the industry supports.

The WHO has suggested that, if individuals are still concerned about mobile phone use, despite the absence of scientific evidence suggesting a detrimental effect on health, then they can choose to limit their exposure. They can do this by limiting the length of calls and/or by using ‘hands-free’ kits, thereby keeping mobile phones away from the head and body. This ‘personal choice’ approach is supported by the industry.

Box 1: Mobile Manufacturers Forum

The Mobile Manufacturers Forum (MMF) is an international association of radio equipment manufacturers and its members include the major manufacturers of handsets and network infrastructure accounting for sales of approximately 80% of the world's mobile phones. These members include: Alcatel, Ericsson, Mitsubishi Electric, Motorola, Nokia, Panasonic, Philips, Sagem, Siemens and Sony Ericsson.

The MMF was formed in 1998 in response to the publication of the WHO research recommendations and its main role has always been to support independent research that addresses the needs of the WHO. The research supported by the MMF, network operators and national and international health agency partners, provide the basis for even more definitive statements on the public health aspects of mobile telephony. As a necessary extension to its core activities, the MMF has also increasingly become involved in regulatory and communications issues relating to the health issue.

The WHO also plays an important role in advising governments worldwide on the state of the science in this area and, in turn, has considerable influence in the regulatory and policy arena. For example, the WHO recommends adoption of safety standards based on the guidelines of the International Commission for Non-Ionizing Radiation Protection (ICNIRP), whose guidelines form the basis of standards used in many countries.

The industry is also involved at the regulatory and policy level, but in a supportive role – providing views and other information when requested or invited by national agencies and authorities. Again, the approach to issues of research, communications and standards is very similar to that of the WHO. The industry certainly aims to be as active and responsive as it can in relation to government requests for information, which is best demonstrated by the fact that the MMF is working with many governments worldwide.

More recently, consumers have asked whether the introduction of 3G services raise new concerns. For our purposes, the basis of 3G products and services are essentially the same as that of previous generations; therefore, the same research base and the same safety standards apply. Consumers can be assured that 3G products will meet the relevant international safety standards as do current products.

Some challenges will be presented by 3G in the

deployment of the additional network infrastructure required for the new services. Generally, 3G networks require more base-station sites than existing networks, and communities around the world have become increasingly vocal in opposing the construction of sites in their vicinity. Again, it raises another paradox of this issue – the community has embraced mobile technology but opposes the local deployment of the infrastructure. While some issues will always remain, the industry has become much more sensitive and mature about infrastructure deployment, adopting, for example, a range of voluntary measures such as better community consultation and improving the provision of information.

In conclusion, the issue is certainly complex – involving the communication of complicated research and science, while acknowledging that some people are genuinely concerned and have questions that need to be answered. The industry is committed to addressing these concerns responsibly through continued support for independent research and the provision of reliable and accurate information by health authorities, industry and government.

While these concerns are taken seriously, sight must not be lost of the fact that international scientific consensus provides a sound basis for confidence in the safety of mobile technology. At the same time, it is a technology that has been embraced by millions of people for its clear benefits, including convenience, personal security and safety. ■