

THE EFFECTS OF HEALTH IN THE CITY BASRAH THE USED OF BROADCAST AND INTERNET COMMUNICATION ACROSS TOWERS

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ABSTRACT

There is growing concern among the population about the effects that Environmental exposure to any source of "uncontrolled" radiation may have on the public health. The concern arises from the knowledge of a debate about the impact of electromagnetic and during our visit to some of the towers and was detected cases affected by pain in the head and increase the heart rate and bring down the cases of the fetus, and whenever increasing frequencies needles frequently influence.

KEYWORDS: Trans-Receive Station (BTS), Communications Services (PCS), Studio-To-Transmitter, Electromagnetic Field (EMF), Tower, Wireless, Frequency Radiations (RFR)

INTRODUCTION

Equipment's used by human are rapidly increasing and researchers try to pass the limits and save time. Users mostly are not aware of the disinfections of electromagnetism field and frequencies on the sensitive body cells and tissues as well as on their children, while these frequencies may cause disinfections on the body cells (1) Basra province is one of Iraq's provinces and is the second largest Iraqi city, bordered by Kuwait and Saudi Arabia to the south, and Iran to the east, the border province of Basra to local shares with all of the province of ThiQar, Maysan, north, west and Muthanna. Basra is the port of Iraq, the sole, and the perpetrator of the main sea, as well as historical preservation oil fields rich, including Rumaila fields SAA, and Situated where located in the plains of Mesopotamia, the fertile, it is one of the main centers for the cultivation of rice, barley, wheat, millet, is also famous for breeding herds cattle. Located on the land of varying terrain between plain and mountain plateaus and desert. An area of 19,070 km² and a population of about 3.8002 million people (according to statistics from 2009 and where the humidity is high and this leads to a somewhat weak signal and start up companies towers for frequent users of Internet and communications in Basra, where the number of towers erected by the companies to over 900 tower across Basra

SPECIFICATIONS OF TOWER

Base Trans-Receive Station (BTS), is very important part of GSM or CDMA architecture. It is used for transmitting as well as receiving purposes. It contains three sectors in it having 120o coverage angle each. Handover and handoff process is also occurred at this terminal due to which there is the transmitting and breakdown of calls occurred. It emits the electromagnetic radiations. All the traffic measurement are measured from this site (2). It needs a unique local authentication password to access all its data Due to the public concern on the installation of Communication transmission towers on the health effects from the exposure of radio frequency radiations (RFR), the assessment was conducted through literature works and we have proved the presence of health effects due to radiation from cellular towers. We cannot

abandon the towers as they are the most component of the communication infrastructure (4). It is the people who need communication and thus towers are installed where users are. Different bodies worldwide and countrywide usually regulate the deployment of towers and their associated radiation, where the exposure limits has to conform with that of the European Standards for electromagnetic exposure limits has formulated a committee to assess the EMF radiation exposure. There are many overlapping sources of radiofrequency and microwave emissions in daily life, both from industrial sources (like cell towers) and from personal items [cell and cordless phones, personal digital assistants (PDAs), wireless routers, etc.]. Published data on typical levels found in some cities and from some sources are available. These towers are usually located on rooftops, towers and utility poles. The transmitting power of a cell phone varies, depending on the type of network and its distance from the cell phone tower. The power generally increases the further you move away from the nearest cell phone tower (9).



Figure 1

WHAT ARE MICROWAVES?

Microwaves are a specific category of radio waves that can be defined as radiofrequency radiation where frequencies range upward from several hundred megahertz (MHz) to several gigahertz (GHz). One of the most familiar and widespread uses of microwave energy is found in household microwave ovens, which operate at a frequency of 2450 MHz (2.45 GHz). Microwaves are also widely used for telecommunications purposes such as for cellular radio, personal communications services (PCS), microwave point-to-point communication, transmission links between ground stations and orbiting satellites and in certain broadcasting operations such as studio-to-transmitter (STL) and electronic news gathering (ENG) radio links. Microwave radar systems provide information on air traffic and weather and are extensively used in military and police applications. In the medical field microwave devices are used for a variety of therapeutic purposes including the selective heating of tumors as an adjunct to chemotherapy treatment (microwave hyperthermia). Radiofrequency radiation, especially at microwave frequencies, efficiently transfers energy to water molecules. At high microwave intensities the resulting energetic water molecules can generate heat in water-rich materials such as most foods (3). The operation of microwave ovens is based on this principle. This efficient absorption of microwave energy via water molecules results in rapid heating throughout an object, thus allowing food to be cooked more quickly than in a

conventional oven Cell phones transmit and receive microwave radiation at frequencies which excite rotation of water molecules and some organic molecules, associated with thermal effects and non-thermal effects. The thermal effects includes headache, sensation of warmth or burning around the ear, burning sensation on the facial skin and alteration of the blood-brain barrier (8) we are all familiar with vibrations or oscillations in various forms: a pendulum a tree swaying in the wind the string of a guitar a wave has a wave has a certain speed, frequency, wavelength (9).

$$\text{Speed} = \text{frequency} \times \text{wavelength}$$

RADIO WAVE

The longer waves are radio waves, which extends to a length of about 100 thousand kilometers. And cosmic rays are the shortest they do not exceed 1×10^{-16} of a meter linear (5). The wavelength ranges of visible light between 400 nm to 700 nm (14) Radio wave is a type of electro-magnetic field and existed in nature before man came into existence (13)

Table 1: Radio-Frequency Sources in Basra

RF Source	Operating Frequency	Transmission Powers	Numbers of Towers
AM towers	540–1400 kHz	90 KW	15
FM towers	90–100 MHz	7 KW	15
TV towers	180–220 MHz	30 KW	10
Cell towers	800, 900, 1800 MHz	20 W	635
Wi-Fi	2.4–2.5 GHz	10–90 mW	225

ELECTROMAGNETIC RADIATION (EMR)

Electromagnetic Radiation consists of electric and magnetic energy waves moving together through space at the speed of light (6). We are exposed to both natural and man-made radiation. The electromagnetic radiation may occur naturally such as ultraviolet light from the sun and as made by lightning. The EMR, generated artificially or man-made, are for fixed and mobile radio communication, radio and television broadcasting, radar and other innumerable applications (13).

EFFECTS CAUSED BY ELECTROMAGNETIC POLLUTION

Electromagnetic fields of all frequencies represent one of the most common environmental influences, and EMF exposure levels of the population will continue to increase with technological The biological effects of electromagnetic radiation are studied through investigations and research such as numerical bio electromagnetic modeling, experimental (in vivo and in vitro) investigations and epidemiological studies (7).

When our visit to one of the sites in the city of Basra, which operate at frequencies microwave and when we met with two employees working on one of the towers and found that they feel some nausea and increased strikes the heart with pain in the head and during our stay in the tower became have faulty when conducting maintenance has been running the tower card is too high the accident at the top of the tower there is a bird and while operating fallen sparrow of his frequency of the radiation emitted from the broadcast tower on the ground and says the employee that all of does not lend itself from the tower because of the emission frequencies and also we visited another site also works on frequencies microwave and we met with three employees working on the imaging device pallet Mndhu long estimated more 10 years and its first employee, a woman, when she married at what is happening load drops child and constantly more than two children and a second employee and is also a woman not getting then download the final and the employee the third, a man

has a sperm sperm is very weak because the device sends a very high frequencies and when we isolate staff from the device with a very thick Plate frequency decreased significantly after pallet protection of frequency and also applies to the Internet towers also have tater when broadcasting within the residential areas have an impact on citizens'. Also various frequencies for GSM (from 900MHz and 1800MHz) have been used in simulating the results to find the SAR, Electric field and Magnetic field variation with the mentioned frequencies and fixed transmit power using FEKO simulation software or tool Not everyone is affected in the same way and some may not be affected at all. However, there is increasing evidence that the situation is getting worse. Our electromagnetic exposure is rapidly increasing and previously healthy people are now becoming sensitized to it. In this study, I am concentrating on the cases where there have been definite effects; since this is the most efficient way in which we can find out what is going wrong and what can be done to prevent it (10). advances. Since the 1960s, anxiety and speculation has grown among the public about the consequence of casual exposure to or continuous interaction with different sources of EMF emission [12]. The neologism "electro smog" is an indication of how this concern has spread among the population many studies have demonstrated the health and environmental organizations, that there area lot of effects that produce result Electromagnetic pollution (9).

Table 2: The Impact & Microwave Radiation on Human Health

Gender	Name	Age	Work Period	Anti-Toyoplasmosis	Utra Sound	Disease
Female	A.M	35	10	POST	POST	Dropping
Female	H.H	40	11	POST	negtiv	Infertility
Male	M.S	29	7	POST	negtiv	Infertility
Male	A.A	25	5	POST	negtiv	Infertility
Male	Y.M	25	5	POST	negtiv	Infertility

The amount of this effect depends on several of the most import influences (11):

- The effect of the strength of these electromagnetic waves
- After the distance that separates us from the source of the impact of these waves
- The nature of the human body which are exposed, age, weight and genetic predisposition to disease
- The impact & microwave radiation on human health the main reason why microwaves are especially damaging is probably because of the ease with which the currents that they generate penetrate cell membranes. Cell membranes have a very high resistance to direct currents but, because they are so thin (About 10nm), they behave like capacitors so that alternating currents pass through the measily. Since the effective resistance of a capacitor to alternating current (its reactance) is inversely proportional to its frequency, microwave currents pass through the membranes of cells and tissues more easily than radio waves of lower frequencies and can therefore do more damage to the cell contents (10)

HEALTH EFFECTS OF WIRELESS TECHNOLOGY IN AND AROUND YOUR HOME

Whilst debate continues to rage as to whether or not digital wireless networking technology has a detrimental effect on health or not, it would seem to make sense not to ignore the growing concern that this new environmental pollution could have very serious long term implications for the health of the mechanised world.) (10)

Some schools refused to use wireless technologies, due to the potential health risks involved.

If we try to ignore the debate but accept there is no smoke without fire, it would make sense for us to adopt the ALARA (as low as reasonably achievable) principle. In other words, we all have our busy lives to live and most of us would prefer to ignore this subject but have a sneaking suspicion that there has to be something to explain the deterioration in modern day health and its in tandem parallels, in particular with modern wireless technology (11). there is much scientific study on our blog. You will find evidence of growing levels of insomnia and poor quality sleep, headaches, migraines, depression, concentration problems, aggression, blood disorders, heart palpitations, all of which improve or in some cases are completely alleviated when sources of microwave radiation (13), previously emitted by wireless and other technologies are removed or reduced in the sufferer's environment.

RECOMMENDATIONS

- To we are advised to stay away from residential areas as a safe distance of 400 meters and this safe distance..but the point is that not all types have the same damage, and depending on the amount of radiation outside of the tower
- Not be a tower near schools, hospitals
Not be a tower with in a residential area.
- Be the antenna height above neighboring buildings in a radius 10m.
- That is placed metal barriers from all directions
- No less than the distance between the antenna and the human body for in the direction of the beam
- Non-steering antenna in the direction of children's schools
- Requiring companies to have a maximum power density should not exceed 0.5mW /S M2 (According to the specifications allowed and that the companies provide a certificate
- (18 m–35 m) The height of the building to be the establishment of the plant above the surface within 50
- What to do about Wi-Fi Health Dangers

Because these EMFs are designed to flood entire homes and buildings, moving away from them is not an option. While they can be turned off when not in use, or replaced with hardwired connections, there are the neighboring signals to contend with. Safe Space products are designed to influence artificial EMFs, restoring coherence and balance to the fields around you by setting up a "corrective resonance." In other words, they alter the EMF, changing it from harmful to harmless

CONCLUSIONS

In our paper this we took the study myself as a teacher computers and colleague teacher nursing cases influence the man through the Towers Internet and communications through calculations and analysis from the beginning of the influence of the Internet and the frequencies are harmful to the body of man and the cause on the duration of working years disease infertility and dropping and head pain and increased heart palpitations and therefore We propose to stay away from those frequencies and a distance of not less than 300 meters and be erected towers Internet and telecommunications populated places and private areas such as the province with a population dense

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