

PROPER UTILIZATION OF TECHNOLOGY PARTICULARLY MOBILE PHONES:

PREVENT NEGATIVE EFFECTS THAT MAY CAUSE YOU HARM

PREVENTION IS BETTER THAN CURE

YOUR HEALTH IS VERY IMPORTANT.

**mobile phones are integral part of communication. however, if used carelessly they
can be harmful**

Acknowledgements

First of all, we would like to thank our almighty God who enabled us to conduct research on radiation and we have been able to disseminate this knowledge in our community.

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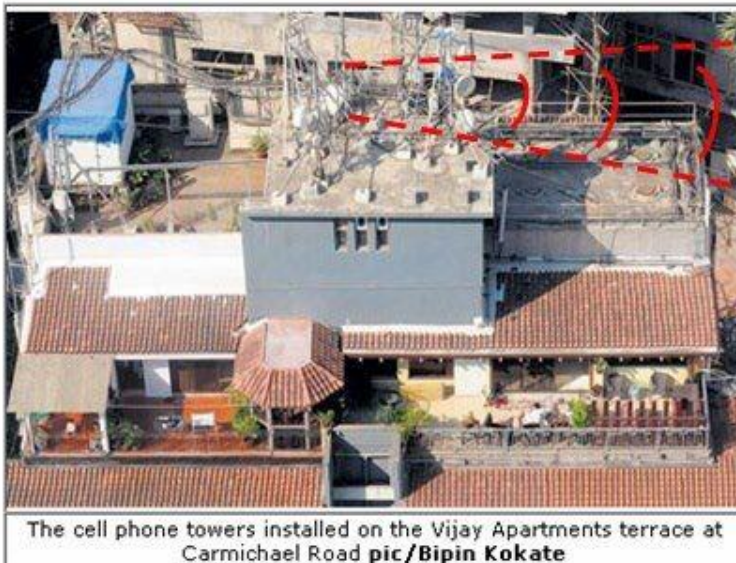
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Do you live next to or near a cell phone tower or booster? Then you need to take precaution:

CASE STUDY Usha Kiran Building, Worli, Mumbai



Usha Kiran Building

Six cancer cases in consecutive floors (5th, 6th, 7th, 8th and 10th) directly facing and at similar height as the mobile phone towers of four telecom companies placed on the roof of opposite building.

Wake up Africa! This is not a coincidence!

You are **EXPOSED !!!** ... to Cellphone Towers and their **Radiation** by:

- **Vodacom**
- **MTN**
- **Tigo**
- **Airtel**
- **Safaricom**

As if 1 Cellphone Tower is not enough in your area, which can be shared by multiple companies, they are fighting about the best places to set up new and more masts continuously and want to put up their own, to make the most money with it. This is effectively putting us all **HUMANS**,

ANIMALS and PLANTS in a very **STRESSFUL SITUATION** - a real Onslaught of **ELECTRO-MAGNETIC RADIATION** from virtually all sides.

- If you don't believe me, please just go outside (not in the street!), stand still and make a slow 360° turn carefully observing all the cell phone masts and antennas. Well this would mostly not even include the hidden ones and the small **Wi-Fi** masts, which are also affecting you.

CORRECT USE OF MOBILE PHONES IN ORDER TO AVOID DANGEROUS SIDE EFFECTS.

The following are the side effects of mobile phones when used in the wrong mode:

- ✓ Brain Cancer.
- ✓ blood cancer.
- ✓ bones cancer.
- ✓ Prostate Cancer.
- ✓ Negative effect on the reproductive system.
- ✓ Affects sperm counts
- ✓ Deforms an unborn baby in the womb
- ✓ Causes Road accidents.
- ✓ Electrical hazards when using them while on charge.
- ✓ Reduces work performance.
- ✓ Reduces classroom performance.
- ✓ Memory loss
- ✓ Reduces classroom performance (this is due to the wrong use of phones at the wrong time)
- ✓ Causes loss of good eye sight. (Rays produced and the light from phones are not friendly in the dark and are not favorable when using the mobile phone for long when sending a message.

Further reading on the side effects of mobile phones.

Knowledge is power. According to various researches on specific absorption (SAR) rates the negative effects from mobile phones are gotten from the phones themselves and from the boosters as well. SAR checks on the rate and the level at which the side effects of mobile phones causes brain cancer to the users.

After getting a report from different researchers who carried out the specific absorption rate, deliberate measures are being taken in order to prevent mobile phone users, and people who live near mobile phone boosters. Strict measures are being taken to avoid building putting up boosters in schools, and hospitals. This is because they are able to cause brain cancer, skin cancer, breast cancer, as well as highly affect the male reproductive organs. This information was given after a thorough research by various doctors and World Health Organization (WHO) and after put on every form of media for the benefit of the public.

KNOWLEDGE IS POWER.

This message is controversial and may bring up arguments on other gadgets that have ultraviolet rays and are comfortably used in the society, hence creating doubt on whether mobile phones are perilous. The wrong use of any man made gadget has a great potential of causing havoc but the most important thing is to get to know the dangerous effects of these gadgets and use them in the right manner before pointing a finger or blaming the manufacturer.

Our desire is to reach out to our readers and ensure that they are well informed about the dangers of mobile phones and also to help them know the right manner of using these gadgets since they are foreign to us because they are manufactured outside and we may tend not to understand them at all. It is therefore better to come up and write about its dangers and expose them than to keep quiet about them.

Information is an eye opener and it brings forth new ideas and solutions to problems not solved and those yet to be solved. At the same time when hidden from those who need it information becomes useless and the users become blind folded over what is rightfully theirs to know. We learn everyday even to old age here is always something new.

Let us therefore share the knowledge we have about mobile phones and ensure that the right information reaches the public for their own benefit. In order to avoid future complaints, Prevention is better than cure they say... let us do the right thing and prevent diseases that we could have avoided by acquiring knowledge. We should be aware that every gadget has a bad side effect as much as it also has great benefits.

Mobile phones should be given special attention just like people give to cars, televisions, laptops and other electrical gadgets. Mobile phone users should also acquire the habit of reading

manuals and taking heed of what is written on them that is the dos and the don'ts. Though to date the hazards of using mobile phones are not clearly put out to the developing nations who apparently have a larger number of mobile phone users in the world and are the least informed about their dangers. Yet some people will doubt this information and question government offices that is in charge of telecommunications and may chose to assume since the message has no weight. Check the following website for more information. www.whophoneshazards.com for further information.

It is difficult to get convinced that a mobile phone can have such side effects and cause such dangerous diseases. A practical measure is try to make a very long call on your phone. You will realize that as the longer you call gets the hotter your mobile phone becomes and this is associated with electricity. This heat is accelerated especially when one is speaking on phone while it is charging hence causing the phone to blow up and cause other hazards that were not called for. This heat can heat up your head to 70-80 degrees Celsius, which affects the whole head hence creating other bad situations.

It is therefore advisable to use mobile phones for the shortest time possible or if you need to make a very long call then take precautions and use the favorable measures given to you on the manual.

In order to avoid these dangerous side effects kindly observe the following:

- ✓ Use the mobile phone on a loud speaker.
- ✓ While making or answering a call ensure that the phone is not very close to your ears put at a distance so that rays are spread out.
- ✓ Use your ear phones.
- ✓ Prefer sending messages (sms) though some researchers say that too much of this can cause tremor.
- ✓ If your mobile phone does not have the mentioned accessories then try to make very short calls.
- ✓ Never use your mobile phone while it is charging.
- ✓ Never give small children telephones since their brains are still young and vulnerable.
- ✓ Never use a phone while driving a car, motor cycle or anything mobile if its urgent park the car nicely and answer or make the call.
- ✓ If it is necessary to make a long call, it is then preferable to use a land line (TTCL) for those in Tanzania.

- ✓ Never put where there are other metallic objects like keys ,earrings e.tc they are likely to blow up due to the spark in them and you know on a spark like poles repel .It is therefore advisable for mobile phone users not to keep phones in their pockets.

Arguments may rise against this book especially from people of a higher caliber or those who sale mobile phones, who feel that this will bring their businesses down. Our intention is not wrong. We are not saying that people should not use mobile phones rather people sho.uld use them in the right manner. Neither do we want to discourage them. Our aim is to create awareness in the community to be able to avoid future problems.

Further reading of this book will give you a clear understanding of what we are talking about since we will break it bit by bit for greater understanding of the use of mobile phones and you will be able to use your phones with a lot of keenness.

The book does not say that mobile phones are not beneficial they are of benefit but not every use it is permissible.

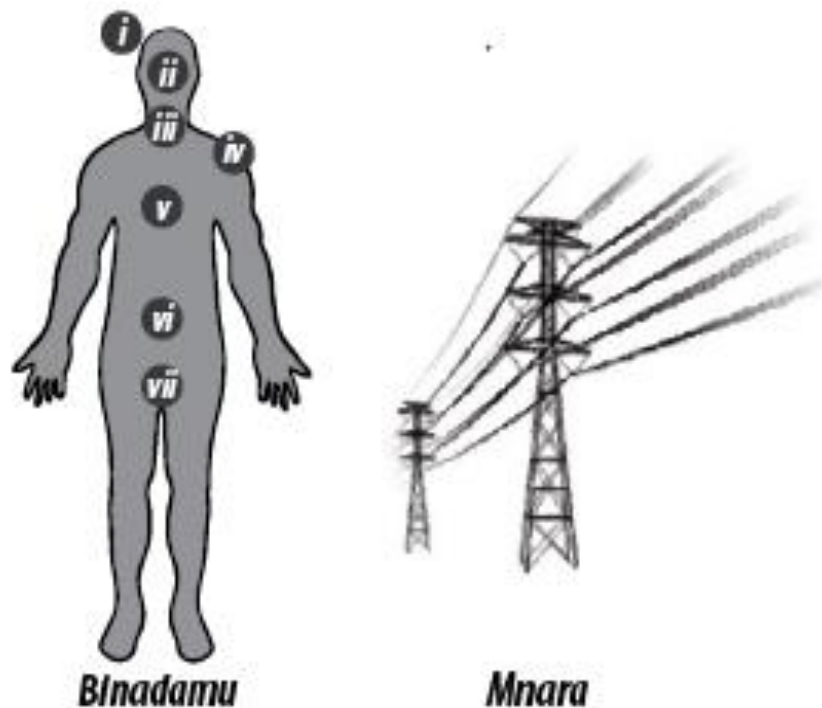
In case one makes a call to a friend the phones receives waves that rays from the booster that is close to the caller. These waves travel from the booster to the phone as shown in the diagram below. As the short waves travel to the recipient who may be close to the booster, the rays get activated upon receiving the phone hence surrounding the body of the recipient who is now exposed to these dangers.

Follow the diagram below



Every phone has an antenna some are internal while some are exposed depending on the manufacturer. Once a phone call is made, signal that comes with radiation is sent directly from the booster to telephone that's in use at that moment. The radiation that's produced at this particular moment gets into the brain and affects the brain with cancer. It directly affects the medulla oblongata which also gets over heated and affects the memory of the user.

Effects of Boosters



Diagram

From the diagram above, the roman numbers indicated on the human body shows how radiation travels in the human body and the parts where it causes bad effects.

Boosters affect those who live where they erected. According to experts they are supposed to be erected in areas where there are no settlements at all due to their effects. This was discovered by researchers from Hiroshima and Nagasaki Japan.

Key

- (i) Cancer of the hair.
- (ii) Brain Cancer.

- (iii) Cancer of the neck.
- (iv) Skin Cancer.
- (v) Breast Cancer.
- (vi) Cancer of the Stomach.
- (vii) Prostate Cancer.
- (viii) Reduction of sperm count
- (ix) Negative effects on reproductive organs as well as causing body tremor.
- (x) Leukemia.

Do cellular phone towers cause cancer?

Some people have expressed concern that living, working, or going to school near a cell phone tower might increase the risk of cancer or other health problems. At this time, there is very little evidence to support this idea. In theory, there are some important points that would argue against cellular phone towers being able to cause cancer.

First, the energy level of radiofrequency (RF) waves is relatively low, especially when compared with the types of radiation that are known to increase cancer risk, such as gamma rays, x-rays, and ultraviolet (UV) light. The energy of RF waves given off by cell phone towers is not enough to break chemical bonds in DNA molecules, which is how these stronger forms of radiation may lead to cancer.

A second issue has to do with wavelength. RF waves have long wavelengths, which can only be concentrated to about an inch or two in size. This makes it unlikely that the energy from RF waves could be concentrated enough to affect individual cells in the body.

Third, even if RF waves were somehow able to affect cells in the body at higher doses, the level of RF waves present at ground level is very low – well below the recommended limits. Levels of energy from RF waves near cell phone towers are not significantly different from the background levels of RF radiation in urban areas from other sources, such as radio and television broadcast stations.

For these reasons, most scientists agree that cell phone antennas or towers are unlikely to cause cancer

Very few human studies have focused specifically on cellular phone towers and cancer risk.

In one large study, British researchers compared a group of more than 1,000 families of young children with cancer against a similar group of families of children without cancer. They found no link between a mother's exposure to the towers during pregnancy (based on the distance from the home to the nearest tower and on the amount of energy given off by nearby towers) and the risk of early childhood cancer.

In another study, researchers compared a group of more than 2,600 children with cancer to a group of similar children without cancer. They found that those who lived in a town that could have exposed them to higher than average RF radiation from cellular phone towers in the previous 5 years had a slightly higher risk of cancer, although not of any certain type of cancer (like leukemia or brain tumors). This study estimated the children's possible exposure based on the number of towers in their town and how strong the signals were from the towers. It did not look at actual exposure of any individual child based on how far their home or school was from a tower.

One study looked for signs of DNA and cell damage in blood cells as a possible indicator of cancer-causing potential. They found that the damage was no worse in people who lived near a cell phone tower as compared with those didn't.

The amount of exposure from living near a cell phone tower is typically many times lower than the exposure from using a cell phone. About 30 studies have looked at possible links between cell phone use and tumors in people. Most studies to date have not found a link between cell phone use and the development of tumors, although these studies have had some important limitations. This is an area of active research

Studies done in the lab

Laboratory studies have looked at whether the types of RF waves used in cell phone communication can cause DNA damage. Most of these studies have supported the idea that the RF waves given off by cell phones and towers don't have enough energy to damage DNA directly.

Some scientists have reported that the RF waves may produce other effects in human cells (in lab dishes) that might possibly help tumors grow. However, these studies have not been verified, and these effects weren't seen in a study that looked at the blood cells from people living near a cellular phone tower.

Several studies in rats and mice have looked at whether RF energy might promote the development of tumors caused by other known carcinogens (cancer-causing agents). These studies did not find evidence of tumor promotion. Research in this area continues.

What expert agencies say

About cell phone towers

The 3 expert agencies that usually classify cancer-causing exposures (carcinogens) – the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), and the US Environmental Protection Agency (EPA) – have not classified cell phone towers as to their cancer-causing potential.

The **US Federal Communications Commission (FCC)** has said this about cell phone towers near homes or schools:

“Radiofrequency emissions from antennas used for cellular and PCS [personal communications service] transmissions result in exposure levels on the ground that are typically thousands of times

below safety limits. These safety limits were adopted by the FCC based on the recommendations of expert organizations and endorsed by agencies of the Federal Government responsible for health and safety. Therefore, there is no reason to believe that such towers could constitute a potential health hazard to nearby residents or students.”

About RF radiation

Some of the agencies that classify cancer-causing exposures have, however, made statements about radiofrequency radiation.

The **International Agency for Research on Cancer (IARC)** has classified RF fields as “possibly carcinogenic to humans,” based on limited evidence of a possible increase in risk for brain tumors among cell phone users, and inadequate evidence for other types of cancer. (For more information on the IARC classification system, see our document, *Known and Probable Human Carcinogens*.) IARC also noted that exposure to the brain from RF fields from cell phone base stations (mounted on roofs or towers) is less than 1/100th the exposure to the brain from mobile devices such as cell phones.

The **Environmental Protection Agency (EPA)** states:

“Exposure to radio frequency (RF) radiation has climbed rapidly with the advent of cell phones and other wireless technologies. Studies of the link between exposure to RF and to electric and magnetic frequency (EMF) radiation have found RF and EMF to be ‘potential carcinogens,’ but the data linking RF and EMF to cancer is not conclusive. Worldwide, health physicists (scientists who study the biological effects of radiation) continue to study the issue.”

Do cellular phone towers cause any other health problems?

High levels of RF waves can cause a warming of body tissues, but the energy levels on the ground near a cell phone tower are far below the levels needed to cause this effect. So far, there is no evidence in published scientific reports that cell phone towers cause any other health problems.

Can I limit my exposure?

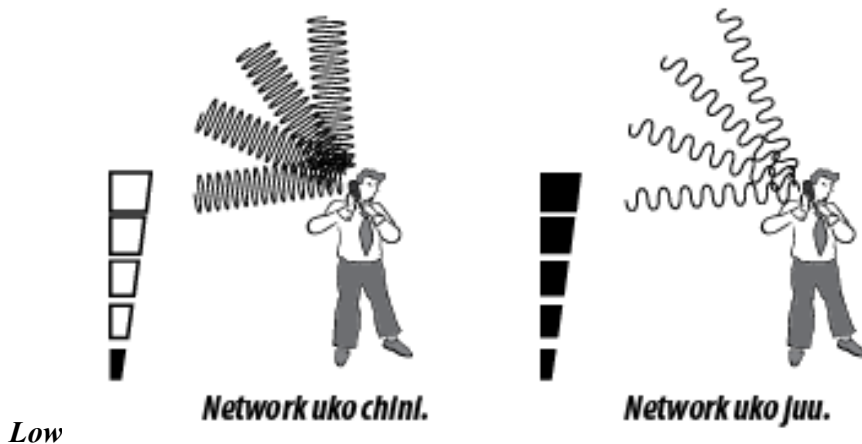
Cell phone towers are not known to cause any health effects. But if you are concerned about possible exposure from a cell phone tower near your home or office, you can ask a government agency or private firm to measure the RF field strength near the tower (where a person could be exposed) to ensure that it is within the acceptable range.

What should I do if I've been exposed to cellular phone towers?

There is no test to measure whether you have been exposed to RF radiation from cellular phone towers. But as noted above, most researchers and regulatory authorities do not believe that cell phone towers pose health risks under ordinary conditions. If you have additional health concerns, you might want to talk with your doctor.

Kindly take precaution.

When The Net Work is



Diagram

From the diagram above there is a lot of radiation taking place when the network is low. This means that a lot of energy is used and hence affects the body preferably negatively.

It is therefore advisable not use mobile phones when the net work is low; preferably use it when the net work is stable to avoid further damages. It spreads as shown in the diagram below:

Diagram.

As shown in the diagram above mobile telephone users are advised not to press these phones on their ears rather they asked to hold them at a distance or preferably use a head set. Radiation from the hand set spreads from the head and the fingers to the whole body. Take note that these rays are none ionized hence making them more harmful and the rate of their spread very fast. That is, the rays spread within 15 minutes of using these mobile phones. This was a research done by Sean Paul Fitzgerald. It is therefore advisable to take the shortest time on hand sets as possible or preferably use head sets that are provided among the mobile phone accessories. These rays are the major causes of brain cancer.

To parents and guardians who love taking to the children on mobile phones it is advisable to either leave a message with the baby sitter or matron if the child is in a boarding school, than allow the child to use the mobile phone in the wrong manner and get affected with cancer at a tender age. The brain is one of the most sensitive parts of the human body and remember prevention is better than cure. Parents please protect your children!

Hold the Phone in The Right Manner

In case you do not have an ear phone, it is important to hold the mobile phone as shown in the diagram above to avoid any effect that can be caused radiation. Or if possible just send a message.

From the diagram above user (a) has more radiation because of the holding the mobile phone tightly on the ear. While user (B) has less radiation because the mobile phone is held away from the phone.

Ear Phone.

It is advisable to use an ear phone as shown in the diagram below:



Use The Right Phone

Diagram

Telecommunication industries came up with mobile phones with an aim of improving communication by making it easy especially for business purposes. This however has taken another turn because many people intend their businesses to expand. As a result different telephone companies have come up with telephones that are not user friendly hence increasing the risk of using these gadgets.

Dangers of Using Phone close to Electrical Appliances

It is important to note that mobile phones should not be used next to electrical appliances since some of these appliances have ionized rays, and this puts the user in a very dangerous state.

These includes appliances like X ray machines, televisions, Radios, Electrical wires, Transformers, and any environment that has high electricity.

If mobile phone user uses it near these appliances they are likely to be affected with leukemia and lymphoma. It also endangers pregnant women and men's reproductive system.

When using these gadgets near these appliances one mixes the ionized rays and the non ionized rays , making the danger of exposure twice as much. It is better to switch off the telephone or to use the telephone away from these appliances.

Duration of Use of Mobile Phones.

Diagram

From the diagram above the longer you use the mobile phone the faster the rate of infection from the rays. The energy used on the radiation from the rays is equalized to a baking oven and that is what burns to the brain of the user. The human body cannot stand a lot of heat naturally. It is therefore advisable to take the shortest time possible on phone.

For instance from the diagram above, if the user takes 30 minutes of making a phone call the energy used up is 2.5 degrees Celsius. This means that those who use these phones for more than an hour are in great danger of exposure. Normal body temperature should be 35 degrees ,at at most 36 degrees, above that one risks convulsion. This means that these rays are very dangerous to the human body the heat they produce is not accommodative at all.

After using the phone for 20 minutes or 25 there is tendency of having a head ache or feeling dizzy, itchy ears, these is because of the mobile effect. And the ear tends to block.

Effects of Wrong Use of Mobile Phones



These are the negative effects caused by the wrong use of mobile phones every user is encouraged to take note of these effects and if you have started noting one of them then take the rightful measures see a doctor or use the phone in the rightful manner to avoid further damages that are irreversible.

Use of Mobile Phones in Public

Diagram

A public place should be respected even when making phone calls. It has been taken with great concern that there are people who feel very proud when handling mobile phones and would like the whole world to know or notice a phone call or the type of phone he or she is handling whether borrowed or personal.

After being carried away with incoming calls or dialed calls, we tend to speak vulgar words in public, speak lies, or become very graphic on phone. Just in case the user is a respected public figure, he or she loses their respect in a most embarrassing manner and others may never want to associate with you. Some matters are private and are not meant for other people's ears kindly postpone the phone call until you get to a favorable place then make a call this will be more comfortable for you to handle.

We would like to suggest that lectures and classes on ethics should incorporate this in their lessons since it is now a great concern in our society.

Avoid Making Phone calls or Receiving while on Charge.



In the diagram above the user was chatting on the phone while it was charging on his bed and it ended up blowing up on him due to overheating from the energy emerging from the phone and electricity.

Many Users are addicted to their phones and can't help to wait until the phone is charged up or disconnect it from the mains before answering the call. It is advisable to first disconnect the mobile phone from the main switch then go ahead with the activity on phone. Telephones are both good and bad depending on how they are used.

Effect of Rays on Plants or Seedlings

Radiation from mobile phones also affects seedlings when placed next to these plants. As an example take fertilized soil and put a seed on it and let germinate in a seedling or just plant it and take a phone that has a strong radiation and place it or 3 of them next these seedlings. You will not after a while that the seedling, seed plus the soil get burnt up by the radiation from these phones. That is how much #06# send or ok. The energy is noted on the sixth or seventh digit which normally begins with eg. 35216 (479)8125386).

Effect on the Male Reproductive Organ.

According to Dr Ashok Argwal's research , a gynecologist in Cleveland USA, keeping the phone in men's pockets while it is on is dangerous and even worse when received on the headset while the headset is in the pocket. This causes a reduction in the sperm count hence making a man unable to sire children. This was discovered after carrying out an experiment on 32 sperms of which a bigger percentage died after being exposed to these rays. The experiment was carried out because many men complained of low sperm count after sometime and raised concern about it for fear of losing their marriages. He further on discussed that stress and hunger can also cause low sperm count but for short while, soon after the problem is solved it is regained. Other appliances that affect sperm counts are X-ray machines, televisions and laptops among others so it is very important to take note of this.

The experiment was carried out by exposing the sperms to a phone that had MHz50 with 4.7 voltage at a distance of 2.5

This brought a conclusion that phones can cause a serious reduction of sperm count in men.

Effect on Pregnant Women



Pregnant woman is vulnerable to many things in her environment some of which directly affect the unborn baby. Radiation from the phone while being used by the pregnant mother spreads so fast in her body hence she is advised to use her phone after putting a dress with a heavy material or cover herself

with a blanket in order to block the rays from penetrating easily into the body. This case has caused many pregnant mothers to have still births, or go for caesarian sections. These caes are on the rise today and many women today end up in the theatres today. Pregnant women and users are also asked to avoid sleeping with phones under their pillows as this is also dangerous. The radiation from the phones are like dust in the air and as like mentioned earlier in the book ,will spread cancers and even affect the functioning of the heart of a pregnant woman. Kindly take precaution and spread the news around.

Other Effects



Kindly avoid using mobile phones while driving it has caused many nasty road accidents hence loss of lives and limbs that were not intended. A driver needs to concentrate on the road while driving without distraction. A mobile phone ringing causes serious interruption which makes him to lose focus hence cause a serious accident. The phone should neither ring nor be on vibration because vibration can cause a heart attack, or the user may receive a phone call that has a shocking message that can make one lose concentration on the road. If the car has a radio in it then radiation becomes worse it is therefore advisable to park the car and make or receive a call after switching of the electrical appliances of the car if the call is urgent. This may sound like too much work but for benefit of the user these rules should be followed. Remember prevention is better than cure.

Diagram

Do not allow your child to put the phone into their mouths because the phone may ring with a vibration which can scare the child and create a heart problem can get a shock from the phone due to the saliva that is applied on the phone.

Kindly switch off your phone when it is raining heavily lightening could strike you due to radiation and cause death or unnecessary fire.

Do not allow your child to sleep with a phone under the pillow this is dangerous as mentioned before.

When breast feeding a child do not use your phone as radiation spreads easily to the child from the user so be ware.

SAFE CELL PHONE RADIATION?

A lot has emerged concerning cell /mobile phone radiation. The RF safe radiation from mobile /cell phones in New York, announces a new proprietary shielding technology designed to combat the potential dangers of cell phone radiation exposure. The new process reduces the thickness of Peel-n-Shield to only 1mm for shielding flip cases with small tolerances between flip cover and phone.

Radiation shielded foam liners for smart phone flip cases solve two important risk factors that go unprotected when using an ordinary cell phone case vs. an RF Safe's Universal Flip Case with radiation shielded flip that protects a smart phone's display screen while providing cell phone users protection from cell phone radiation.

The basic requirement of any RF Radiation shielding is that it is electrically conductive. An example of RF Safe EMI shielding fabric is Silver plated-metalized woven nylon used in many of RF Safe's shielding products, announces a new proprietary shielding technology designed to combat the potential dangers of cell phone radiation exposure. The new process reduces the thickness of Peel-n-Shield to only 1mm for shielding flip cases with small tolerances between flip cover and phone.

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Before this gets to Africa many will already have been affected so kindly take precaution and stay safe.

View From the World Health Organization

CNN, Radiation from cell phones can possibly cause cancer according to the World Health Organization. The agency now lists mobile phone use in the same “carcinogenic hazard” category as lead, engine exhaust and chloroform.

Before its announcement, WHO had assured consumers that no adverse health effects had been established?

A team of 31 scientists from 14 countries, including the United States, made the decision after reviewing peer-reviewed studies on cell phone safety. The team found enough evidence to categorize personal exposure as “possibly carcinogenic to humans.”

They found some evidence of increase in glioma and acoustic neuroma brain cancer for mobile phone users, but have not been able to draw conclusions for other types of cancers.

“The biggest we have is that we know most environmental factors take several decades of exposure before we really see the consequences,” said Dr. Keith Black, chairman of neurology at Cedars-Sinai Medical Center in Los Angeles.

The type of radiation coming out of a cell phone is called non-ionizing. It is not like X-ray, but more like a very low-powered microwave oven.

“What microwave radiation does in most simplistic terms is similar to what happens to food in microwaves, essentially cooking the brain. Black said, “ So in addition to leading to a development of cancer and tumors, there could be a whole host of other effects like cognitive memory function, since the memory temporary lobes are where we hold our cell phones.”

Wireless industry responded to Tuesday’s announcement saying it “does not mean cell phones cause,” CTIA –The Wireless Association added that WHO researchers “did not conduct any new research, but rather reviewed published studies.

The European Environmental Agency has pushed for more studies, saying cell phones could be as big a public health risk as smoking, asbestos and leaded gasoline. The head of a prominent cancer- all employees urging them to limit cell phone use because of a possible risk of cancer.

When you look at cancer development particularly brain cancer it takes as long time to develop. I think it is good to give the public some sort of warning that long-time exposure to radiation has some effects, warns Henry Lai, research professor in bioengineering at University of Washington who has studied radiation for more than 30 years.

Results from the largest international study on cell phones and cancer was released in 2010. It showed participants in the study who used a cell phone for 10 years or more had doubled the rate of brain glioma, a type of tumor. The date, there have been no long-term studies on the effects of cell phone usage among children.

“Children skulls and scalps are thinner. So the radiation can penetrate deeper into the brain of children and young adults. Their cells are at a dividing faster rate, so the impact a radiation can be much larger, said Black of Cedars – Sinai Medical Center.

In February, a study by researchers at the National Institute of Health, revealed radiation emitted after just within 50 minutes on a mobile phone increases the activity in brain cells. The effects of brain activity being artificially stimulated are still unknown.

Manufacturers of many popular cell phones already warn consumers to keep their device away from their body and medical experts sat the other ways to minimize cell phone radiation.

The Apple iPhone 4 safety manual users’ radiation exposure should not exceedd FCC guidelines: “When using iPHone near your body for voice calls or for wireless data transmission over a cellular network keep iPhone at least 15 millimeters (5/8 inch) away from the body”.

BlackBerry Board advises users to “keep the BlackBerry device at least 0.98 inch (25 milimeters) from your body when BlackBerry device is transmitting.

The logic behind such recommendantions is that the further the phone is from the body, the less the radiation is absorbed. Users can also use the speakerphone function or an earphone to gain some distance.

Users can text instead of talk if they want to keep the phone away from their faces.

Finally, cell phones emit the most radiation when they are attempting to connect to cellular towers. A moving phone, or a phone in an area with a weak signal, has to work harder, giving off more radiation and rural areas if they want to reduce their exposure”, experts say.

www.whophonesshazad.com//

After reading this book to this point one may be afraid the goodness is there are ways to get this radiation reach you and it needs a lot of self discipline. We have explained some of the this is just a summary:

- Use a hands-free headset.
- Use a phone that places the antenna as far away from you as possible.
- Extend the antenna during use.
- Limit calls inside buildings.
- Use the phone in open spaces as often as possible.
- Limit use by children.

Once again another summary of illnesses: Here are a few illnesses and ailments that have potential links to cell-phone radiation:

- Cancer
- Brain tumors
- Alzheimer's
- Parkinson's
- Fatigue
- Headaches

Those that are underlined are frequently discovered on patients who have been affected by radiation. Studies have only muddled the issue. As with most controversial topics, different studies have different results. Some say that cell phones are linked to higher occurrences of cancer and other ailments, while other studies report that cell-phone users have no higher rate of cancer than the population as a whole. No study to date has provided conclusive evidence that cell phones can cause any of these illnesses. However, there are ongoing studies that are examining the issue more closely.

This Is What The World Would Look Like If Cell Phone Radiation Was Visible

24

It shocks many people to discover that less than 1 percent of the electromagnetic spectrum is visible to the human eye. Think about that for a moment. Take the rainbow for example, the existence of the rainbow depends on the conical photoreceptors in your eyes; to animals without cones, the rainbow does not exist. If they can't conceive the idea of one in their head, does it mean that rainbows don't exist?

Part of the spectrum we can't see is radiation. Radiation emanates from most technology, especially cell phones. Cell phones have only been around for the past 20 years or so, they've become extremely popular within the past 10, with more than 5 billion cell phone users across the globe. Multiple studies have indicated a possible link between cell phones and cancer, and explain the need for more studies, especially as cell phone use increases over time. (1) More specifically, studies show a link between EMFs and childhood leukemia.(2) Although the radiation emitted from cell phones might be small, multiply it by 5 billion and then throw time into the equation.

Cell phone use and the health affects resulting from their use is something we will see as time moves forward. They might also be one of many reasons cancer rates are skyrocketing. Electromagnetic fields emitted from appliances and cell phones are greatly overlooked, but shouldn't be. Before we get into the pictures, I wanted to provide this documentary as a source for you to further your research, it's

called *Resonance*. The way we surround ourselves with cell phones and other electronic devices, from a health perspective, is something to take notice of.

So what would it look like if cell phone radiation was visible? Artist Nickolay Lamm decided to conceptualize what our world would look like in this case, creating a series of illustrations.

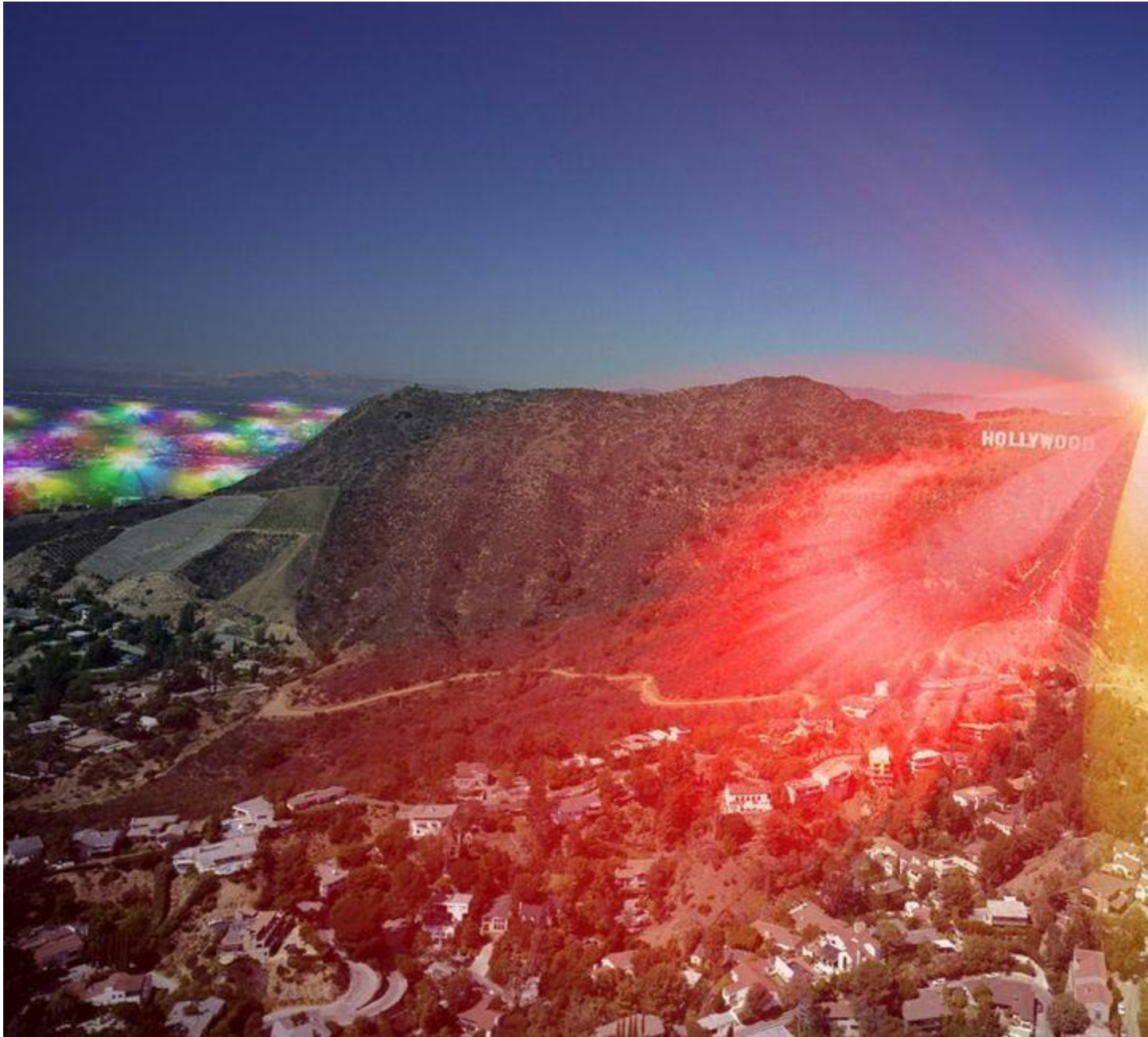
Cell phones, cell phone towers and radio frequencies are affecting our health more seriously than we might have previously imagined.



This is a “hexagonal grid of cellular base-station sites’ that cover the city of Chicago. Also known as cell phone towers, base stations sit at the corner of every “cell” in Chicago’s large network. The picture also reveals antenna signals extending beyond the original cells that provide coverage over a large part of Lake Michigan.



Above is Lamm's artwork of the Department of Commerce which is headquartered in Washington. The picture focuses on the radiation that's emanating from a single cell phone tower. The different colors represent the radiation's different frequencies.



Last but not least, here's how a long-distance cell tower radiates over the Hollywood Hills.

OTHER STUDIES.

Other studies state that radiation from mobile phone are not very harmful as radiation from ionized objects. Lets us take a look at a study done by National Cancer Institute. On cell /mobile phone and cancer risk:

KEY POINTS

- Cell phones emit radiofrequency energy, a form of non-ionizing electromagnetic radiation, which can be absorbed by tissues closest to where the phone is held.
- The amount of radiofrequency energy a cell phone user is exposed to depend on the technology of the phone, the distance between the phone's antenna and the user, the extent and type of use, and the user's distance from cell phone towers.
- Studies thus far have not shown a consistent link between cell phone use and cancers of the brain, nerves, or other tissues of the head or neck. More research is needed because cell phone technology and how people use cell phones have been changing rapidly.

1. Why is there concern that cell phones may cause cancer or other health problems?

There are three main reasons why people are concerned that cell phones (also known as “wireless” or “mobile” telephones) might have the potential to cause certain types of cancer or other health problems:

- Cell phones emit radiofrequency energy (radio waves), a form of non-ionizing radiation. Tissues nearest to where the phone is held can absorb this energy.
- The number of cell phone users has increased rapidly. As of 2010, there were more than 303 million subscribers to cell phone service in the United States, according to the Cellular Telecommunications and Internet Association. This is a nearly threefold increase

from the 110 million users in 2000. Globally, the number of cell phone subscriptions is estimated by the International Telecommunications Union to be 5 billion.

- Over time, the number of cell phone calls per day, the length of each call, and the amount of time people use cell phones have increased. Cell phone technology has also undergone substantial changes.

2. What is radiofrequency energy and how does it affect the body?

Radiofrequency energy is a form of electromagnetic radiation. Electromagnetic radiation can be categorized into two types: ionizing (e.g., x-rays, radon, and cosmic rays) and non-ionizing (e.g., radiofrequency and extremely low-frequency or power frequency).

Exposure to ionizing radiation, such as from radiation therapy, is known to increase the risk of cancer. However, although many studies have examined the potential health effects of non-ionizing radiation from radar, microwave ovens, and other sources, there is currently no consistent evidence that non-ionizing radiation increases cancer risk (1).

The only known biological effect of radiofrequency energy is heating. The ability of microwave ovens to heat food is one example of this effect of radiofrequency energy.

Radiofrequency exposure from cell phone use does cause heating; however, it is not sufficient to measurably increase body temperature.

A recent study showed that when people used a cell phone for 50 minutes, brain tissues on the same side of the head as the phone's antenna metabolized more glucose than did tissues on the opposite side of the brain (2). The researchers noted that the results are preliminary, and possible health outcomes from this increase in glucose metabolism are still unknown.

3. How is radiofrequency energy exposure measured in epidemiologic studies?

Levels of radiofrequency exposure are indirectly estimated using information from interviews or questionnaires. These measures include the following:

- How “regularly” study participants use cell phones (the minimum number of calls per week or month)
- The age and the year when study participants first used a cell phone and the age and the year of last use (allows calculation of the duration of use and time since the start of use)
- The average number of cell phone calls per day, week, or month (frequency)
- The average length of a typical cell phone call
- The total hours of lifetime use, calculated from the length of typical call times, the frequency of use, and the duration of use

4. What has research shown about the possible cancer-causing effects of radiofrequency energy?

Although there have been some concerns that radiofrequency energy from cell phones held closely to the head may affect the brain and other tissues, to date there is no evidence from studies of cells, animals, or humans that radiofrequency energy can cause cancer.

It is generally accepted that damage to DNA is necessary for cancer to develop. However, radiofrequency energy, unlike ionizing radiation, does not cause DNA damage in cells, and it has not been found to cause cancer in animals or to enhance the cancer-causing effects of known chemical carcinogens in animals (3–5).

Researchers have carried out several types of epidemiologic studies to investigate the possibility of a relationship between cell phone use and the risk of malignant (cancerous) brain tumors, such as gliomas, as well as benign (noncancerous) tumors, such as acoustic neuromas (tumors in the cells of the nerve responsible for hearing), most meningiomas (tumors in the meninges, membranes that cover and protect the brain and spinal cord), and parotid gland tumors (tumors in the salivary glands) (6).

In one type of study, called a case-control study, cell phone use is compared between people with these types of tumors and people without them. In another type of study, called a cohort study, a large group of people is followed over time and the rate of these tumors in people who did and didn't use cell phones is compared. Cancer incidence data can also be analyzed over time to see if the rates of cancer changed in large populations during the time that cell phone use increased dramatically. The results of these studies have generally not provided clear evidence of a relationship between cell phone use and cancer, but there have been some statistically significant findings in certain subgroups of people.

Findings from specific research studies are summarized below:

- The Interphone Study, conducted by a consortium of researchers from 13 countries, is the largest health-related case-control study of use of cell phones and head and neck tumors. Most published analyses from this study have shown no statistically significant increases in brain or central nervous system cancers related to higher amounts of cell phone use. One recent analysis showed a statistically significant, albeit modest, increase in the risk of glioma among the small proportion of study participants who spent the most total time on cell phone calls. However, the researchers considered this finding inconclusive because they felt that the amount of use reported by some respondents was unlikely and because the participants who reported lower levels of use appeared to have a slightly reduced risk of brain cancer compared with people who did not use cell phones regularly (7–9). Another recent study from the group

found no relationship between brain tumor locations and regions of the brain that were exposed to the highest level of radiofrequency energy from cell phones (10).

- A cohort study in Denmark linked billing information from more than 358,000 cell phone subscribers with brain tumor incidence data from the Danish Cancer Registry. The analyses found no association between cell phone use and the incidence of glioma, meningioma, or acoustic neuroma, even among people who had been cell phone subscribers for 13 or more years (11–13).
- The prospective Million Women Study in the United Kingdom found that self-reported cell phone use was not associated with an increased risk of glioma, meningioma, or non-central nervous system tumors. The researchers did find that the use of cell phones for more than 5 years was associated with an increased risk of acoustic neuroma, and that the risk of acoustic neuroma increased with increasing duration of cell phone use (14). However, the incidence of these tumors among men and women in the United Kingdom did not increase during 1998 to 2008, even though cell phone use increased dramatically over that decade (14).
- An early case-control study in the United States was unable to demonstrate a relationship between cell phone use and glioma or meningioma (15).
- Some case-control studies in Sweden found statistically significant trends of increasing brain cancer risk for the total amount of cell phone use and the years of use among people who began using cell phones before age 20 (16). However, another large, case-control study in Sweden did not find an increased risk of brain cancer among people between the ages of 20 and 69 (17). In addition, the international CEFALO study, which compared children who were diagnosed with brain cancer between ages 7 and 19 with similar children who were not, found no relationship between their cell phone use and risk for brain cancer (18).
- NCI's Surveillance, Epidemiology, and End Results (SEER) Program, which tracks cancer incidence in the United States over time, found no increase in the incidence of brain or

other central nervous system cancers between 1987 and 2007, despite the dramatic increase in cell phone use in this country during that time (19, 20). Similarly, incidence data from Denmark, Finland, Norway, and Sweden for the period 1974–2008 revealed no increase in age-adjusted incidence of brain tumors (21, 22). A 2012 study by NCI researchers, which compared observed glioma incidence rates in SEER with projected rates based on risks observed in the Interphone study (8), found that the projected rates were consistent with observed U.S. rates. The researchers also compared the SEER rates with projected rates based on a Swedish study published in 2011 (16). They determined that the projected rates were at least 40 percent higher than, and incompatible with, the actual U.S. rates.

- Studies of workers exposed to radiofrequency energy have shown no evidence of increased risk of brain tumors among U.S. Navy electronics technicians, aviation technicians, or fire control technicians, those working in an electromagnetic pulse test program, plastic-ware workers, cellular phone manufacturing workers, or Navy personnel with a high probability of exposure to radar (6).

5. Why are the findings from different studies of cell phone use and cancer risk inconsistent?

A limited number of studies have shown some evidence of statistical association of cell phone use and brain tumor risks, but most studies have found no association. Reasons for these discrepancies include the following:

- **Recall bias**, which may happen when a study collects data about prior habits and exposures using questionnaires administered after disease has been diagnosed in some of the study participants. It is possible that study participants who have brain tumors may remember their cell phone use differently than individuals without brain tumors. Many epidemiologic

studies of cell phone use and brain cancer risk lack verifiable data about the total amount of cell phone use over time. In addition, people who develop a brain tumor may have a tendency to recall using their cell phone mostly on the same side of their head where the tumor was found, regardless of whether they actually used their phone on that side of their head a lot or only a little.

- **Inaccurate reporting**, which may happen when people say that something has happened more or less often than it actually did. People may not remember how much they used cell phones in a given time period.
- **Morbidity and mortality** among study participants who have brain cancer. Gliomas are particularly difficult to study, for example, because of their high death rate and the short survival of people who develop these tumors. Patients who survive initial treatment are often impaired, which may affect their responses to questions. Furthermore, for people who have died, next-of-kin are often less familiar with the cell phone use patterns of their deceased family member and may not accurately describe their patterns of use to an interviewer.
- **Participation bias**, which can happen when people who are diagnosed with brain tumors are more likely than healthy people (known as controls) to enroll in a research study. Also, controls who did not or rarely used cell phones were less likely to participate in the Interphone study than controls who used cell phones regularly. For example, the Interphone study reported participation rates of 78 percent for meningioma patients (range 56–92 percent for the individual studies), 64 percent for the glioma patients (range 36–92 percent), and 53 percent for control subjects (range 42–74 percent) (9). One series of Swedish studies reported participation rates of 85 percent in people with brain cancer and 84 percent in control subjects (17).
- **Changing technology and methods of use.** Older studies evaluated radiofrequency energy exposure from analog cell phones. However, most cell phones today use digital

technology, which operates at a different frequency and a lower power level than analog phones. Digital cell phones have been in use for more than a decade in the United States, and cellular technology continues to change (6). Texting, for example, has become a popular way of using a cell phone to communicate that does not require bringing the phone close to the head. Furthermore, the use of hands-free technology, such as wired and wireless headsets, is increasing and may decrease radiofrequency energy exposure to the head and brain.

6. What do expert organizations conclude?

The International Agency for Research on Cancer (IARC), a component of the World Health Organization, has recently classified radiofrequency fields as “possibly carcinogenic to humans,” based on limited evidence from human studies, limited evidence from studies of radiofrequency energy and cancer in rodents, and weak mechanistic evidence (from studies of genotoxicity, effects on immune system function, gene and protein expression, cell signaling, oxidative stress, and apoptosis, along with studies of the possible effects of radiofrequency energy on the blood-brain barrier).

The American Cancer Society (ACS) states that the IARC classification means that there could be some risk associated with cancer, but the evidence is not strong enough to be considered causal and needs to be investigated further. Individuals who are concerned about radiofrequency exposure can limit their exposure, including using an ear piece and limiting cell phone use, particularly among children.

The National Institute of Environmental Health Sciences (NIEHS) states that the weight of the current scientific evidence has not conclusively linked cell phone use with any adverse health problems, but more research is needed.

The U.S. Food and Drug Administration (FDA), which is responsible for regulating the safety of machines and devices that emit radiation (including cell phones), notes that studies reporting biological changes associated with radiofrequency energy have failed to be replicated and that the majority of human epidemiologic studies have failed to show a relationship between exposure to radiofrequency energy from cell phones and health problems.

The U.S. Centers for Disease Control and Prevention (CDC) states that, although some studies have raised concerns about the possible risks of cell phone use, scientific research as a whole does not support a statistically significant association between cell phone use and health effects.

The Federal Communications Commission (FCC) concludes that there is no scientific evidence that proves that wireless phone use can lead to cancer or to other health problems, including headaches, dizziness, or memory loss.

7. What studies are under way that will help further our understanding of the health effects of cell phone use?

A large prospective cohort study of cell phone use and its possible long-term health effects was launched in Europe in March 2010. This study, known as COSMOS, has enrolled approximately 290,000 cell phone users aged 18 years or older to date and will follow them for 20 to 30 years.

Participants in COSMOS will complete a questionnaire about their health, lifestyle, and current and past cell phone use. This information will be supplemented with information from health records and cell phone records.

The challenge of this ambitious study is to continue following the participants for a range of health effects over many decades. Researchers will need to determine whether participants who leave are somehow different from those who remain throughout the follow-up period.

Another study already under way is a case-control study called Mobi-Kids , which will include 2000 young people (aged 10-24 years) with newly diagnosed brain tumors and 4000 healthy young people. The goal of the study is to learn more about risk factors for childhood brain tumors. Results are expected in 2016.

Although recall bias is minimized in studies that link participants to their cell phone records, such studies face other problems. For example, it is impossible to know who is using the listed cell phone or whether that individual also places calls using other cell phones. To a lesser extent, it is not clear whether multiple users of a single phone will be represented on a single phone company account.

The NIEHS, which is part of the National Institutes of Health, is carrying out a study of risks related to exposure to radiofrequency energy (the type used in cell phones) in highly specialized labs that can specify and control sources of radiation and measure their effects on rodents.

8. Do children have a higher risk of developing cancer due to cell phone use than adults?

In theory, children have the potential to be at greater risk than adults for developing brain cancer from cell phones. Their nervous systems are still developing and therefore more vulnerable to factors that may cause cancer. Their heads are smaller than those of adults and

therefore have a greater proportional exposure to the field of radiofrequency radiation that is emitted by cell phones. And children have the potential of accumulating more years of cell phone exposure than adults do.

So far, the data from studies in children with cancer do not support this theory. The first published analysis came from a large case-control study called CEFALO, which was conducted in Denmark, Sweden, Norway, and Switzerland. The study included children who were diagnosed with brain tumors between 2004 and 2008, when their ages ranged from 7 to 19. Researchers did not find an association between cell phone use and brain tumor risk in this group of children. However, they noted that their results did not rule out the possibility of a slight increase in brain cancer risk among children who use cell phones, and that data gathered through prospective studies and objective measurements, rather than participant surveys and recollections, will be key in clarifying whether there is an increased risk .

Researchers from the Centre for Research in Environmental Epidemiology in Spain are conducting another international study—Mobi-Kids —to evaluate the risk associated with new communications technologies (including cell phones) and other environmental factors in young people newly diagnosed with brain tumors at ages 10 to 24 years.

9. What can cell phone users do to reduce their exposure to radiofrequency energy?

The FDA and FCC have suggested some steps that concerned cell phone users can take to reduce their exposure to radiofrequency energy (1, 23):

- Reserve the use of cell phones for shorter conversations or for times when a landline phone is not available.
- Use a hands-free device, which places more distance between the phone and the head of the user.

Hands-free kits reduce the amount of radiofrequency energy exposure to the head because the antenna, which is the source of energy, is not placed against the head.

10. Where can I find more information about radiofrequency energy from my cell phone?

The FCC provides information about the specific absorption rate (SAR) of cell phones produced and marketed within the last 1 to 2 years. The SAR corresponds with the relative amount of radiofrequency energy absorbed by the head of a cell phone user (24). Consumers can access this information using the phone's FCC ID number, which is usually located on the case of the phone, and the FCC's ID search form.

11. What are other sources of radiofrequency energy?

The most common exposures to radiofrequency energy are from telecommunications devices and equipment (1). In the United States, cell phones currently operate in a frequency range of about 1,800 to 2,200 megahertz (MHz) (6). In this range, the electromagnetic radiation produced is in the form of non-ionizing radiofrequency energy.

Cordless phones (phones that have a base unit connected to the telephone wiring in a house) often operate at radio frequencies similar to those of cell phones; however, since cordless

phones have a limited range and require a nearby base, their signals are generally much less powerful than those of cell phones.

Among other radiofrequency energy sources, AM/FM radios and VHF/UHF televisions operate at lower radio frequencies than cell phones, whereas sources such as radar, satellite stations, magnetic resonance imaging (MRI) devices, industrial equipment, and microwave ovens operate at somewhat higher radio frequencies (1).

12. How common is brain cancer? Has the incidence of brain cancer changed over time?

Brain cancer incidence and mortality (death) rates have changed little in the past decade. In the United States, 23,130 new diagnoses and 14,080 deaths from brain cancer are estimated for 2013.

The 5-year relative survival for brain cancers diagnosed from 2003 through 2009 was 35 percent (25). This is the percentage of people diagnosed with brain cancer who will still be alive 5 years after diagnosis compared with the survival of a person of the same age and sex who does not have cancer.

The risk of developing brain cancer increases with age. From 2006 through 2010, there were fewer than 5 brain cancer cases for every 100,000 people in the United States under age 65, compared with approximately 19 cases for every 100,000 people in the United States who were ages 65 or older .

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