

# Mobile phone 'shields' are unnecessary and their effectiveness is unproven

The Australian Mobile Telecommunications Association (AMTA) relies on the advice of national and international health authorities and regulators who have found that devices designed to 'shield' mobile phone users are unnecessary and their effectiveness in reducing exposure in everyday use is unproven.

## What do the experts say about the devices that claim to reduce exposure from mobile phones?

The current (June 2011) World Health Organisation (WHO) [Fact Sheet N° 193](#) says:

*The use of commercial devices for reducing radiofrequency field exposure has not been shown to be effective.*

Regarding these products, the Australian Radiation Protection and Nuclear Safety Agency (ARPNSA) [Fact Sheet N° 5](#) says:

*Scientific evidence does not indicate any need for such devices since they cannot be justified on health grounds and their effectiveness in reducing exposure in everyday use is unproven.*

In their most recent [Fact Sheet N° 14](#) ARPANSA also warned consumers that devices which claim to protect users from mobile phone radiation may actually increase the phones output power, reduce battery life and interfere with reception:

*Tests have shown that many of these devices can reduce your exposure when the phone is set to transmit at maximum power. However, because phones have automatic power control, these shields make the phone work harder, transmitting more power, increasing heat and reducing battery life.*

*The incoming signal to the phone will also be reduced so the phone may not work in poor signal areas.*

In order for consumers to make an informed decision, AMTA suggests consumers seek advice from independent health agencies and consider the body of scientific opinion before buying these sorts of products.

Consumers should be aware that the WHO's [most recent advice](#) (2011) on mobile phone research is:

*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.*

## Do these devices do what their manufactures' claim?

The range of 'shielding' devices currently available includes stick-on deflective holographic or ceramic absorbing disks, passive electronic chips, metallic fibre patches, antenna clips, phone covers containing passive antennas and foil-lined cases and pouches.



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Consumers should look for science-based facts about these products, including independent test reports in real life use conditions to confirm any marketing claims.

Device manufactures should accurately reference the prevailing views of major independent health and scientific organisations, such as the WHO.

A number of companies selling these products have already been prosecuted in Australia and overseas for making unsubstantiated health claims and misleading consumers.

In February 2002, the US Federal Trade Commission (FTC) charged two companies which sold devices marketed under the names 'SafeTShield' and 'WaveShield' that claimed to protect wireless phone users from radiation with making false and unsubstantiated claims. According to FTC, these defendants lacked a reasonable basis to substantiate their claim.

Also, in two separate cases, the Australian Competition and Consumer Commission (ACCC) took action against two Melbourne companies, Phoneflasher.com and Purple Harmony Plates International, after they falsely claimed their products reduced radiation exposure.

In May 2002, the UK Government published a report<sup>1</sup> into the effectiveness of mobile phone shielding and absorbing devices. The report found these devices either did not work at all or that they significantly interfered with the normal operation of the phone and that the phone's performance was 'sharply reduced' in weak signal areas and when used inside buildings.

The FTC has been so concerned about the sale of these devices they have released two consumer alerts to warn consumers:

1. [Radiation Shields: Do They 'Cell' Consumers Short](#) (February 2002)
2. [Listen Up: Tips to Help Avoid Cell Phone Radiation Scams](#) (September 2011)

The Commission said:

*If you're looking for ways to limit your exposure to the electromagnetic emissions from your cell phone, know that, according to the FTC, there is no scientific proof that so-called shields significantly reduce exposure from these electromagnetic emissions. In fact, products that block only the earpiece – or another small portion of the phone – are totally ineffective because the entire phone emits electromagnetic waves. What's more, these shields may interfere with the phone's signal, cause it to draw even more power to communicate with the base station, and possibly emit more radiation.*

More importantly, devices which claim to act as 'shields' may significantly interfere with the normal operation of the phone. Reduced or redirected transmission levels caused by shielding products can interfere with call reception and quality and cause calls to drop out.

Before mobile phones can be sold in Australia, in addition to strict safety requirements, they also have to meet hundreds of regulations and network compliance tests to ensure each phone model performs



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in all conditions and does not interfere with other devices and works on the full range of available wireless networks.

A simple device which blocks or redirects the phone's signal can adversely affect the network performance of the phone leading to more dropped calls and substandard performance.

In fact, a handset fitted with a 'shielding' device may have difficulty connecting with a network and the handset will have to 'power-up' to make a connection and this could actually increase a user's RF exposure, which is counterproductive to what these devices claim they can do.

While some claim that handsets have been tested to show a reduced exposure in laboratory conditions, they have not met the hundreds of compliance tests required by standards and network operators to ensure each phone model performs in all real life conditions and does not interfere with other devices and works on the full range of available wireless networks.

Fundamental to the design and acceptable operation of a mobile phone handset is the integration of the antenna and an understanding that the entire handset forms part of the antenna. The antenna cannot be treated as an add-on at the end of the design phase.

The World Health Organization (WHO) said of these types of devices in June 2000 (Fact Sheet N° 193):

*Scientific evidence does not indicate any need for RF-absorbing covers or other "absorbing devices" on mobile phones. They cannot be justified on health grounds and the effectiveness of many such devices in reducing RF exposure is unproven.*

The then leader of the WHO research project looking at mobile phones and health, Dr Michael Repacholi, also cautioned against the purchase of such 'shields'<sup>ii</sup>. He said:

*As for these sleeves that are supposed to absorb the radiation, we wouldn't recommend the sleeves because you could be redistributing the radio frequency field from the antenna, you would be modifying the operation of the phone.*

### **If I have concerns what is the best way to reduce exposure from my phone?**

The WHO's latest [Fact Sheet N° 193](#) also provides information on how to effectively reduce mobile phone exposure:

*In addition to using 'hands-free' devices, which keep mobile phones away from the head and body during phone calls, exposure is also reduced by limiting the number and length of calls. Using the phone in areas of good reception also decreases exposure as it allows the phone to transmit at reduced power*

The most effective and practical steps that people can take to reduce exposure if they are concerned include:



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1. Use a hands-free kit or loudspeaker so the mobile is away from the head and body
2. Use text messages when practical
3. Limit the length or number of calls
4. Use your phone in areas of good network reception

Mobile phone systems (mobiles and base stations) are designed, built and tested to comply with strict science-based safety standards, which have substantial in-built safety margins.

Handsets and base stations are also designed to reduce power automatically to the lowest possible level to maintain a good quality connection. In practice, this means the mobile system automatically reduces the emission levels and lowers exposure.

## Additional Information

[World Health Organisation \(WHO\)](#)

[Australian Radiation Protection and Nuclear Safety Agency \(ARPANSA\)](#)

[EMF Explained](#)

[US Federal Trade Commission](#)

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<sup>i</sup> Manning MI and Densley M: On the effectiveness of various types of mobile phone radiation shields, SARTest Report for the Department of Trade and Industry 0113, June 2001.

[http://www.dti.gov.uk/industry\\_files/pdf/R500016att.pdf](http://www.dti.gov.uk/industry_files/pdf/R500016att.pdf)

<sup>ii</sup> Caution plea on mobiles: 'Herald Sun' 12 August, 1999



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