

Documented Health Dangers Linked to Microwave Radiation Exposure

The following three lists present the symptoms, illness indicators, and diseases that are linked to microwave frequency exposure from cell towers, Wi-Fi transmitters, and other microwave generating devices. [8, 12, 16]

Symptoms of Damage: These are some of the common symptoms linked to microwave exposure.

- Fatigue
- Chronic headaches
- Heart palpitations
- High pitched ringing in the ears
- Dizziness
- Disturbed sleep at night
- Sleepiness in daytime
- Moodiness
- Irritability
- Unsociability
- Feelings of fear
- Anxiety
- Nervous tension
- Mental depression
- Memory impairment
- Pain in muscles and joints
- Pain in the region of the heart
- Breathing difficulties
- Allergies
- Yeast infections
- Blood sugar swings
- Heartburn
- Bowel problems
- Thyroid dysfunction
- Weight abnormalities
- Rashes
- Immune system weakness
- Behavioral aberrations

Hidden Illness Indicators: These are some of the indicators of poor health resulting from prolonged microwave exposure. We are usually unaware of these threats to our health.

- Inflammation (caused by excess histamine in the blood)
- Oxidative stress
- Autoimmune responses
- Reduced blood flow to the region of the thalamus
- Pathologic leakage of the blood-brain barrier
- Myelin damage to the central nervous system
- Hormone imbalance
- Deficit in melatonin metabolic availability
- DNA damage
- Metabolic dysregulation

Diseases and Body System Failures: Some of the diseases and body system failures that result from multi-year microwave frequency radiation include:

- Cancer
- Heart disease
- Neurological dysfunction
- Diabetes
- Immune system suppression
- Cataracts of the eyes
- Sperm malformation
- Hearing loss
- Vision loss
- Cognitive impairment
- Alzheimer's
- Depressive mental illness
- Fetal abnormalities

Long-term Microwave Exposure Equals Extreme Harm

The bottom line in microwave frequency radiation exposure is, “The longer the exposure, the more deadly the cumulative effects.” [8]

In 2011, Professor Karl Hecht from the International Research Center of Healthy and Ecological Technology in Germany reported three distinct phases of illness caused by microwave radiation.

During the first phase, lasting up to 3 years, the living organism struggles to cope and compensate for the exposure to microwaves. [8]

They may experience numerous symptoms and may be aware of illness indicators, but aren't able to fix their problems unless they stop the exposure.

3 to 5 years of Microwave Exposure

Professor Hecht described the damage that occurs during the second phase of exposure – 3 to 5 years of microwave irradiation. He stated:

During this second phase, chronically irradiated people develop weakly visible, pathological neurasthenic symptoms with vagotonic reaction tendencies.

This means overactivity or irritability of the vagus nerve, adversely affecting function of the blood vessels, stomach, and muscles. It also means that the parasympathetic autonomic system is overactive, while sleep disorders and daytime tiredness are common.

Neurasthenic symptoms involve: poor appetite or overeating, insomnia or hypersomnia, low energy and fatigue, low-self esteem, poor concentration, difficulty making decisions and feelings of hopelessness.

In its most severe form, this phase may include a chronic disturbance of mood called dysthymia (depressive neurosis) in which a depressive mood accompanies the other physiological features listed here.

This might explain why millions of Americans need anti-depressant drugs and illegal narcotics to cope with their radiation-induced depressive symptoms.

By this end of this stage, the systemic damage may be irreversible, even if the radiation exposure ceases. [8]

5 years or more of Microwave Exposure

According to Professor Hecht, during the third Phase (5 years or more), the body degenerates into exhaustion and severe states of disease. He stated:

This final degenerative phase produces pronounced neurasthenic symptoms with increasing pathological lapses of the regulation system, sleep disorders, daytime tiredness, and general exhaustion.

People who have progressed to this phase suffer a dramatic increase in chronic illnesses and elevated cancer incidence.

After 30+ years of environmental Wi-radiation, America's chronically-ill population certainly fits this description.

A 2016 study by researchers at Emory University confirms that over one half of the US adult population is now chronically ill: "The health of individuals is increasingly being defined by complexity and multi-morbidity, the co-occurrence of two or more chronic medical conditions."

However, not one in a million would guess that the mortal misery of cancer, heart disease, diabetes, Alzheimer's and even depressive mental illness, is inextricably connected to years of covert irradiation delivered by crafty Wi-profiteers who have been laughing all the way to their gold-lined vaults. [8]

Russian Studies Revealed Microwave Harm Long Before the FCC Adopted Its Regulations

Professor Hecht evaluated nearly 900 studies from Russian sources, which demonstrated the harmful effects of microwave technology.

The Russian research took place between 1960 and 1996 — long before the 3G and 4G cellular systems were built. [8]

Videos Explain the Harm of 3G, 4G and 5G

ConsumerWatch: 5G Cellphone Towers Signal Renewed Concerns Over Impacts on Health –

Public Waking up to Fact that 5G has not been Proven Safe for Human Health

by **John P. Thomas**
Health Impact News

While telecom companies are moving full speed ahead to put up millions of small cell towers for their new 5G (fifth generation) cellular communication system in the United States, the public is waking up to the fact that 5G has not been proven safe for human health.

The health concerns actually go far beyond the 5G cell towers that are being placed approximately every 500 feet on the streets of America's urban areas. It has now been revealed that 20,000 satellites will be soon put into orbit around the Earth to broadcast 5G microwave radiation over every square foot of ground on our planet.

As has been discussed in my previous articles about the 5G cellular microwave communication system, it will be much faster than the current 3G and 4G systems. However, it will use a much higher frequency range in the electromagnetic energy spectrum. These frequencies in the gigahertz spectrum have not been used for public communication. And these millimeter frequencies have not been tested for safety.

5G Phased Array Antennas will Shoot Beams of Radiation at People and Equipment

The 5G communication system will use phased array antennas, which will shoot beams of microwaves at 5G phones and other equipment containing 5G capabilities such as new computers, automobiles, and Wi-Fi hubs.

The beams of microwave radiation will follow a person who is holding a 5G phone or who is moving with one of these phones on his or her body. These beams of radiation have to be strong enough to penetrate walls and human flesh such as hands and heads, because you won't know the direction from which the microwave beam is coming.

The beams of non-ionizing microwave radiation used by this technology also have to be strong enough to pass through the bodies of other people who might happen to walk between a person using a phone and the tower that is beaming the microwave signal at them.

5G smartphones will broadcast and receive microwave signals that are 10 times stronger than the current 4G smartphones. Wi-Fi systems using 5G will use microwave signals that are 150 times stronger than a 4G phone. [8]

Don't Worry – the FCC Says it's Safe

Despite the lack of testing to prove that 5G is safe, telecom companies and the Federal Communications Commission (FCC) are in agreement that no one should worry about health effects of 5G.

Their advice to the American public is based on assumptions that were made in 1998.

But, the research at that time was questionable because it only examined health concerns related to the heating effect of the microwave radiation.

Background on 5G and other Radio Frequency Health Risks

This article will look at some of the newest information about microwave radiation risks and the concerns that are being raised by those who have been studying this form of non-ionizing radiation.

For those who are new to this topic, you may wish to read some of my previous articles about health concerns related to radio frequency pollution to obtain background information about 5G and other wireless communication systems such as Wi-Fi.

Radiation from 2G and 3G Cellular Systems is Associated with Cancer in Male Rats

In a ten-year study of rats and mice conducted by the National Toxicology Project (NTP), government scientists in collaboration with non-government scientists concluded that there is “clear evidence” of an association between microwave radiation exposure from what is known as the second generation (2G) and third generation (3G) cell phone systems and the formation of cancer in the hearts of male rats. [1]

2G and 3G are still being used for cell phone voice calls and text messaging.

NTP scientists use a four level rating system for describing the degree of association between exposure and harm to health. Their rating system indicates: clear evidence (highest association with harm), some evidence, equivocal evidence, and no evidence of association (lowest). [1]

Their November 2018 final report found that there was clear association between exposure to 2G and 3G microwave frequency radiation with the formation of cancer in rats. [1]

These government scientists won't say that radiation from 2G and 3G cellular technology “causes” cancer in rats or in humans.

To those of us on the outside of scientific laboratories, it sure looks like exposure causes cancer and numerous other serious illnesses. (See my previous articles for details.)

I base my conclusion on thousands of research articles that have been published over the last several decades and the conclusions reached by hundreds of physicians and scientists [2, 3], which clearly show serious risk to human beings when we are exposed to non-ionizing radiation from cellular systems.

When the NTP began their study 10 years ago, 5G did not exist. Thus, NTP scientists made it very clear in their report published in November of 2018 that their findings say nothing about the safety or risks of 5G or Wi-Fi systems.

So, here we are at the end of 2018 with 5G radio frequency radiation systems being installed in many cities across America, and no one has studied the safety of this new technology.

If there is clear evidence that microwave radiation exposure from 2G and 3G is associated with rat cancer, then this should be a bright red flag that should alert us to the potential risk from the newest 5G cellular system.

I must wonder if we will have to wait ten more years while government scientists study 5G and Wi-Fi before they conclude that there is clear evidence of risk from these systems. Based on the potential of microwave radiation in 2G and 3G systems to cause harm, there is no reason to assume that the millimeter microwave radiation used in 5G will be safe.

It is not a farfetched assumption, based on the lack of 5G research, to conclude that there will be an even higher level of health risks associated with the close proximity to the new 5G small cell tower and phased array antennas. Evidence is mounting that 5G will be very dangerous for adults and especially for children.

FCC regulators are ignoring the precautionary principle and are doing nothing to slowdown the implementation of 5G while they study the safety of this system.

As it stands right now, telecom companies are running full speed ahead to install their 5G system even though the health risks of that system have not been studied.

How many millions of people will be sickened, and how many will die before the 5G system is studied? The system could be fully implemented in many urban areas before the studies even get off the ground.

Pediatricians are Concerned about Childhood Exposure to Wireless Radiation

The American Academy of Pediatricians (AAP) has added its collective voice to those who have been advocating for research into cell phone safety. The AAP contacted the Federal Communication Commission (FCC) in 2012 to ask that they reopen their study of cell phone safety. Since then, they have been warning of potential harm to children. [4]

The American Academy of Pediatrics, the largest US medical association of pediatricians and pediatric specialists, recommends that the US government tighten wireless exposure limits and that the public reduce children's exposure to cell phones and other devices that emit wireless radiation. [4]

The AAP reminds parents:

Children are not just little adults; their growing minds and bodies make them uniquely vulnerable to the effects of the environment around them, including cell phone radiation.

Because technology is being adopted by children at younger ages than ever before, it's even more important to investigate if cell phone usage is a health hazard. [5]

The AAP notes that the FCC has not revised the standard for cell phone radiation since 1996. They are concerned that the FCC "safety levels" were based on large adult bodies and did not consider the effects on children. The AAP indicates that children's skulls are thinner and can absorb more radiation. [5]

These physicians are encouraging parents to limit cell phone use for children and teenagers. They point out that cell phones are not toys, and are not recommended for infants and toddlers to play with. They recommend that parents limit children's screen time and limit their exposure to cell phones and other devices that emit radiation and electromagnetic fields (EMF). [5]

Members of Congress Question the FCC about 5G Safety

U.S. Senator Richard Blumenthal from Connecticut and House Representative Anna Eshoo from California sent a letter to Brendan Carr at the FCC. They are asking the FCC to prove that 5G is safe.

An article published in the CT Mirror stated:

Senator Richard Blumenthal is leading a campaign to determine whether new "5G" wireless technology is safe and is asking the federal government for proof the cutting edge radio frequency does not pose health risks – including cancer.

Senator Blumenthal said the new technology "offers the tremendous promise of higher speeds and reliability. — But there is also a peril of health hazards associated with radio frequency that is higher and requires more transmitters and antennas," he said.

In his letter to Carr, the senator said "most of our current regulations regarding radio frequency safety were adopted in 1996 and have not yet been updated for next generation equipment and devices." [6]

This kind of intervention is crucial, because the FCC is clearly under the control of telecom companies, and *the FCC does the bidding of corporate interests*. Only Congressional action at this point can turn the FCC around.

5G from Space

5G technology and space exploration companies are also moving forward with the creation of a system of satellites that will use phased array antennas and millimeter microwave frequencies to communicate with 5G equipment on the ground. They intend to launch *20,000 satellites* over the next few years.

Their systems are not specifically called 5G, but they will contain all the components of 5G and operate in the same way as ground-based 5G.

The satellite system will provide telecommunication coverage over every square foot of the Earth. There will be nowhere to hide from being exposed to this form of microwave radiation. See:

[**20,000 Satellites for 5G to be Launched Sending Focused Beams of Intense Microwave Radiation Over Entire Earth**](#)

What Happened when the First Satellite Phone System was Turned-on?

At present, there are satellite-based cell phone providers who use current generation cellular systems to serve their customers. On the day that the first of these satellite systems was activated, there were thousands of people who had physical reactions to the sudden increase in microwave activity in their environment.

Arthur Firstenberg, a researcher, writer, and advocate for protecting people from exposure to wireless communication signals described what happened when the first space-based cellular system was turned on. He stated:

On September 23, 1998, 66 satellites, launched into low orbit by the Iridium Corporation, commenced broadcasting to the first ever satellite telephones.

Those phones would work equally as well in mid-ocean, and in Antarctica, as in the middle of Los Angeles—a remarkable achievement.

But telephone interviews revealed that on that day exactly, electrically sensitive people all over the world experienced stabbing pains in their chest, knife-like sensations in their head, nosebleeds, asthma attacks, and other signs of severe electrical illness. Many did not think they were going to make it.

Statistics published by the Centers for Disease Control reveal that the national death rate rose 4 to 5 percent during the following two weeks.

Thousands of *homing pigeons* lost their way during those two weeks, all over the United States. [7]

What should we expect when the 5G Ground and 5G Satellite Systems are Turned-On?

Well — no one knows. This is another grand experiment on humanity to see what will happen.

Mega-size telecommunication companies have taken control over the FCC, which is supposed to protect the public from harm.

As a result, the FCC will do nothing to insure that 5G is safe. In addition, the FCC has established regulations that prevent people from trying to slow-down or stop the implementation of 5G at the local or state level.

It will take action by congress to demand that research be done to prove that 5G is safe. Given the thousands of studies that have already been done on other type of radio frequency hazards, it is very doubtful that any well designed scientific study could show that 5G will be harmless to adults or to children, so we shouldn't expect to see the results of 5G safety studies for many years to come, unless there is a strong outpouring of public and congressional pressure on the FCC.

Please contact your representatives in Congress and ask them to demand that research be done on 5G safety before there can be any further implementation of 5G systems in the United States.

Conclusion – Thinking about the Future

Please give serious thought to not getting on the 5G bandwagon. There will be massive advertising campaigns in the months and years to come, designed to get everyone to switch over to 5G phones. You don't have to bite the bait. 4G smartphones and 3G phones for voice and texting are adequate for everyday use.

We don't need 5G technology to live happy and productive lives!

You might even consider whether this is a good time to just turn off your cellular service and live a less hectic life. **You could join the small minority of people who are minimizing their microwave exposure by simply living without a cell phone of any type.**

It is important to consider that the demand for better cellular service is not coming from consumers, but from mega-corporations who are trying to create a market for a new set of products.

It's not really about better service, but about greater profitability for corporations who don't mind killing off people with microwave radiation in order to turn greater profits.

It is also about creating a system that will enable central control over every aspect of human life.

5G is not a vision of something better, but an omen of something much worse.

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References

- [1] "[National Toxicology Program releases final reports on rat and mouse studies of radio frequency radiation like that used in 2G and 3G cell phone technologies](#)," 11/01/2018.
- [2] "[Updated Research Summaries](#)," 12/15/2017.
- [3] "[Statements by Physicians, Scientists and Health Policy Experts](#)," Cellular Phone Task Force.
- [4] "[The American Academy of Pediatrics Recommendations on Cell Phones, Cell Towers and Wireless Radiation](#)," Environmental Health Trust, Blog Archive.
- [5] "[Cell Phone Radiation & Children's Health: What Parents Need to Know](#)," HealthyChildren.org, 2016.

[6] "[Blumenthal wants FCC to prove 5G wireless technology is safe](#)," Ana Radelat, CT Mirror, 12/3/2018.

[7] "[Wi-Fi in the Sky](#)," Arthur Firstenberg, Cellular Phone Task Force.

[8] "[5G – From Blankets to Bullets](#)," Arthur Firstenberg, Cellular Phone Task Force.

Cell Phone and Wifi Exposure to the Eyes Causes Long-Term Damage

The eyes of ten-year-old children absorb five times more cell phone radiation than the eyes of adults, and the eyes of five-year-old children absorb 12 times more than adults.

by **John P. Thomas**
Health Impact News

Microwave exposure to the eyes causes long-term damage regardless of whether it is coming from smartphones, tablets, cell tower, Wi-Fi, DECT cordless phones, baby monitors, child's toys, microwave ovens or any other microwave source. The vision of children is even more at risk than adults.

When a person talks on a cell phone or looks at a smartphone display, the eyes receive a large dose of microwave radiation.

Even if we are not using a smartphone, our eyes are still being exposed to microwave radiation from the local environment as well as from the cell phones being used by other people near us.

Based on decades of research, we can expect the combined effects of microwave radiation used in modern microwave devices to damage our vision and to damage the vision of our children. [1]

Children have Serious Risk for Eye Related Damage

The eyes of ten-year-old children absorb five times more cell phone radiation than the eyes of adults, and the eyes of five-year-old children absorb 12 times more than adults.

These calculations were made in 1996, long before the implementation of the modern 3G, 4G and 5G microwave communication systems and the more powerful phones that use these systems. [2]

Microwave Radiation is just as Dangerous as Nuclear Radiation

It's a lie that microwaves are harmless.

Historically, scientists divided radiation into two broad categories – ionizing radiation from sources such as uranium and X-rays, and non-ionizing radiation from other sources such as microwaves from cell phones.

It was once believed that the most dangerous radiation to human health was ionizing radiation, but we now know that prolonged microwave exposure is just as harmful to human health as nuclear radiation, asbestos, and tobacco smoke. [3]

The Eyes are Particularly Vulnerable

The authors of the [Wi-Eyes website](#) have brought together research from around the world to document the harmful effects of microwave exposure on human eyes. They summarize the situation this way:

Epidemiological studies of people living close to cell tower antennas document widespread complaints about eye and vision abnormalities (Santini 2002/ Oberfeld 2004/ Bortkiewicz 2004).

Many radiation victims damaged by cell phones, Wi-Fi antennas and smart meters complain of the same. The documented pathological effects on human eyes from RF/microwave radiation include: eye inflammation and redness, pain or burning in the eyes, a feeling of pressure behind the eyes, floaters, cataracts, deteriorating vision — including macular degeneration— and eye cancers. [1]

Microwaves Damage Human Cells at Several Levels

This is how the Wi-Cancer website describes how radiation effects cells in the human body. The authors state:

Like nuclear radiation, the antenna frequencies of RF/microwave radiation are delivered as photons (energy packets), having both particle and wave behavior.

Microwave frequencies couple with human flesh as pulsing currents, creating hot spots throughout various tissues. These currents carry electrical voltage and magnetic fields that mechanically oscillate the polarity of living cells millions to billions of cycles per second.

Because wireless radiation is pulse-modulated to produce voice and data signals, it is loaded with extremely low frequencies (ELF), plus kilohertz frequencies, riding along on the microwave carrier waves.

This complex energy causes significant vibration that atoms, molecules and tissues cannot long withstand. Cells break down from the jack-hammering effect, which causes displacement of calcium.

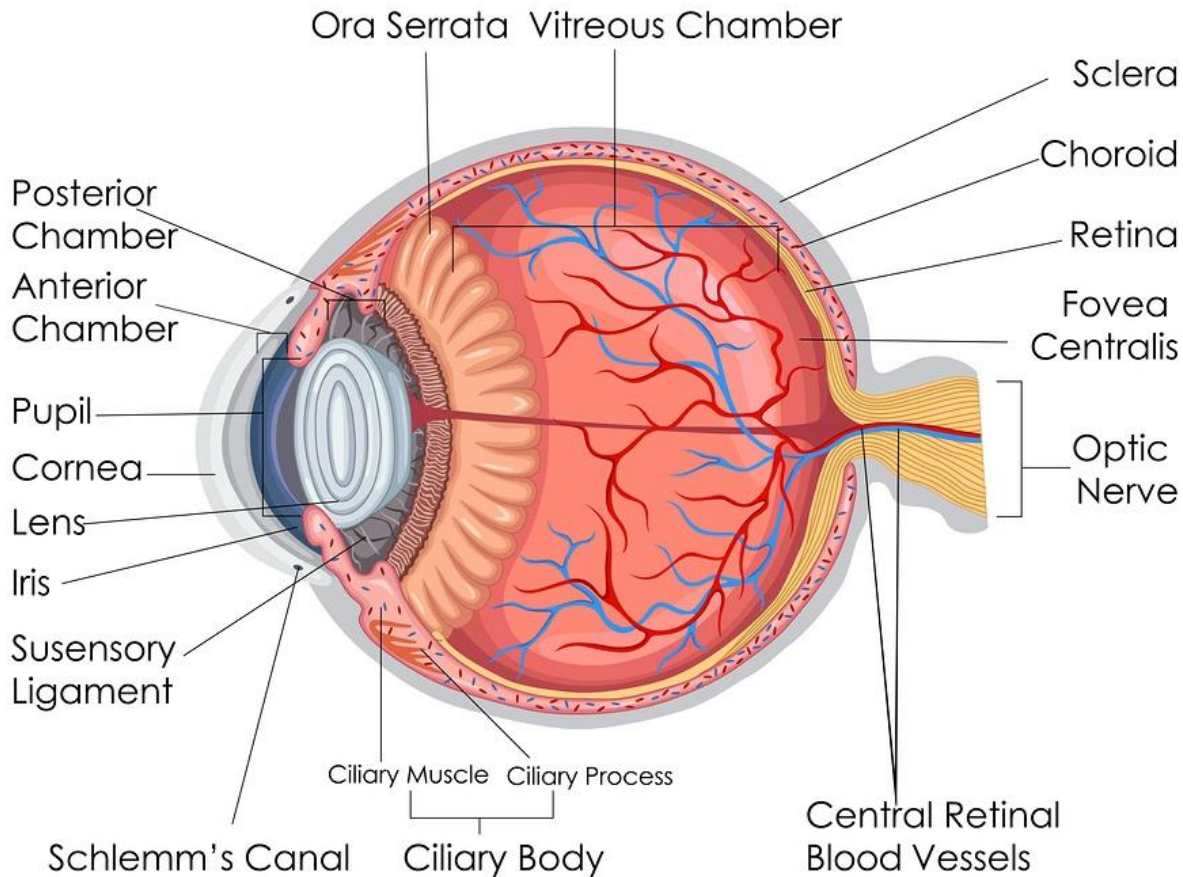
Leaky cells become functionally deficient. Oxidative stress, inflammation and damaged DNA are guaranteed. Premature aging and chronic disease set in.

Because cancer begins with damaged DNA, any wireless voltage that causes strand breaks in the DNA is the **VOLTAGE OF CANCER**. [3]

When a cell phone is held up to the ear, microwaves stream out of the multiple antennas in all directions. Some eventually reach a cell tower, which can be many miles away, but *40% of the microwaves enter the hand, ear, eye, and head/neck of the person using the phone*. [4]

The Lenses of the Eyes are Extremely Vulnerable

Eye Diagram



The cells in the lenses of the eyes are the first structure to be damaged. However, the damage does not stop there. The microwaves also damage the vitreous fluid in the eye ball, the retina and the optic nerve.

The only way to possibly stop microwaves from entering the eyes would be to enclose the face with a microwave shield. Eye glasses and contact lenses do not stop microwaves from entering the eyes. If a person has glasses with metal frames, then the frames concentrate microwaves and project them into the eyes. [1]

Microwaves Contribute to Cataract Formation in the Lenses of the Eyes

When vision becomes cloudy, blurred and dim and there is sensitivity to light and glare, the usual diagnosis is cataracts. [5]

When this happens, the lenses of the eyes turn yellow or even brown and light entering the eyes is distorted or partially blocked.

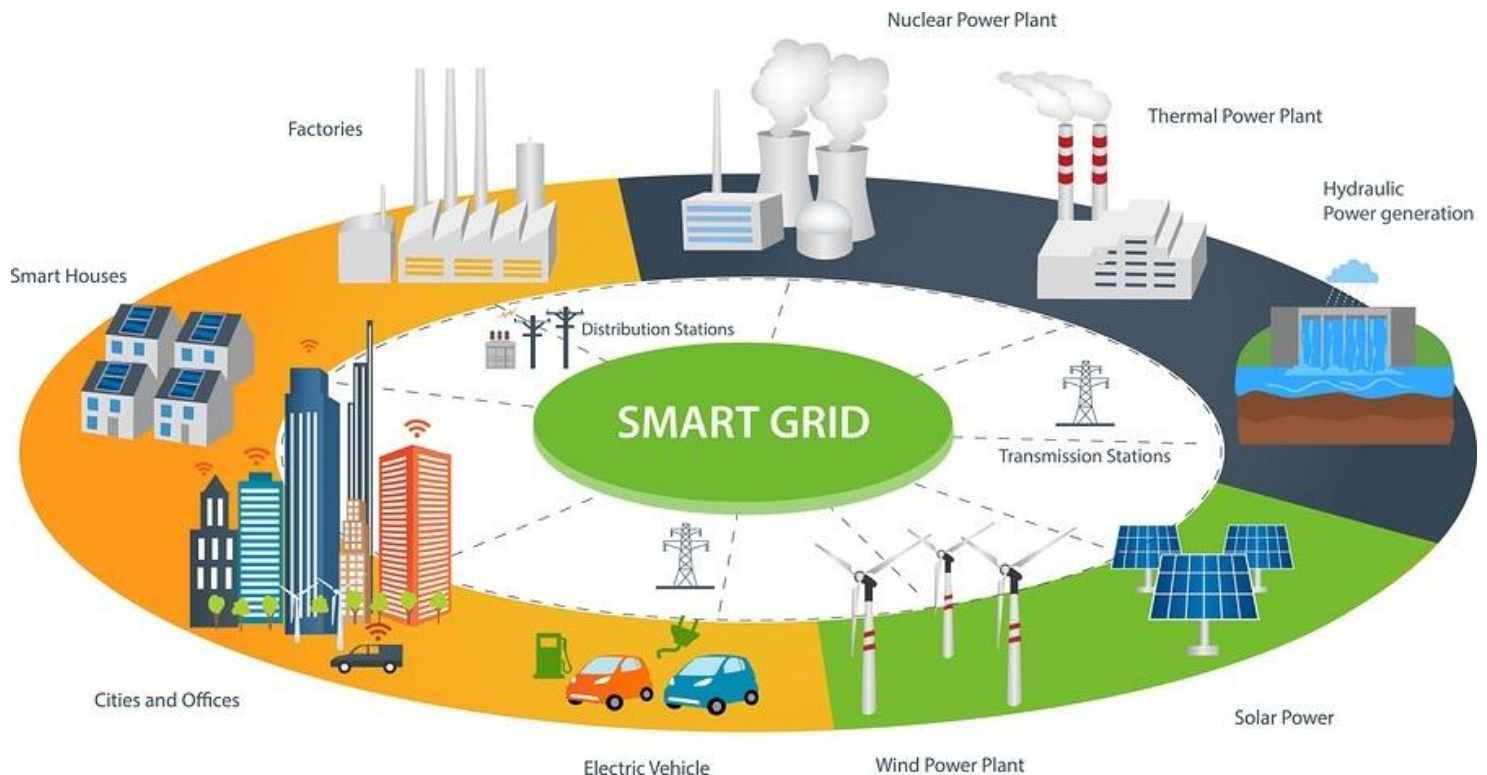
Microwave related damage to the normally clear lenses appears on the back side of the lenses (posterior subcapsular cataracts). [1]

Cataract surgery can remove the front portion of the lens and replace it with a permanently implanted optically corrected lens. This restores clear vision in cases of hereditary, metabolic, or age-related cataract. [1]

However, posterior subcapsular cataracts form on the back of the lens and are usually not correctable with surgery – the damage is permanent!

The damage occurs slowly and people might not notice until the problem starts interfering with normal vision. By that point it is too late. [1]

There are No Microwave Exposure Limits for Consumers



Individual microwave emitting consumer products, such as cell phones, are not supposed to emit more than a certain level of radiation. The assumption is that if the exposure threshold is not passed, then there is no risk to human health.

However, a single device only represents a small portion of a person's daily total microwave exposure.

So, a person who has a cell phone, tablet, and laptop, which are all connected to a microwave router, is receiving exposure from four sources simultaneously.

If we add the microwave radiation from wireless devices such as computer monitors, headphones, printers, keyboards and external touchpads, then a typical office setting is roaring with microwave activity.

If we then add in the radiation from smart meters, smart appliances, driver assist technology in cars, then the exposure levels skyrocket.

Finally, if we add the radiation from cell towers, regional Wi-Fi antennas, and microwave transmitting sources in homes and buildings around us, then our eyes and our bodies are being blasted with endless streams of intense radiation all day and all-night long.

Damage to the Eyes begins with Tiny Changes

In 2007, Chinese researchers examined changes in human eye lenses when they were exposed to 1.8 Gigahertz of microwave radiation from cell phones.

Lenses showed abnormal changes in four different proteins. The presence of these abnormal proteins is a serious danger signal.

Cataracts form after these tissue proteins clump together and start scattering light. [6]

Some Medications for Glaucoma Increase Microwave-related Eye Damage

A 1998 Canadian report warned that microwave radiation from devices such as cell phones can cause adverse reactions with a common anti-glaucoma drug. When the drug was given to test animals, eye damage began to occur at only one tenth of the radiation density that was previously used to produce damage. [7]

Cornea Damage, Macular Degeneration, Dry-Eye Disease, and other Conditions

Researchers found that the blood-aqueous and blood-vitreous humor barriers in the eyes of primates become leaky when exposed to low-intensity radio frequencies. Other animal research showed that microwave frequencies produced irreversible damage to the endothelial layer of corneas.

When human eye lens epithelial cells were exposed to microwave radiation, there were disruptions to genes and proteins, in addition to severe oxidative stress, which is implicated in senile cataracts, age-related macular degeneration of the retina, and dry-eye disease. [8]

Additionally, microwave exposure accelerates the formation of cataracts in diabetic patients. Research with animals showed a degeneration of retinal nerve endings and a small increase in retinal permeability when their eyes were exposed to microwaves. [9]

Japanese Researchers found that when the ears of children with chronic fatigue were exposed to 30 seconds of cell phone radiation, there was a change in blood flow to the eyes. Simply holding a phone by the ear as when talking caused more than a 50% reduction in blood flowing through the arteries serving both eyes. [10]

Eye Cancer

In 2001, researchers from University of Essen in Germany showed that people who regularly use microwave emitting communication devices are at significantly higher risk of developing cancer of the eye.

They compared the microwave exposure for 118 patients with uveal melanoma, who used cell phones or microwave walkie talkies, to a control group of 475 people who did not use these microwave devices. [11]

They found that those who used microwave-powered walkie talkies were over **THREE TIMES** more likely than non-users to develop eye cancer. The risk was even higher for cell phone users. Cell phone users were **FOUR TIMES** more likely than non-users to develop eye cancer. [11]

Watching Small Displays on Portable Devices also Causes Eye Problems

Current research shows that up to 90% of teenagers and young adults in China are short-sighted. Only 10% to 20% of the Chinese population was short-sighted 60 years ago. In the United States and Europe, half of young adults are short-sighted. This is twice as high as it was a half century ago. [12]

Some ophthalmologists believe that when the eyes focus on small bright screen displays for many hours each day, such as those used for smartphones, then short-sightedness can result. [13]

Other researchers attribute the epidemic of short-sightedness to inadequate exposure to natural bright sunlight. When children were forced to put down their smartphones and spend three or more hours a day playing in bright outdoor light, the progression of short-sightedness was stabilized. [12]

Conclusion – Risk Factors for Microwave Eye Damage

There are five risk-factors that you can use to evaluate potential eye damage from microwave exposure. They apply to both adults and children. These risks factors are general and can be applied to exposure to any part of the body, which includes over-all cancer risk.

The Wi-Cancer website states:

- *The higher the cumulative hours of exposure, the higher the risk.*
- *The more years of exposure, the higher the risk.*
- *The higher the radiated power used by Wi-antennas, the higher the risk.*
- *The longer a single area of the body is exposed, the higher the risk.*
- *The younger a person is during their first microwave exposure, the higher the risk.* (14)

The truth is simple. The total years of exposure and the intensity of that exposure to microwaves from all sources will eventually produce noticeable damage to the eyes and the rest of our body. Children are most vulnerable because they are still growing and developing.

We cannot stop our microwave exposure, but we can take steps to limit it. This is especially important for our children who depend on their parents to make wise decision regarding their exposure levels.

A smartphone or wireless tablet in the hands of a toddler [15] or school age child is a very high-risk situation!

Unlimited daily use of microwave technology by a person of any age is very high-risk activity — even more so for our children!

The risks from cell phones, Wi-Fi, and countless other wireless devices has been known for decades. We should not assume that government agencies, public school systems, and telecom companies will protect us from being harmed by microwave exposure – it is up to each of us to protect ourselves. The most powerful way that we have available to protect ourselves and our families from microwave radiation is to reduce the exposure.

Even though you might not notice the effects of microwaves today, this technology is slowly producing cumulative harm that may not be realized for 5, 10, or 20 years. Nevertheless, we will all eventually pay the price for the convenience of microwave technology when microwave-related illnesses take control over our lives.

For additional Information, I recommend visiting the [Wi-Eyes website](#).

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References

[1] [Wi-Eyes Webpage](#), Retrieved 5/1/2018.

[2] Wi-Eyes provides this reference: 7. Cell Phones: Invisible Hazards in the Wireless Age, Dr. George Carlo, 2002, pp. 216-217. This source features a discussion on Dr. Om Gandhi's eye research.

[3] [Wi-Cancer Home Page](#), Retrieved 5/1/2018.

[4] Wi-Eyes provides this reference: 6. International Encyclopedia of Neuroscience, W. Ross Adey citing Kuster et al., 1997.

[5] ["Cataracts – Symptoms and causes," Mayo Clinic](#), Retrieved 4/23/2018.

[6] Wi-Eyes provides this reference: 23. "Proteomic Analysis of Human Lens Epithelial Cells Exposed to Microwaves," Li et al., Zhejiang University, Hangzhou, China, Japanese Journal of Ophthalmology, 2007 Nov-Dec.

[7] Wi-Eyes provides this reference: 22. "Radiation Protection Bureau on the Brain, the Eye and the Mobile," Microwave News, March/April 1999.

[8] Wi-Eyes provides this reference: 24. ["Study of Oxidative Stress in Human Lens Epithelial Cells Exposed to 1.8 Gigahertz Radiofrequency Fields," Ni et al., Zhejiang University School of Medicine and St. Georges University of London](#). Published in Public Library of Science (PLOS), a peer-reviewed, open access journal (e72370), 08-26-2013.

[9] Cutz A; ["Effects of Microwave Radiation on the Eye: The Occupational Health Perspective," Physical Hazards Group, Canadian Centre for Occupational Health and Safety](#), Hamilton, Ontario, Lens Eye Toxic Res, 1989, PMID 2488031.

[10] Wi-Eyes provided this reference: 25. "Is Chronic Fatigue Syndrome Caused by EMF from Cell Phones, Games and Computers?" Gauss Tsushin (newsletter of the Japanese Gauss Network) 68, 08-15-2004.

[11] Wi-Eyes provided this reference: 29. “German Study: More Eye Cancer Among Mobile Phone Users,” Microwave News, January/February 2001.

[12] [“The myopia boom : Nature News & Comment,” Elie Dolgin](#), 3/18/2015.

[13] Wi-Eyes provides this reference: 5. “Smart Phones May Raise Myopia Risk,” Economic Times, UK, 08-18-2013.

[14] The Wi-Cancer.com home page provided this reference: 66. “Effects of Electromagnetic Fields on Glands and its Relationship with Diabetes,” Dr. Andrew Goldsworthy, Scientific Advisor to ES UK, 2012.

[15] [90 Percent Of 2-Year-Olds Use Tablets and Smartphones. Do YOU Know the Risks? “10 Reasons Why You Shouldn’t Give a Child a Smartphone or Tablet,” Elyse Wanshel, Little Things](#), Retrieved 5/15/2018.

How Big Technology Companies Control the Minds of the Masses Through Smart Phone Addiction

by **John P. Thomas**
Health Impact News

With the push of a button, tech companies can make a billion people have the same thought. The tool they use is the smartphone. The thought could be a bit of truth or it could be a lie.

Regardless of the content of the message, they have the power to capture our attention and to insert a thought in our minds, even if the thought only lingers there for a few seconds before we move on to something else. [1]

This kind of mind control is not accidental but is part of an intentional plan of technology companies to get us addicted to their technology, to steal our time, and to build profitability at our expense. [1]

Supercomputers have now beaten the best chess masters in the world, and it is these same supercomputers that are used by tech companies to manage smartphone addiction. The process involves collecting information about our interests and using psychological and behavioral methods to get us hooked on their technology.

Unless we understand the techniques being used to get us addicted and take steps to control how we use smartphones and tablets, these devices have a high potential for taking over our lives.

Do You have a Smartphone Addiction? A Quick Test

Research shows that it is common for many people to check their phones 150 times a day [2] and to touch the phone 2,617 times every day. The top 10% of users touch their phones more than 5,400 times daily. [3] These are signs of technology addiction.

How many times an hour do you check your phone?

Do you spend more time on social media or playing games than you do interacting with real people? [4]

Do you find that you can't stop yourself from repeatedly checking texts, emails, or apps—even when it has negative consequences in your life? [4]

Have you tried to cut back on smartphone use, only to experience restlessness, anger, irritability, difficulty concentrating, sleep problems, and craving access to your smartphone? [4]

If you are concerned about how your smartphone is controlling your life or the life of your children, then keep on reading.

Silicon Valley Whistleblower? Former Google Exec Reveals how Big Tech Wants to Control You

The problem is not the smartphone itself, but how technology companies and technology designers are using this technology to capture our time and attention.

Tristan Harris, a former executive at Google, and the co-founder & executive director of the Center for Humane Technology, describes the bigger picture of how smartphones can take control over our time and our lives.

Tristan Harris stated:

I want to tell you why the future of technology is going in a very specific direction... That direction is guided by one goal which is that everyone who succeeds needs your attention.

If you are Facebook or YouTube or Snapchat you need people's attention. You don't just need a little bit, but because of the business model of advertising you need as much as possible, because more attention equals more money. [5]

The Atlantic Magazine called Tristan Harris the "closest thing Silicon Valley has to a conscience."

He was the former Design Ethicist at Google. He left Google to create a public conversation about the ethical issues involved with technology. His work has been featured on 60 Minutes, TED, The Atlantic, PBS News Hour, and more. [6]

Tristan Harris gives us a picture of the mind control programs of tech companies and the serious ethical concerns that are involved. He states:

I want you to imagine walking into a room – a control room – with a hundred people hunched over at desks with little dials.

And that control room will shape the thought[s] and feelings of a billion people.

This might sound like science fiction, but this actually exists right now today.

I know, because I used to be in one of those control rooms. I was design ethicist at Google where I studied how you ethically steer people's thoughts.

We don't talk about how a handful of people working at a handful of technology companies – through their choices – will steer what a billion people are thinking today.

When you pull out your phone – and they designed how this works – and [you see] what is on the feed – it’s scheduling little blocks of time in our minds.

If you see a notification – it schedules you to have thoughts that maybe you didn’t intend to have. If you swipe over that notification – it schedules you into spending a little bit of time getting sucked into something that maybe you didn’t intend to get sucked into.

When we talk about technology we tend to talk about it as this blue-sky opportunity – it could go any direction.

I want to get serious with you for a moment and tell you why it is going in a very specific direction, because it is not evolving randomly.

There is a hidden goal driving the direction of all the technologies and that goal is the race for our attention. [1]

It’s All about Taking Our Time Away from Us

Tristan Harris explains that companies such as YouTube, Netflix, Facebook, and Snapchat don’t want a few minutes of our time every day – they want hours and hours – they each want our entire day if we will give it to them.

The more time they capture, the more money they earn from their advertisers.

For example, YouTube starts autoplaying the next video that it has selected for you as soon as you finish watching a video. YouTube hopes to grab your attention and keep it fixed on their site for the time it takes to play the next video.

Netflix will start autoplaying the next episode in a series to keep you watching.

Facebook will autoplay news feeds to hold your attention.

The Snapchat texting service provides snapstreaks to encourage people to have daily contact with each one of their friends even if they don’t have anything to say.

Listen to Tristan Harris’s complete presentation:

Technology Companies Call it “The Hook“

The hook is the four-step process that technology companies use to get our attention and create habits that unconsciously control our lives.

According to author and Habit Behavior Psychology Blogger Nir Eyal, a hook is an experience that is designed by technology companies for those who use their technology.

The hook is intended to establish a connection between the problems of users with the solution that has been designed by the company, with enough frequency to form a habit. [7]

A hook has four parts: the trigger, an action, a reward, and an investment. [7]

Nir Eyal, MBA, is the author of *Hooked: How to Build Habit-Forming Products*.

For most of his career, he worked in the video gaming and advertising industries where he “learned, applied (and at times rejected) the techniques used to motivate and manipulate users.”

He writes to help companies create behaviors that benefit their users, while educating people on how to build healthful habits in their own lives. He also has taught at the Stanford Graduate School of Business and Design. [8]

1. The Hook has Triggers

According to Nir Eyal, our negative emotions are internal triggers that open the door for technology companies to use the hook.

We are most vulnerable when we are bored, lonesome, lost, fearful, uncertain, or confused.

Our negative emotional state dictates the technology that we will use in response to our emotions with little or no conscious thought. [7]

2. The Hook has Actions

Painful internal triggers turn our attention toward specific actions.

Loneliness and depression may turn us to spend time on Facebook.

Uncertainty about certain facts can trigger us to turn to Google. Boredom can turn our attention to YouTube or various sports and news sites. [7]

3. The Hook has Rewards

Simply acting in response to negative emotion is not enough, because we need to get a reward for our action.

The rewards medicate or manage our unwanted negative emotions.

It is not just the content of smartphone apps that gives us a sense of pleasure, but it is also the changes in brain function, which they induce.

For example, getting a “like” on a post or photo on Facebook produces a reaction in the brain that helps a person temporarily feel better. [7]

4. The Hook has an Investment

The final step in the hook is called the investment. This is the building of an association or memory pattern within us, which recognizes the value of the technology or app, and causes us to go back to the app again and again whenever we experience triggers. [7]

Cravings

Nir Eyal tells us more about craving for rewards. He stated:

When we talk about rewards we need to talk about the brain, and in particular, we need to understand a region of the brain called the nucleus accumbens.

This special area of the brain becomes active when we crave something – luxury goods, sex, junk food, certain chemicals, and of course, right there in the center, technology.

What is most interesting about this center of the brain is that it becomes most active in anticipation of a reward. But when we actually get the thing we think we want, the thing that is going to make us happy, that's when that part of the brain becomes less active.

So, the way the brain gets us to act is by creating this itch that we seek to scratch. As it turns out, there is also a way to supercharge that itch – to stimulate a craving. [7]

Nir Eyal goes on to explain how cravings can be created by using – the mystery of the unknown. He stated:

In all sorts of things that we find most engaging you will find an element of mystery – it is the unknown. ... When you open the Facebook app, you never know what you are going to see. What photos might you find? What are the comments going to say? How many likes did something get? ...

When you open the twitter app, perhaps the first thing isn't very interesting, and maybe the second isn't all that interesting, but how about the third or fourth.

To get more of this reward of the hunt what do you have to do?

All you have to do is to continue to scroll. This scrolling is the exact same thing in psychology as pulling on a slot machine – searching and searching and never done searching for the next reward of the hunt. [7]

Is the Use of the Hook on Uninformed Smartphone Users Ethical?

The techniques of the hook could be consciously applied by a person to build positive behavior patterns in his or her own life.

However, when someone else is applying the hook to change our behavior or our thinking without our knowledge, then this is called manipulation and mind control.

Nir Eyal warns about the practice of designing technology that manipulates user behavior to meet the needs of a technology company. He stated:

We need to be very careful of how we apply these techniques. We are building products [smartphones] that people take to bed with them every night – and the first thing they reach for in the morning before they even say hello to their loved ones.

For too long these techniques have been used for mindless frivolity, but there is so much more we can do.

As consumers and users ourselves, by understanding how we get hooked, we can break unwanted habits in our own lives. And as people who make these products I believe we can help people live happier healthier, more productive and more connected lives. [7]

Are You Concerned about Smartphone Addiction?

The following webpage provides detailed information about the signs of smartphone addiction. If you are concerned about whether your smartphone use is actually an addiction, then be sure to visit the following page and take the smartphone addiction test.

[Smartphone Addiction: Tips for Breaking Free of Compulsive Smartphone and Internet Use](#)

Conclusion – Are Smart Phones the “Cigarette” of the Century?

Ian Bogost, the contributing editor at The Atlantic and the Ivan Allen College Distinguished Chair in Media Studies at the Georgia Institute of Technology coined the phrase “The Cigarette of the Century” when referring to smartphones. [9]

In his 2012 article, he questioned whether smartphone addiction will become just as unpopular as cigarette addiction. He speculated, there may be a day when checking your cellphone at dinner in public will be condemned just as much as lighting up a cigarette at the table is today.

We are just beginning to learn about the harmful effects of smartphones and tablets. Until the full extent of social dysfunction, emotional damage, and physical harm is recognized by our society, the use of these small screen devices will keep growing. They will continue to be passed around like candy with little concern for the risks of addiction.

About the Author

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References

- [1] [How a Handful of Tech Companies Control Billions of Minds Every Day](#),” Tristan Harris, TED Talk, 2017.
- [2] [The Surprising Reason Millennials Check Their Phones 150 Times a Day](#),” John Brandon, Inc.com, 2018.
- [3] [People Touch Cellphones 2,617 Times a Day](#),” Dscout Research, Business Insider, 7/13/2016.
- [4] [Smartphone Addiction: Tips for Breaking Free of Compulsive Smartphone and Internet Use](#),” Helpguide.org, Retrieved 6/15/2018.
- [5] [Time Well Spent: What’s Worth Our Attention?](#)” (Tristan Harris, Design Ethicist), DLD Conference, New York, YouTube, Published on May 19, 2017.
- [6] [The Problem](#),” Center for Humane Technology, Retrieved 6/7/2018.
- [7] [Hooked: How to Build Habit-Forming Products](#),” Nir Eyal, Animated, Narrated By Nir Eyal, YouTube, 10/4/2015.

[8] "[About Nir Eyal – Author and Habit Behavior Psychology Blogger](#)," Retrieved 6/7/2018.

[9] "[The Cigarette of This Century](#)," Ian Bogost, The Atlantic, 6/6/2012.