

What if I'm still concerned about exposure to radiofrequency energy?

First, you should be familiar with the safety language in your handset user manual. Additional sources of information are mentioned below in this pamphlet.

Some cellphone users may choose to use a headset, earbud or other similar device designed for convenient "hands-free" operation of the phone. If you decide to use these devices it should be for convenience and not because of health concerns. These devices are available through your service provider, manufacturer of the phone or various retail outlets.

Additional information

Detailed information for both cellphones and base stations can be obtained from us at [www.sacta.co.za/011 615 9800](http://www.sacta.co.za/0116159800) or from the following international sources:

World Health Organisation: www.who.int/peh-emf

International Commission on Non-Ionising Radiation Protection: www.icnirp.com

UK Radiation Protection Board: www.nrpb.org.uk

US Cellular Telecommunications Industry Association: www.phonefacts.net

Australian Communication Authority: www.aca.gov.au/standards/emr.htm

Health Canada: www.hc-cs.gc.ca

German Research Association for Radio Application: www.fgf.de

Research Centre for the Environment Compatibility of Electro-Magnetic Fields: www.femu.rwth-aachen.de

Global GSM Association: [www.gsmworld.com/technology/other hs sites.html](http://www.gsmworld.com/technology/other_hs_sites.html)

Swedish Radiation Protection Institute: www.ssi.se/english/index.html

The South African Cellular Telecommunication Association

SACTA is an independent non-profit organisation representing the mobile cellular public switched and fixed mobile telecommunications industry within the Republic of South Africa

SACTA aims to be a source of credible information, guidance, co-operation and communication for the local and global telecommunications industry, the public, regulator and Government on matters relating to radiofrequency emissions.

NOTE

The content appearing on this pamphlet has been assembled for general information purposes only. SACTA has taken every reasonable care in compiling the information, however, you are urged to consult with suitably qualified advisors before any reliance or taking any action based on information contained in this pamphlet or any other material *e.g.* Website *etc.* to which this pamphlet refers.

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FACTS ABOUT CELLPHONES AND BASE STATIONS



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FACTS ABOUT CELLPHONES AND BASE STATIONS

The use of cellphones has increased dramatically in South Africa and throughout the World. Questions are asked about how this technology works and the health and safety aspects of the equipment.

There is a vast amount of information available globally, in all forms of media, on every aspect of mobile telecommunication services and the technology. This information includes published papers on research studies conducted over the past 40 years on radio frequency emissions.

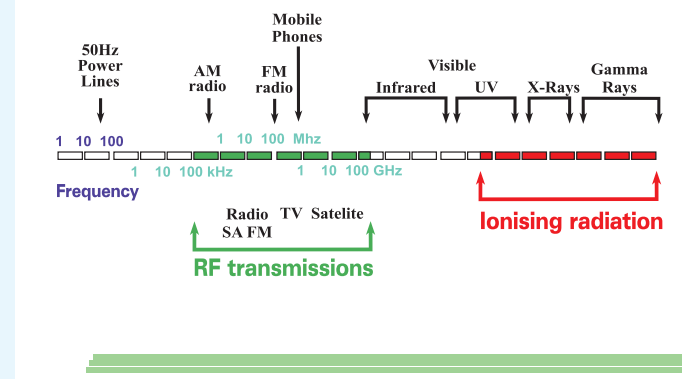
The South African Cellular Telecommunications Association (SACTA) recognises the prime importance of health, safety and technology issues related to the use of mobile communication and technologies. SACTA is committed to ensure that the public has access to factual information that will educate and inform and has accordingly compiled this brochure.

How Mobile Communication Works

Mobile Communication and Radiofrequency Energy

Radiofrequency (RF) emissions are electromagnetic waves that transport energy as they travel through space and time. The RF energy provides the support medium for transportation of information between the base station and cellphone.

The electromagnetic spectrum



The electromagnetic spectrum covers many different frequency bands, each with its own characteristics. The RF waves associated with mobile technology fall into the “non-ionising” portion of the spectrum. This means the waves are not capable of breaking chemical bonds in biological structures or removing electrons (ionisation) from constituent atoms. In this respect, the RF emissions are very different from, and should not be confused with, the ionising radiation produced by x-rays and gamma rays.

When a person talks on a cellphone, it transmits a signal that is received by a nearby base station antenna. This cellphone transmits and receives low power, RF signals that allow the sound of your voice or other data to be conveyed to another user.

Your cellphone transmits power to an average level of 0.25 watts (during a conversation). However, while you are in the midst of a conversation, it will only transmit the minimum power required to maintain the call, which, in most urban areas, is about 0.063 watts. This automatic power adjustment feature helps to lengthen the life of the cell phone battery and reduces interference.

Is there any evidence of an adverse health risk from the use of cellphones?

The health and safety aspects of radiofrequency energy have been the subject of intensive studies for over 40 years. The preponderance of scientific evidence indicates that there are no adverse health effects from the use of cellphones and the operation of a mobile cellular network. Periodic reviews by numerous government agencies, international health organisations and scientific bodies support the observation that the signals from cellphones pose no health risk. The base of scientific knowledge related to RF emissions continues to expand with a significant amount of research now being conducted under the directorship of the World Health Organisation (WHO) www.who.int/peh-emf.

The South African Department of Health sets out safety guidelines for all emission throughout the electromagnetic spectrum. These guidelines were developed by the International Commission on Non-Ionising Radiation Protection (ICNIRP). The ICNIRP guidelines were endorsed by the European Commission in July 1999 and subsequently by the UK government in May 2000. The World Health Organisation (WHO) also endorses the use of ICNIRP as a suitable safety standard for RF (www.icnirp.com).

What about base stations?

Claims that base stations are harmful to health are not borne out by established scientific opinion. The World Health Organisation's position is that the radio frequency fields around base stations are typically a fraction of the levels stated in the safety guidelines and therefore do not constitute a health risk.