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IS THERE ANY RELATED STUDY IN MALAYSIA?

In 1996, a study by the Inter-agency Ad-Hoc Scientific Committee comprising the Ministry of Health, UKM, UM, MINT, SIRIM, JTM and UTM concluded that there is no conclusive evidence to indicate that RF emission exposure at levels normally encountered will cause health effects. An extensive study carried out by the Malaysian Nuclear Agency (MNA) found that the average RF emission level recorded near telecommunication transmitters in Malaysia is very low and in compliance to the exposure limit set by ICNIRP and MCMC.

A recent study by UNIMAP found no established links between the often reported health effects such as dizziness, headache, nausea, loss of focus and etc with the exposure to RF emission.

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WHO MONITORS THE RF EMISSION FROM TELECOMMUNICATION TRANSMITTERS IN MALAYSIA?

MCMC regulate and monitor RF emission from these transmitters in accordance to the enforced Mandatory Standards and exposure limit. Any non-compliance to the Mandatory Standards and exposure limit shall be liable to a fine not exceeding RM200,000.00.

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HOW DOES THE PUBLIC FILE ENQUIRIES OR COMPLAINTS IN REGARDS TO RF EMISSION?

All enquiries and complaints may be directed to **MCMC CONSUMER COMPLAINTS BUREAU**. Kindly refer to the **CONTACT US** section for details.

Further information regarding RF emission may be obtained at <http://rfemissions.skmm.gov.my>



RF Emission Video
on Youtube

CONTACT US

HEADQUARTERS

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SMS : SKMM ADUAN [Details of Complaints] and SMS to 1588

REGIONAL OFFICES

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10 FAQ's RADIO FREQUENCY EMISSION



1

WHAT IS RADIO FREQUENCY (RF) EMISSION?

RF Emission is an electromagnetic wave that travels through a medium or space. There are two types of electromagnetic wave emission:

Ionizing Emission has sufficient energy to induce chemical reactions in the body and cause excessive heating. Examples of Ionizing Emission are Gamma ray, X-ray and radioactive radiation.

Non-ionizing Emission does not have sufficient energy to ionize the atoms and molecules in the body. RF emission which is commonly used for telecommunication and broadcasting transmission is a type of non-ionizing emission.

“ RF Emission is **NOT** radioactive ”

	NON-IONIZING EMISSION					IONIZING EMISSION			
TYPE	Extremely Low Frequency (ELF)	RF Emission	Microwave	Infrared	Visible Light	Ultraviolet	X-ray	Gamma Ray	TYPE
EFFECT	NON-THERMAL Induces low currents	THERMAL Induces currents, Heating	OPTICAL Excites electron, Photo-chemical effects			BREAK MOLECULE BONDS Damages DNA			EFFECT
SOURCE	Static field, Power line	TV, Radio, Base station	Microwave oven		Lamp	UV water filter	Medical X-ray	Radioactive material	SOURCE

Source: epa.gov

2

IS RF EMISSION SOMETHING NEW TO US?

No, RF emission has existed in our surroundings for a very long time, and has been widely used since the introduction of radio and television broadcast more than 60 years ago.

3

WHAT ARE THE EXPOSURE LIMITS FOR RF EMISSION?

The exposure limits for RF emission defined by the International Commission on Non-Ionizing Radiation Protection (ICNIRP) and MCMC are 4.5 W/m² at 900MHz frequency, 9W/m² at 1800MHz frequency and 10W/m² at 2000MHz frequency and above. ICNIRP is an independent scientific body recognized by the World Health Organization (WHO) and the Ministry of Health Malaysia. The exposure limits cover frequencies for 2G, 3G and 4G technologies. The limits also incorporate very large safety factors to protect the general public, including the elderly and children.

4

IS IT TRUE RF EMISSION IS HARMFUL TO HEALTH?

Conclusive scientific evidences have not shown that RF emission from telecommunication transmitters cause health effects such as headache, memory loss, skin irritation and cancer.



WORLD HEALTH ORGANIZATION (WHO-2006)

“Over the past 15 years, studies examining potential relationships between RF transmitters and cancer have been published. These studies have not provided evidence that RF exposure from the transmitters increase the risk of cancer.”

Public perception of risk:

“Some people perceive risks from RF exposure as likely and even possibly severe. Several reasons for public fear include media announcements of new unconfirmed scientific studies, leading to a feeling of uncertainty and a perception that there may be unknown or undiscovered hazards.”

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ARE THERE ANY INTERNATIONAL STUDIES ON THE EFFECTS OF RF EMISSION TO HEALTH?

Numerous studies have been conducted throughout the world over the years. Here are some of the findings made by relevant international bodies: -

“The 10-year study, carried out in 13 countries (Australia, Canada, Denmark, Finland, France, Germany, Israel, Italy, Japan, New Zealand, Norway, Sweden, and UK) has found **no conclusive increase in brain tumors**” – **Interphone Study, May 2010**

“The World Health Organization (WHO), based upon the consensus view of the scientific and medical communities, has stated that **cancer is unlikely to be caused** by cellular phones or their base stations and that reviews have found **no convincing evidence** for other health effects.” – **WHO, May 2010**

“An assessment was published in 2007 by the European Commission Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR). It concludes that the three lines of evidence, viz. animal, in vitro, and epidemiological studies, indicates that **“exposure to RF fields is unlikely to lead to an increase in cancer** in humans.” – **SCENIHR, March 2007**

“The balance of evidence indicates that there is **no general risk** to the health of people living near to base stations on the basis that exposures are expected to be small fractions of international guidelines.” – **Steward Report, May 2000**

“The panel considered epidemiologic studies of populations living near base station transmitters to be less valuable, given the low radiofrequency fields in the vicinity of these transmitters.”

– **The Royal Society of Canada, March 1999**

There are also numerous findings allegedly linking RF emission exposure to various health effects based on circumstantial evidences, inconclusive findings and incomplete studies. These findings are often sensationalized leading to fear and confusion.

5

WHAT IS THE RF EMISSION LEVEL EMITTED BY TELECOMMUNICATION TRANSMITTERS IN MALAYSIA?

Based on various inspections, the average RF emission level recorded from telecommunication transmitters in Malaysia is 0.000093W/m² compared to the exposure limit defined by ICNIRP and MCMC. The emission level is too low to cause health effects.

6

SHOULD THERE BE A PARTICULAR DISTANCE BETWEEN TELECOMMUNICATION TRANSMITTERS AND HOMES?

There are physical safety distances defined under the Ministry of Housing and Local Government Guideline 2002. This is to protect the public from improper physical installations and falling objects from these structures. **(In terms of RF emission however, the emitted level is too low to require any additional distance requirements.)**