



Broadcast Towers and Health

Based on current research there are no established health effects from the low RF EME exposure encountered by the public from broadcast towers.

What is a broadcast tower?

Broadcast towers are used for transmitting a range of communication services including radio and television. The tower will either act as an antenna itself or support one or more antennas on its structure, including microwave dishes. These antennas emit radiofrequency (RF) electromagnetic energy (EME). This fact sheet provides information about the concern of adverse health effects arising from exposure to RF EME from broadcast towers.



the tower almost horizontally so that as much area as possible is covered. This minimises the signal strength at ground level near the tower. The higher level RF EME therefore occurs at a height not accessible to the general public.

Typical EME exposure levels at ground level in areas surrounding FM radio and TV broadcast towers are well below the limit for public exposure in the ARPANSA RF Standard. However this may not be the case for AM radio sites where the tower itself acts as an antenna. Therefore access to the base of AM radio towers is restricted, to prevent the general public entering areas where the limits of the Standard may be exceeded.

Are broadcast towers regulated in Australia?

The RF EME emissions from broadcast towers and other communications installations are regulated by the Australian Communications and Media Authority (ACMA). The ACMA's regulatory arrangements require broadcast towers to comply with the exposure limits in the ARPANSA RF Standard. The ARPANSA Standard is designed to protect people of all ages and health status against all known adverse health effects from exposure to RF EME. The ARPANSA Standard is based on scientific research that shows the levels at which harmful effects occur and it sets limits, based on international guidelines, well below these harmful levels.

How much RF EME are people exposed to from broadcast towers?

Broadcast towers supporting FM radio and TV antennas are placed on the highest point in an area so the transmitted signal has a clear path to receiving antennas. The transmitted signal is projected away from

Do broadcast towers cause any health effects?

Health authorities around the world, including ARPANSA and the World Health Organization, have examined the scientific evidence regarding possible health effects from broadcast towers. Current research indicates that there are no established health effects from the low RF EME exposure encountered by the public from broadcast towers.

Conclusion

No adverse health effects are expected from living near broadcast towers.

ARPANSA will continue to review the research into potential health effects of RF EME emissions from broadcast towers and other sources in order to provide accurate and up-to-date advice.

Useful Links

ARPANSA fact sheet on RF EME
www.arpansa.gov.au/RadiationProtection/basics/rf.cfm

The ARPANSA RF Standard
www.arpansa.gov.au/Publications/codes/rps3.cfm