

Media Resource Kit

Health Concerns

We are not experts on human health and therefore the mobiles industry relies on the advice of independent national and international health authorities – including the [World Health Organization](#) – who constantly review the latest scientific evidence.

There has now been [a large number of independent expert reviews](#) that have carefully considered the more than 2900 scientific studies related to mobile phones and health.

The most recent comprehensive review conducted by the UK Health Protection Agency's independent Advisory Group on Non-ionising Radiation ([AGNIR](#)) (2012) concluded:

Although a substantial amount of research has been conducted in this area, there is no convincing evidence that RF field exposure below guideline levels causes effects in adults or children.

Exposure Levels

Although the biggest exposure to radio frequency electromagnetic radiation comes from holding a mobile phone next to your head to make a phone call, in everyday use modern smart phones operate at a fraction of international safe exposure limits.

These independently set safe exposure limits also include large safety margins (5000%) to cover any unknown health impacts.

Also, the way people use their mobile phone has changed dramatically and people now rely more on texts and email which has reduced exposure even further.

30 Minutes

In 2010 [media reports](#) incorrectly claimed half an hour of mobile phone use per day increased the risk of brain cancer, but this was a misinterpretation of the results of the 13 country INTERPHONE project. The false claim is based on a subset of results from a very small group of cancer patients in the study who reported they used their mobile phone for more than 12 hours a day (not 30 minutes a day) – which is highly unlikely.

Follow-up INTERPHONE validation studies found evidence that people diagnosed with a brain tumour over-reported their past mobile phone use and that this 'recall bias' was more likely if subjects perceive that mobile phone use is associated with brain tumours, as has been widely speculated in the media.

Because of these potential biases the INTERPHONE researchers specifically warned against focusing on extreme values: *“Rather than focus on the most extreme values, the interpretation should rest on the overall balance of evidence.”*

The [overall results](#) of the study - which included the 'heavy user' subset – found there was no link between the two most common types of brain cancers and mobile phone use: *“Overall, no increase in risk of glioma or meningioma was observed with use of mobile phones.”*

The 30 minute figure is a misinterpretation of the amount of use reported by INTERPHONE's heaviest users who all reported more than 1640 hours lifetime use spread out over 10 years –

this corresponds to about a half-hour per day. But this is just a cut off point for ‘heavy users’ in the study and, as pointed out earlier, the patients in this group reported much higher than 1640 lifetime hours and this over-reporting (i.e. an improbable more than 12 hours day) is likely to have caused the false link which did not show up in the overall combined results.

Unfortunately, a study of this size and significance that found no overall link should have helped to dispel some people’s concerns but the early misreporting of some selective and biased results may have increased concerns.

Children

It’s understandable that some parents may be concerned about mobile phone safety and their children’s use of mobiles. Kids can be more easily affected by health risks and they will more than likely use mobile phones for most of their lives.

However, the most recent independent review that specifically looked at children, published in October 2011, by the [Health Council of the Netherlands](#) concluded:

There is no scientific evidence for a negative influence of exposure to electromagnetic field of mobile telephones, base station antennas or Wi-Fi equipment on the development and functioning of the brain and on health in children.

Also, international safety standards have taken these concerns and potential risks into account when setting safe exposure limits. For example, the Chairman of the International Commission on Non-Ionizing Radiation Protection (ICNIRP), which developed the international safety standard, has concluded:

The protection system using basic restrictions and reference levels makes the ICNIRP guidelines flexible and applicable to virtually any exposure condition, and any group of population. Therefore, there is no need, or justification, for a special approach to the protection of children.

Precaution

Despite the precautions built into existing safety standards and the low everyday exposures from modern smartphones we understand that some people want to take their own steps to reduce exposure even further.

Therefore we support [independent health authorities](#) – such as the WHO and FCC – who advise people that are worried to use ‘hands-free’ devices which keep cell phones away from the head and body during calls and to limit the number and length of calls.

However, the FCC has [made clear](#) that by providing these tips it does not endorse the need for reducing RF exposure:

*Accordingly, some parties recommend taking measures to further reduce exposure to RF energy. **The FCC does not endorse the need for these practices**, but provides information on some simple steps that you can take to reduce your exposure to RF energy from cell phones. **For example**, wireless devices only emit RF energy when you are using them and, the closer the device is to you, the more energy you will absorb.*

We do not support the use of so called ‘shielding devices’ because they are often not properly tested and in many cases can increase exposure.

Warning Labels

In light of the views of the independent health authorities which have consistently found there is no solid evidence of health effects from mobile phone technologies it is difficult to imagine what kind of warning would be accurate or appropriate.

The suggestion that any sort of warning is needed would also unnecessarily concern people and unwarranted warnings can diminish the value of warnings which are genuinely required.

Differences in SAR values in the US and Europe

Mobile phone manufacturers have provided SAR information since 2001 on company websites and in manuals. The MMF also runs a SAR reporting program: www.sartick.com.

Unfortunately, there is considerable confusion and misunderstanding about the meaning of the maximum reported Specific Absorption Rate (SAR) values for mobile phones.

SAR is a measure of the rate of radiofrequency (RF) energy absorption by the body from a RF source such as a mobile phone. Each model of mobile phone is tested at maximum power output to ensure they are within the safety guidelines of the various countries they are sold in. However, mobile phones in normal everyday use operate at much lower power levels, always adapting to the minimum power required to make a call in order to preserve battery life, maximise call time and avoid network interference.

Because SAR compliance tests do not show real everyday exposure levels regulatory authorities such as the [FCC advise](#) consumers not to use SAR levels as a safety guide:

Many people mistakenly assume that using a cell phone with a lower reported SAR value necessarily decreases a user's exposure to RF emissions, or is somehow "safer" than using a cell phone with a high SAR value. While SAR values are an important tool in judging the maximum possible exposure to RF energy from a particular model of cell phone, a single SAR value does not provide sufficient information about the amount of RF exposure under typical usage conditions to reliably compare individual cell phone models.

To provide protection against established effects from RF fields, exposure guidelines have been developed by both the International Commission on Non-Ionizing Radiation Protection ([ICNIRP, 1998](#)) which are used in Europe and the Institute of Electrical and Electronics Engineers ([IEEE, 2005](#)) which are used in the USA. Because of this the same model of phone will have a slightly different SAR value in Europe and the USA.

Similarly, the two slightly different safety guideline limits should not be used to suggest some models of mobile phones sold in Europe or the USA are safer, because these values also do not reflect every day exposure levels.

IARC Classification of RF as a 'possible carcinogen'

We understand that some mobile phone users may be concerned about the classification; however, it is important to note that IARC concluded that there is the possibility of a hazard and whether or not this represents a risk requires further scientific investigation.

The IARC classification [preamble](#) and the [general remarks](#) both clarify this important point:

This Monograph is focused on the potential for an increased risk of cancer among those exposed to RF radiation, but does not provide a quantitative assessment of any cancer risk, nor does it discuss or evaluate any other potential health effects of RF radiation.

The assessment of health risks is the responsibility of another part of the WHO - the International Electromagnetic Fields (EMF) Project, which was set up in 1996 to assess the scientific evidence of possible adverse health effects from electromagnetic fields and to provide advice to governments around the world.

Following the IARC announcement in early June 2011 the WHO updated its [factsheet](#) on electromagnetic fields and public health in mid-June 2011 and while acknowledging the IARC classification have said mobile phones were not known to cause any health problems:

A large number of studies have been performed over the last two decades to assess whether mobile phones pose a potential health risk. To date, no adverse health effects have been established as being caused by mobile phone use.

In addition, the possible link with cancer is not supported by evidence of an increase in the number of brain cancer cases during the rapid increase in mobile phone use globally according to the 2014 [World Cancer Report](#) published by IARC:

Time trends in glioma incidence based on Nordic countries and the USA exclude any large increase in incidence attributable to mobile phone use, albeit with reference to a relatively short time from initiation of exposure. No association was observed between mobile phone use and other cancers.