

Mobile Base Stations and Health

For many of us, mobile phones are an essential part of everyday life. It's the most convenient way to stay connected to people and online information.

In order to work, our phones and wireless broadband devices connect to a network of mobile base stations. You can see antennas and base station equipment in many different places, including building rooftops, roadside poles, and at community facilities.

The mobile phone carriers (Telstra, Optus and Vodafone Hutchison Australia) are responsible for installing and upgrading their base station networks.

These are some of the answers to questions that are frequently asked about mobile networks and safety.

I have heard there's a new base station proposed in my suburb. Are they safe?

Like many other things, base stations are subject to a safety standard regulated by the Australian Federal Government. The regulations cover lots of radio services including AM and FM radio, police, fire and ambulance communications as well as mobile phones, wireless devices and mobile base stations. Mobile base stations must comply with these regulations and information on the compliance and emission levels can be found on the national site database at www.rfnsa.com.au for each site.

Who sets the safety standard?

A government organisation called ARPANSA (Australian Radiation Protection and Nuclear Safety Agency) set the safety standard after careful analysis of national and international scientific studies. The standard is based on guidelines recommended by the World Health Organization (WHO).

What about the increase in wireless laptops and other devices? Does that change the safety of a base station?

As technology evolves and equipment is updated, the fundamental safety regulations must still be met. So, as we saw analogue technology make way for 2G, 3G and now 4th Generation mobile technologies such as LTE (Long Term Evolution), and other high speed data technologies emerging, the safety requirements stay the same – the

Standard is relevant for the radio frequency range that phones and other devices use, regardless of the technology.

What about the effect on children?

The safety standard is set at a level that protects everyone, including children and the elderly.

What do the experts say?

The WHO has a number of fact sheets about mobile phones and health available on their website. In the "[Base Stations and Wireless Networks](#)" fact sheet, the WHO states "*Considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak radio frequency (RF) signals from base stations and wireless networks cause adverse health effects*".

<http://www.who.int/mediacentre/factsheets/fs304/en/index.html>

Similarly ARPANSA's latest factsheet updated in 2012 "Mobile Telephone Communications Antennas and Health Effects" concludes that "*No adverse health effects are expected from continuous exposure to the RF radiation emitted by the antennas on mobile telephone base station towers*".

http://www.arpansa.gov.au/radiationprotection/factsheets/is_antenna.cfm

Where can I get more information?

Independent information can be obtained from:

- Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)
Ph: 03 9433 2211
www.arpansa.gov.au
- World Health Organization:
<http://www.who.int/peh-emf/en/>

Additional information can be obtained from:

- Mobile Carriers Forum
Ph: (02) 6295 8191
www.mcf.amta.org.au
- EMF Explained web site
www.emfexplained.info