

## **INFLUENCE OF THE MOBILE PHONE SIGNALS WAVES AND INTERNET SIGNALS WAVES ON THE MASCULINITY AND SPERM AND RATES OF PREGNANCY AND PROCREATION**

**Abdullah Farhan<sup>1</sup>, Wisam Mahdi Abas<sup>2</sup>, Waseem Saad Nsaif<sup>3\*</sup>  
and Saja Salim Mohammed<sup>3</sup>**

<sup>1</sup>Faculty of Agriculture College, Diyala University, IRAQ

<sup>2</sup>Faculty of Presidency of the Diyala University, IRAQ

<sup>3</sup>Faculty of Physical education & sport science college, Diyala University, IRAQ

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**ABSTRACT:** *With the advent of the mobile phones and the wireless internet, which spread around the world, studies and interest in this subjects began, and their effect in the human body, but because of time constraints on this invention, until now there are no studies or research that specifically describes the damage to the cell phones signals waves and the internet signals waves in the human body, so that be required approximately thirty years of continuous research on a specific group of people are using these phones to determine damages, But there are information that who talking on the cell phones for up to four hours a day leads to a decrease in spermatozoa by 25% with effect on the function and movement and distortions of the spermatozoa, and these mobile phones are issued radiation may affect the DNA that affects testicle producing testosterone and sperms. A number of researchers in the Netherlands studied Wi-Fi wireless signals waves because of their responsibility for the deterioration of the trees, where many of the trees hit the cracking and zigzags so the research team studied signals Wi-Fi. Another study was conducted to evaluate the impact of electromagnetics signals waves on the fertility of male rats, rats were divided into groups, to conduct tests sperm and to the hormonal tests, and for carrying fertility experience, rats was divided into 3 groups, the control group, the group exposure hour \ day and the group two hours exposure group \ day, for a period of 30 days, the experience conclusion that electromagnetics signals wave issued by the mobile phone have detrimental effect on the fertility of male rats. Our bodies on a daily basis are exposed to many types of radiation, whether wireless phone, wireless handheld devices or wireless tablets or even a microwave and many other technological devices that have become something essential to our daily lives. We will learn about the gravity of these rays and how to prevent them, after that proved scientific studies and research the influence of this radiation in plants and animals and thereby in humans, in particular to the point that we focus on in this research the masculinity and sperms and rates of pregnancy, and child-bearing and even the extent of their impact on the fetus during pregnancy.*

**KEYWORDS:** Electromagnetics Signals Waves, Phone Cells, Wi Fi, Fertilization, Sperms, Rates Of Pregnancy, Fetus.

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## **INTRODUCTION**

Cell phones used electromagnetic radiation in the range microwave or microwave, as the other digital wireless systems, such as data communication networks that produce similar radiation. The international Agency for Research on Cancer has classified mobile phone radiation depending on the IARC scale to Category 2b (may cause cancer). [1] Which mean they may

contain a risk of causing cancer, therefore it was necessary to further studies and research in the long term, to see the effect of frequent use of mobile phones, some of the advisory national authorities [2] recommended measures to reduce the vulnerability of their citizens as a preventive approach. Parts of a radiation wave emitted by mobile phone handset are absorbed by the human body. It is possible to reach energy summit for the waves of radiation emitted by the handset with a Global Positioning System (Global System for Mobile Communications) to 2 watts. The counterpart phone in the United States has a maximum transfer of energy up to 3.6 watts. The other digital mobile technologies such as communication technology encoded multi-access points (CDMA2000), and the digital advanced mobile phone service (D-AMPS) used the lowest producing energy, compared to less than a watt. The majority of energy produced from the mobile phone Adjust by the mobile phone measure and the regulatory agencies in each country. [3] In the most systems, examines the phone and the signal-generating stations the efficiency of reception and signal strength, and can be increase or decrease the energy level automatically, within a certain extent, to suit different situations, for example, inside and outside of buildings and vehicles. [4] The rate of absorption can be measure, whatever the energy absorbed by the human body, by the specific absorption rate (SAR), the Organized government agencies in many countries had put the great levels of the specific absorption rate by the modern headsets. In the United States, had put the agency the Federal Communications (FCC) an end to the specific absorption rate (SAR) is estimated at 1.6 watts per kilogram, calculated by using the amount of 1 gram of tissue, in order to head. In Europe, the limit is 2 watts per kilogram, calculated by using the amount of 10 grams of tissue, the values of the specific absorption rate related significantly of sized amount moderation. [5] The thermal radiation does not resemble the ion radiation; it only increases the heat of the natural material, without breaking the molecular bonds or releases the electrons from the atoms. Some Australian research conducted by subjecting samples of human sperms, in vitro radiation of radio frequency of 1.8 GHz, with the specific rates of absorption of 0.4 to 27.5 W / kg, showed a relationship between the increase in the specific absorption rate and reduced mobility with the vitality in sperms as well as an increase in oxidation, and stimulating DNA base to form an extra seat, in addition to the increase in DNA fragmentation.[6] Emery Veilles, from the Department of Obstetrics and Gynecology at the University of Chiguid in Hungary, reach in the study that the use of cell phones for long periods of time can have a negative effect on sperm production, thus the fertility in men. The researchers in this study found, contrary to the previous studies, that the cell phones can cause harm, even when it is in standby mode because they issued the continual vibrations to keep in touch with the nearest antenna. [7] The men use of for Laptop devices which Connected to Wi-Fi networks effect on the fertility, especially in cases put the device on the legs, where the scientists said that 25% of the sperms lose motility, other research said that 9% of the DNA damage. [8]

### **The electromagnetic waves interacting with the human body**

Atom elements consist of a central core (nucleus), contain positively charged protons and neutral neutrons, and revolve around this core number of negative electrons shipment, called on the number of protons in the nucleus: atomic number, while called on the total number of protons + total neutrons: atomic weight, in the most nuclei of chemical elements is the number of protons in the nucleus is equal to the number of neutrons, in some nuclei of some elements, the number of neutrons is greater than the number of protons, these elements are called isotopes, some of these isotopes are fixed, fitted atomic does not change by the passage of time and the habit, and also have a low atomic number. [9] Some of these isotopes are unstable, often is high atomic numbers and called radioisotope, these isotopes will be produced atomic

nuclei precision components, (Which mean issued the nuclear radiation), that called alpha-rays, beta rays, and gamma rays, with the passage of time these items to turn into other elements less weight, differ in their chemical and physical characteristics of the original item. There are two basic types of radiation are:

- Ionizing radiation, such as gamma rays and cosmic rays, X-rays and beta particles and alpha.
- Non-ionizing radiation, such as electromagnetic radiation which are radio and television waves and radar waves, heat waves with short wavelengths (microwave) waves and infrared and ultraviolet light and normal light.

### **Natural activity within the human body**

The human body radiates from the inside, by all of the air we breathe and the food and water that reaches his stomach, the air is the main source of natural radiation dose up to the inside of the human body, this radiation essential source is the radon a gas, which founded in the earth's atmosphere and generated by the automatic decomposition of the isotope uranium -238 that founded naturally in the rocks of the earth's crust. As well as both of the human food and the water which are main to those radioactive materials of the plant is the soil, which the plants absorb these materials with other natural materials. [10] Some of the dust that falls on the plant contain traces of the radioactive material, radioactive materials up to the inside of the human body by eating plants or the meat of animals that feed on plants, radioactive materials also come in with the water we drink where the water contains very few traces of them. So our bodies are slightly radioactive from the inside because of some radioactive elements, such as (the potassium -40) and (the carbon -14), Radioactive materials behave normally complex ways before they enter the human body.

### **Effect of nuclear radiation on the human body**

Any a living creature when exposed to nuclear radiation an ionization of atoms occurs, the atoms that make up the human body molecules, which leads to the destruction of these tissues, then human life threatening danger. Severity resulting from this radiation depends on several factors, including the type and amount of energy produced them and the time of exposure, but these radiations are two types of biological effects. [11] Physical impact and often appear as a human infected with some dangerous diseases such as skin cancer, blood and infected eyes white water and the lack of ability to fertilization. The second effect of the radiation is genetic impact and show effects on successive generations. This is shown clearly on the Japanese after the dumping of nuclear bombs on Hiroshima and Nagasaki in September 1945, which led to the deaths of thousands of people and infected burns and deformities, their grandchildren injured by dangerous deadly diseases. So must be care taken not exposed the pregnant women X-ray as a way to diagnosis, so as not to infect the child with mental retardation. The maximum and in safe nuclear radiation that must not exceed the human being is (RIM 5) per day, the REM is the unit measuring of absorbed radiation, which is equivalent to one roentgen of x-rays. The human are exposed to a lot of sources of radiation in daily life.

### **Early effects of radiation on human**

The early effects of radiation are those impacts that occur after several hours and even several weeks of acute exposure to large doses of radiation for a few hours or less. The early effects of radiation are those impacts that occur after several hours and even several weeks of acute

exposure to large doses of radiation for a few hours or less. [12] These effects include nausea, fatigue, high fever, bloody changes including inertness or de-bone marrow, gastrointestinal effects such as peel off the lining of the gut cells, and the effect may be death within a month or two after acute exposure to radiation.

The late effects of radiation on the human are that human being tremendously from radiation from natural and industrial sources.

### **Radiation effect on human embryos**

Radiation on human embryos effect depends on the growth stage, if the fertilized egg exposed during the first weeks to radiation will separate from the womb and the abortion occurs, if the age of the fetus was about three months, it is exposed to physical deformities, especially in the nervous system and the eyes, if the age of the fetus was about three months, it is exposed to physical deformities, especially in the nervous system and the eyes, but in the periods following the first three months, the fetus is exposed to a distortion of the hands and legs, embryos affected even the slightest concentrations of radiation therefore not allowed to take the rays for pregnant women.[13]

### **Influence on the masculinity, sperms and the percentage of pregnancy and childbearing**

Two recent studies published at the University of Sharjah in UAE warned from the misuse of mobile, Dr. Randa Mohammed Mustafa, physiological medical professor, the head of the Department of Basic Medical Sciences at the University of Sharjah, she called on her studies to regulate use of the mobile to reduce the negative health effects resulting from it, and avoid putting it on waist belt because its negative effects on hormones manhood. And the need to avoid a pregnant woman to the mobile phone as much as possible because of the effect on the fetal heart beat, It also stressed the need not to be used by children under the age of twelve. The teacher in Diyala University - college of Physical Education and Sports Science WASEEM SAAD NSAIF, [14] one of the researchers in these papers, stressed that also in the search, which published a global journal. Dr. Mustafa explained by about nearly six years in the study of electromagnetic waves caused by devices such as the mobile, the computer, the TV screens and the microwave ovens influences, that the electromagnetic waves interact with the vital organs in the human body and working on be strays footloose, or so called "oxidizers" in the various cells of the body that interacts with the surrounding medium. Dr. Randa explained on recent research published in the University of Sharjah: Mice that are exposed to electromagnetic waves emitted from mobile phone, (only in operating mode and not during the ringing or during a telephone call) for periods ranging from one week to four weeks, led to a severe disruption in the level of sex hormones for males, and impacted a major impact on the pituitary hormones in the brain of those sperms, indicating that this disorder possibly that might affect for the long-term to the fertility and sexual ability in men, especially when putting mobile phone constantly on the middle of the body belt. [15][16] Dr. Randa Mustafa showed the last search she had commissioned on the effects of mobile phone was on the fetus; the study proved heartbeat accelerated abnormally when pregnant women use the mobile phone, appeal not to use it only in extreme necessity for pregnant women because of its negative effects on the fetus. She added that exposure to electromagnetic waves adversely affect the electrical painter of the heart, and effect on the wall of red blood cells, especially those formed in the body after the magnetic field exposure, which leads to many diseases, especially cancers of the blood, a British study conducted recently found that the men who put their mobile phones in a trousers pocket, may affect sperms, as a result of the study, which was carried out by researchers from

the University Exeter, and published in the journal of Environment International, which is the sum of ten studies have been conducted in the past on the impact of mobile on male fertility, the researchers analyzed the sperms in 1500 sample, to determine their quality in terms of number, concentration, movement and the ability to life, where they noticed a decline in the natural ability of the sperm in the movement by 8 per cent between the male category who reserve with their mobile phones inside the trouser pocket, as such decreased the sperm's ability to life among that group by 9 per cent. The researchers explained that the proportion of the damage that may affect sperm depends on the time in which the man keeps his cell phone in his trousers pocket, with how much electromagnetic radiation emitted from the device. The men who use Laptop or PCs or other internet devices which Connected to Wi-Fi networks affect to fertility, [17] especially when put the device on the legs, where the scientists said that 25% of the sperm lose the ability to move, other research said that 9% of the DNA damage, but surely already the impact of networks on the brain and memory, especially in newborns who their resistance is low.

### **Mobile phone signals waves and Internet signals waves**

#### **Mobile phone signals waves**

The cell phone is only a two-way radio (sender and receiver) works by low energy. The phone converts user voice and writing scripts to radio waves. When a user makes a connection to these waves sent out from the cell phone to the nearest base (tower) connections. When these waves reach the base, they are directed to the main telephone network, which in turn converts it to the nearest base (tower) in the recipient person contact area. [18] These bases used radio waves to reach the cell phone telephone network so that users can send and receive calls, SMS, multimedia and other mobile phone applications. Without those bases the cellular phones will not be able to work. Bases consist of three basic elements:

- Antennas to send and receive radio signals, these two types of antennas, one of them is in the form of rod, it is used to connect mobile phones to the base (tower), the length of these antennas between 0.5 and 2.5 meters. The other type in the form of dishes and works to connect Bases to each other.
- Building pads such as mast or high-rise building antennas are installed upon in order to be suspended in the air far away from any obstacle can make waves deviate from its progress in a straight line.
- Devices to supply the base and radio devices with electric power crisis to run and be kept in reserve tanks, connected bases (towers) to each other through the ground cables or by using wireless technology such as wind microwave dishes to create a vast network of bases.

Every base (tower) covers specific geographical area called a cell; the cell phone connects to the base (tower), which provides a stronger signal usually is the closest tower, when a person moves away from the base (tower), the signal becomes weak, then the cell phone automatically adjusts the strength of the signals received, which consumes additional energy from the phone's battery in order to maintain a minimum level of communication with the base (tower). When the user is out of the scope it automatically connects the new scope where he exists with the base. [19] To provide continuous coverage in the wide areas, to provide wireless Services for the largest number of users, must provide a larger number of bases (towers). The dangerous of the cellular phone bases are on the radio rays emitted and them ability (Energy rate per unit of



time). There are three types of interaction that can occur between these rays and the cells in the human body:

- ☒ Combination between the electric field radiations with cells.
- ☒ Combination between the magnetic field radiations with cells.
- ☒ Absorption of radiation energy by the cells as a result of this happen a high degree of heat cells.

Since the radiation energy is inversely proportional to the square traveled distance, whenever the human away from the base (tower) will be reduced the ray's energy that reach his body. So the engineering design of the base (tower) is necessary to ensure not exposure human to high level energy.

### **Internet signals waves**

Wireless technologies in the IEEE 802.11 standard, a technical underpinning most wireless networks WLAN today, it uses radio waves to exchange information instead of wires and cables, also able to penetrate walls and barriers, high speed data transmission and reception Up to 54 Mbps. There are several standards for wireless networks defined by the Institute of cyber engineers, electricians IEEE, and the most famous 802.11a, acknowledged before the standard 802.11b. The latest standards today are 802.11ac, and these standards are compatible with each other often, but the extent and speeds are varying. [20] It is expected to Wi-Fi technology to evolve and change as the most of the other technological applications. It was invented and developed to serve the communications network within the local labor LAN, but without the use of wires, at the beginning the goal of them use was to Serve the laptop devices, but the rapid development of this technology it became serve the browsers of the global Internet, especially in cafes, restaurants, hotels, airports and banks. [21] It also has played an important role in audio technology across the network VoIP. And perform a great service now in sensitive places, as hospital corridors and security sites, so that the doctor access to certain applications to be able to serve patients, or the security man access to certain applications to identify undesirable persons from entering sensitive areas, and many other examples. It also added a lot to the mobile phone technology, and the possibility of its connection to the global Internet in case of presence within the Wi-Fi network scale. The modern task of it uses are transfer of images from digital cameras to the computer. After the research found that the Wi-Fi waves may lead to severe headaches, insomnia, fatigue, increased heart rate; it also leads to serious cases such as brain tumors and fertility problems and symptoms of autism and partial memory loss too. [22] The experts recommend trying to reduce the use of Wi-Fi as much as possible, and close the device while sleeping or dispensed with entirely, and replacing it with Internet cable as long as it is available to avoid damages as much as possible.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Conclusions**

We conclude from the foregoing that the mobile phone signals waves vary in form, content and the principle of work than the Internet Signals waves, but they are similar in their effects on humans, though to varying degrees, so the mobile phone signals waves affect in the human

health, especially in the fertility, rates of pregnancy, childbirth and in the health of the fetus, as well as the Internet signals waves affect in the human health the same effect, but in varying degrees depending on the nature of each case from the other, in terms of the close proximity of the signals and the duration of exposure to them. The wasteful use of the phone has bad repercussions on health, starts trouble in the nervous system, heart, circulatory system, and infertility. For the mobile phone, it may be more dangerous, because it is a high frequency (850 million vibrations per second), the mobile phone design different from the other phones that the speaker has a wireless transmitter, which means that the radio waves enveloping the brain after exit from transmission center (headset), interfere with the natural electric fields of the membranes of the cells causing cancer. To avoid the danger, some companies warn their customers to away mobile phones from their bodies and not touch them during the phone calls. Excessive use of mobile phone may lead to the destruction of the sperms; the researches indicated that the low sperms speed strongly with these people who excessive use of mobile phone compared with those who use the mobile phone in moderation. The research has shown that these radiations have severe influence damage on DNA, which affects the cells of the testes which produce testosterone or on the tubes that produced sperms. A similar study conducted at 1997, where they expose the rat testicles to mobile waves (900 MHZ transferred to 8 Hz which is similar to mobile phone waves), the search concluded at the end that this leads to a decrease in the fertility of male mouse in the form of atrophy of the testes tubes. The waves of the mobile phone reduces the number of sperm in a mouse by statistically significant. As well as the waves of the Internet and Wi-Fi may lead to severe headaches, insomnia, fatigue and increased heart rate, it also leads to dangerous cases such as brain tumors and fertility problems.

## RECOMMENDATIONS

- ❖ Avoid carry the device adjacent to the body, especially near the heart, where is this user sensitive mobile waves, but should carry the device in a handbag away from the body at least 50 cm.
- ❖ Reduce the duration of the call to the shortest possible time, where this device should not be used in chat or long calls, and we should not call more than one minute at the most, and shall not exceed the number of calls per day on the three calls, and the device is closed when it is not intended to send or receive calls and at bedtime.
- ❖ Distance between the antenna device and ear at least 2 cm during use (according to reports of the World Health Organization) reduces the density and intensity of exposure to electromagnetic waves by one-sixth, and a 20 cm by 1/64.
- ❖ Using the speaker of the device permanently, this greatly reduces the risk of exposure to these waves.
- ❖ patients with heart disease, high blood pressure, epilepsy, impaired immunity, psychiatrists and patients receiving chemotherapy have to avoid the use of mobile phone completely because the overlap of electromagnetic waves with treatment.
- ❖ Prohibits children under the age of puberty to open use of the mobile phone (World Health Organization, 1999) because children are more susceptible to health risks of electromagnetic waves in various stages of growth, as it applies to the elderly.

- ❖ Prohibits pregnant women frequent and long calls or put the mobile phone near the womb because the influence of electromagnetic waves on embryo cells in various stages of division and development, especially in the first three months of pregnancy.
- ❖ In a hospital have to closed the mobile phone because the waves effect on the medical devices such as hearing aids, heart pacemakers (must the mobile device away from the cardiac devices a distance of not less than 20 cm).
- ❖ Using the headset while driving if had to use a mobile phone so as not to hinder the use of hands driving a car.
- ❖ Closing the mobile phone when riding a plane because some devices in the plane are affected by the waves of the mobile phone as well as while in refueling stations.
- ❖ During the ringing of the mobile phone do not close it to the ear because it strongly affects the hearing.
- ❖ Do not dispose of the battery consumption of mobile phones in the litter box, but handed it over to the seller who, in turn collected and delivered to the production company where it is disposed of away from residential areas because they are polluting the element mercury that can be absorbed through the skin cells.
- ❖ There is a possibility to use the satellite to send the mobile phone waves instead of using base stations, in order to reduce the intensity of these waves and thus reduce the health risks.
- ❖ Prohibition of closed the public near the antenna on the roofs of buildings a distance less than 6 meters, the professional workers must wear a vests against the radiation signals waves.

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