

Navigating the Uncharted Seas of ElectroMagnetic Radiation

Revealing the Truth Behind Harmful EMFs, How To Protect Ourselves and Thrive

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Electromagnetic energy is everywhere

All day long our bodies bathe in a sea of electromagnetic radiation (EMR) or energy. Sources of EMR are everywhere; some are natural like the light from the sun and the energy radiating from the very cells in our body. Most of this energy is critical to the balance and support of life on Earth.

However, not all EMR is the same. In modern times, humans and most life-forms on this planet have been exposed to increasing levels of artificial EMR. These other sources of EMR are emitted by man-made technology, such as mobile phones, Wi-Fi and even our home electrical wiring¹. The fields generated by these technologies can permeate practically anything (stone, wood and most metals), including our bodies. We now know that overexposure to some types of these fields, such as x-rays, is hazardous to our health. But are the others safe?

We have seen an explosion of chronic disease alongside the proliferation of these new technologies, especially our latest wireless friend - the smartphone. With the increased rates we see of cancer, diabetes, cardiovascular disease and depression, is our concurrent use of these devices just a coincidence? What if you knew that the natural, life-supporting structures and functions of our heart, brain, cells and even our DNA can be disrupted by these artificial fields, preventing the normal functioning of the body? What if our children are significantly vulnerable to this risk? Would you want to do something about it?

While industry-sponsored studies attempt to cast doubt by claiming the research is inconclusive, independent research has continuously provided evidence that artificial EMFs can negatively impact the healthy operation of our human bodies. In addition, warnings on the usage of EMF-emitting devices can be found from prominent organizations and even the manufacturers themselves. But these warnings remain largely hidden from, and if not, often ignored by a consumer that is constantly bombarded by mobile phone advertisements. Are we being led to believe these technologies are safe? Profit is a powerful motivator in big industry, with safety only being a concern when it cuts into that profit. So what can you do about it?

Preventing harmful exposure to EMFs can be as simple as avoiding them. But most EMFs are invisible to the naked eye and can move right through the roof, windows and walls of our homes. So maybe that isn't so simple... it would mean giving up most if not all of our devices, and living in an environment out of reach of the EMFs generated by Cell Towers and geopathic zones. For many of us, this lifestyle change just doesn't seem feasible.

In our modern age, there are many tricks for avoiding the potentially dangerous EMFs, but complete avoidance is near impossible. Protecting ourselves from harmful exposure may be our best option until industries and agencies make it possible for us to simply avoid exposure. Many products are now on the market that minimize exposure to EMFs, or even harmonize these fields so that they resonate with the human body.

If you are concerned about harmful exposure to EMFs, read on to learn more specifically about:

- What EMFs are
- How EMFs affect your body

¹ The term *Electrosmog* is often used to refer to the excessive density of electromagnetic radiation in our modern environment that is bombarding us 24/7.

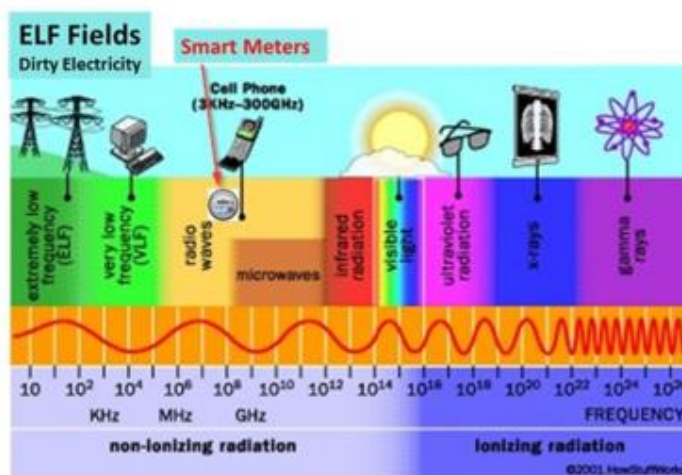
- Whether or not you are exposed to harmful EMFs
- Why the dangers of EMFs remain hidden
- How to protect you and your loved ones from harmful EMF exposure

Onward to good health and wellbeing...

What are EMFs?

Electromagnetic energy goes by different names and comes in different forms. This energy can be natural or man-made and depending on different factors, it can be harmless, beneficial or even quite dangerous to humans. The details can seem fairly complex, but we'll keep it simple here.

Electromagnetic radiation (EMR) and Electromagnetic field (EMF) are often used interchangeably, and for all practical purposes mean the same thing. This energy can be called **radiation**, as it radiates from an electromagnetic source, like the sun or a mobile phone. It also exists within a specific space or **field** around the source. EMR may be more appropriate when looking at the problem - how electromagnetic radiation affects the human body. But when looking at solutions, thinking of this energy as a field (EMF) helps us find ways to avoid unwanted fields or to harmonize them with our body's own natural field.



Within these fields, electromagnetic energy can be measured as waves and they travel at the speed of light across empty space. However, different types of EMFs exist with very different properties based on the length of the wave, or frequency. For example, visible light and lower frequency EMFs can pass through glass, higher frequency EMFs are absorbed by glass. Longer wavelengths have a lower frequency, with the EMF produced by power lines existing on the low end.

Shorter wavelengths have a higher frequency, with gamma rays (radioactivity) found on the high end of the spectrum. The EMFs we are most familiar with, such as visible light, radio waves and microwaves, fall in between. Natural and artificial EMFs can be found along the entire spectrum.

Natural sources of EMFs

The sun alone produces a great deal of the natural EMFs we are exposed to, helping to

provide the necessary energy for life to flourish on the surface of the Earth. But other sources exist in nature as well. The predominant types of natural EMFs include:

- **Visible light** - We are most familiar with these energetic waves, as they are of the right frequency for detection by the retina of our eye. We perceive these waves as the seven colors of the rainbow, allowing us to see our environment. They are also important when converted to chemical energy in the photosynthesis of plants and algae. We have learned to convert visible light to electrical energy with solar panels.
- **Infrared (IR) radiation** - These waves are emitted from warm objects, which in physics is almost everything we come in contact with. The sun itself gives off half of its energy as IR, with much of its visible light being absorbed and remitted as IR from the Earth.
- **Ultraviolet (UV) radiation** - Found at the electromagnetic frequencies just higher than visible light, UV light is able to form and break chemical bonds. We know that exposing our skin to UV from the sun is beneficial, as it stimulates vitamin D production; but exposure has also been related to increased risks of skin cancer. Some organisms also see or perceive UV light, such as butterflies and bees.
- **Gamma rays** - Also known as cosmic waves, they can be found emanating from the sun and outer space. By the time they reach the Earth's surface however, those frequencies have been rendered harmless. They are also known to be a dangerous byproduct of radioactive decay from processes such as nuclear fission.
- **ELF/VLF fields** - These are the lowest frequencies of the spectrum, with ELF/VLF standing for Extremely Low Frequency and Very Low Frequency. On the Earth, a variety of these electromagnetic waves are created by lightning² and natural disturbances in the planet's magnetic field. The human body also emits a weak electromagnetic field with signals in the ELF range. The brain specifically radiates different frequencies within the ELF band, corresponding to different states of mind or consciousness (e.g. focus or sleep), while the heart generates the highest energy EMF within the body.

Artificial sources of EMFs

The EMFs from natural sources can also be created artificially from electrical energy, such as the light and infrared heat from an incandescent light bulb. But through modern technology, we are able to create and take advantage of other types of EMFs from the electromagnetic spectrum. These include:

- **Radio frequency (RF) waves (AM/FM/TV)** - Although we can't hear these electromagnetic waves, a radio or TV can convert them into sound waves. The broadcast distance depends on the frequency, or wavelength, of the signal.
- **Microwaves** - Considered high frequency radio waves, this type of energy is found in a variety of modern applications, including communications, radar and cooking. Much like other radio waves, microwaves can carry information. They make up the bulk of our world-wide communication, commonly transmitting audio and video to our

² Flashes of lightning discharge low frequency waves that form a field around the Earth, an observation known as the *Schumann Resonance*.

smartphones. In addition, microwaves are easily absorbed by water and converted to thermal energy, which makes it useful for cooking.

- **X-rays** - This is a powerful energy known to ionize atoms and disrupt molecular bonds, making it very harmful to living tissue. The most common applications of this energy are in airport security scanners and in the medical field, especially radiography.
- **ELF/VLF fields** - Much like the natural sources of EMFs in this range, the artificial sources are not common knowledge. Currently, these waves are used in submarine communications, medical applications, such as stimulating bone growth, and research applications, such as the HAARP study of the Earth's ionosphere³. Beyond applications though, ELF/VLF fields are commonly found as unused energy generated by alternating current (AC) - the electricity flowing through our power lines, household wiring and electronic appliances. This electrical pollution is often referred to as **dirty electricity**.

Which EMFs are dangerous?

The sun's electromagnetic energy is critical to life on the surface of Earth. From the IR radiation, which heats the planet and its atmosphere to ideal temperatures, to the visible light that drives photosynthesis, producing oxygen. Beyond the natural EMFs, most of our modern technology depends on or produces electromagnetic energy as well, from our power lines to our wireless communications systems. Clearly EMFs are everywhere, but whether or not they are dangerous to humans is believed to depend on the source or type of EMF, the intensity of the radiation and the length of exposure.

It is widely accepted that high-frequency EMFs (upper UV light, X-rays, gamma rays) disrupt biological molecules and increase the risk of cancer. This is known as **ionizing radiation**, meaning it can produce ions by removing electrons from atoms. Ionization breaks bonds, which damages cells or alters the DNA in living tissue. Damaged cells may repair themselves, but if repaired imperfectly, this can lead to cancer or disease. Ionizing damage may also trigger cell death - harmless enough until substantial cell loss impairs the function of an organ, which again leads to disease. We understand that overexposure to ionizing radiation, even in persistent low doses, can quickly lead to illness and even death.

Non-ionizing radiation is used to describe EMFs that fall on the lower frequency portion of the electromagnetic spectrum, ranging from ELF fields to lower UV light. These frequencies have less energy due to a longer wavelength and do not ionize biological tissue, but they can cause thermal damage at the right intensity. We know that visible light from the sun can damage the retina of the eye when looking directly into it; as can some lasers, which if intense enough can burn tissue or cut metal.

The apparent debate lies in the non-thermal effects and consequences of non-ionizing radiation, particularly in the EMFs emitted by our modern technology - from ELF fields to high-frequency radio waves, or microwaves. It has been argued by some authorities that any evidence linking these EMFs, or the devices that emit them to disease is inconclusive. But does the lack of conclusive evidence demonstrating harm prove that they are safe? It is interesting to note that the US does not have any federally-mandated low-frequency EMF exposure limits, yet many other countries do. Even the WHO recognizes adverse health

³ The ionosphere is the region of the Earth's upper atmosphere that is ionized by solar and cosmic radiation.

effects from high level, short term exposure to EMFs, and has recommended international exposure guidelines to protect workers and the public.

If we dig a little bit past the reporting, or more often lack of reporting by the mainstream media, we find a growing body of research linking artificial, low-frequency EMF exposure to a variety of conditions and diseases ranging from cognitive impairment to Alzheimer's disease. Independent research, unsponsored by industry, demonstrates that lower frequency EMFs do indeed interact with the body, causing both thermal (heating) and non-thermal effects. These effects interrupt normal function, with the potential for damage, especially from long-term exposure.

The truth is, we still don't know enough about the interaction of the human body with EMFs, especially its cumulative impact... but what we do know may surprise you. And it just may convince you to reduce or even avoid exposure to these artificial EMFs.

How do EMFs affect the human body?

Human beings have spent most of their existence on Earth with very little exposure to EMFs outside of sunlight and the natural EMF of the planet. Artificial EMFs are a rather recent addition to our environment, slowly ramping up over the last 100 years. And now exploding over just the last few decades, with well over 4 billion mobile phone users worldwide today.

At the same time, we have also seen the proliferation of modern diseases. Could the sizeable increase in our exposure to artificial EMFs be a major contributor to our modern health epidemics? With a number of verifiable health symptoms linked to EMF exposure, along with thousands of published peer-reviewed studies that demonstrate adverse biological effects from EMF exposure, it is very likely.

EMF Hypersensitivity – Common health symptoms of EMF exposure

Today, a number of people are suffering from *electromagnetic hypersensitivity*, which is characterized by a variety of non-specific symptoms. Researchers and public health officials have documented these symptoms, and the syndrome has been recognized by the international health community. The symptoms reported by sufferers include:

- Insomnia and other sleep disorders
- Fatigue and weakness
- Chronic headaches and migraines
- Irritability, depression and behavioral changes
- Cognitive problems, impaired learning and poor memory
- Chronic infections
- Joint and muscle pain
- Numbness or tingling in the extremities
- Respiratory, cardiovascular and gastrointestinal problems

The list could go on. These symptoms are often debilitating, leading sufferers to take extreme measures to avoid exposure to artificial EMFs.

Given that these symptoms differ from one person to the next, mainstream experts have been unable to determine what causes it. They do though deny any link to EMF emitting devices, like mobile phones and Wi-Fi routers, based on the available double-blind provocation studies. These studies simply look at whether or not subjects report symptoms in the

presence of an active or fake EMF. Herein lies a problem with their conclusions - these studies only look for a direct triggering of symptoms upon EMF exposure. Symptoms may in fact be the result of chronic artificial EMF exposure, with triggers dependent on other environmental factors and even the particular individual. Clearly these studies won't tell us as much as those that look at the specific interaction of EMFs with the human body.

Impact of EMFs on human anatomy and physiology

Concerns over the dangers of EMFs emitted by our modern technology has produced a variety of research on the subject, using both humans and animals as models to understand how humans may be affected. Some studies have looked at specific devices with normal exposure, while others have used a range of frequencies with different intensities and durations of exposure. Both have found that EMFs affect the normal structure and function of cells on up to entire organ systems, while a number of studies have identified EMFs as a risk factor for disease. Evidence from these studies strongly supports a number of significant non-thermal effects.

Cellular and Genetic Changes

A variety of cells, each with specific functions make up our body. How they look and behave depends on how each cell expresses the genetic information in its DNA. EMFs can alter this normal gene expression, as well as damage and prevent the proper repair of DNA. The double-helix or coiled structure of DNA acts like a fractal antenna to a wide range of frequencies, providing a mechanism for the direct interaction of EMFs with the DNA molecule. This makes the DNA more vulnerable to damage. As with ionization radiation, the cumulative effects of damaged DNA may be disease or cancer.

Research has also shown that EMFs can affect the cell membrane, preventing nutrients from entering and toxins (e.g. free-radicals⁴) from leaving the cell. Not only that, but they reduce free-radical scavengers, particularly melatonin - we'll talk more about this hormone.

Biological Clocks and Hormonal Disturbance

Organisms have internal clocks that govern essential biological processes throughout the body based on the cycles of the sun and moon. Multiple clocks are located throughout the body, governed by a central clock known as the suprachiasmatic nucleus (SCN) in the hypothalamus of the brain. This master clock resynchronizes itself each day with exposure to light, and then coordinates the circadian rhythms⁵ that influence sleep-wake cycles, hormone release and other bodily functions. Research has shown for some time that EMFs disrupt the important circadian rhythm of melatonin production.

Melatonin is an absolutely vital hormone produced in the pineal gland of the brain to influence sleep-wake cycles and other functions. It is secreted in different amounts through the day, peaking at night to help the SCN regulate the body's circadian rhythms. Like light, non-visible EMFs decrease melatonin production, but EMFs also decrease melatonin activity

⁴ Free radicals are atoms, molecules or ions that have lost an electron. While necessary for life, the body produces natural antioxidants to prevent a buildup of free radicals that may lead to cell damage.

⁵ *Circadian rhythms* are the body's natural mental, physical and emotional cycles linked to the daily variation in light and darkness. *Chronobiology* is the study of how these natural cycles are affected by solar and lunar rhythms.

due to effects on melatonin receptors. As mentioned, melatonin is a powerful antioxidant, but it also has an anti-inflammatory effect and may be useful in treating diseases and cancer.

Alterations in the timing of essential biological processes has also been shown to lead to a cellular stress response.

Activated Stress Response

Environmental toxins, like heavy metals, organic chemicals and pesticides, produce a stress response - as do EMFs. On a cellular level, exposure to the toxin or EMF activates stress proteins to promote survival of the cell. It is common for some toxins to initiate a response by denaturing, or breaking down the structure of vital cellular proteins. While the stress response is a protective mechanism, chronic exposure to the stressor leads to a diminished response. Lowered protection to exposure over time increases the risk of damage to DNA and the initiation of cancer. The cellular stress response tells the body that it has come in contact with something potentially harmful. EMFs trigger this response.

Impacts on the Nervous System

Our nervous system is a complex network of cells and tissues that allow for rapid communication of the brain and spinal cord with various parts of the body. Over a few hundred studies show neurological effects from EMF exposure. On a cellular level we see the same impacts as before, namely gene expression, potential DNA damage and changes in the cell membrane. There's also an effect on the signaling of nerve cells, interfering with the normal flow of the electrical currents through nerve fibers and muscle tissue.

Effects on the brain are of specific concern, given its central role in managing the body and the proximity of EMF emitting devices during use. What we find is that EMFs change electrical activity affecting cognitive function and increasing risk of disease and cancer. The brain has a characteristic EMF, or brainwave pattern, that changes frequency with our mental state, as detected by an electroencephalogram (EEG). Interruptions in typical patterns lead to poor short term memory, altered sleep and other behavioral changes. Strong epidemiological studies go further, demonstrating EMFs as a risk factor in brain and auditory nerve cancers, as well as Alzheimer's disease. Interestingly enough, there is considerable evidence that melatonin protects against Alzheimer's. There's also indications that EMFs cause blood-brain barrier (BBB) damage. The BBB is a protective barrier that prevents the flow of toxins into the brain tissue; EMFs increases permeability of the barrier, allowing toxins in where they can cause various neurodegenerative diseases.

A unifying hypothesis for a biological mechanism that accounts for all EMF effects lies in the synchronized neural activity of pacemaker cells throughout the body. These small masses of specialized cells cooperate electrically to contract involuntary muscles like those in the heart and digestive system, and regulate critical functions including metabolism in the brain, gut and heart, as well as the circadian rhythms governing sleep and hormone cycles. The ability for EMFs to disturb the coordinated activity of these cells would not only account for the researched effects, but also most if not all of the symptoms reported by sufferers of electromagnetic hypersensitivity.

Suppressed Immune System

The immune system is a group of cells, tissues and organs that work together to protect the body from infectious disease and environmental toxins. EMF exposure disrupts this system, leading to over and under active conditions. This has been primarily demonstrated by effects on white blood cells (WBCs), specifically:

- Increased mast cell numbers and function, stimulating allergic and inflammatory responses.
- Decreased function of natural killer cells, which kill certain tumor and virus-infected cells.
- Decreased numbers and function of T-lymphocytes (T-cells), which allow the body to remember and recognize previous invaders and help the body destroy them.
- Decreased activation of macrophages, which are cells that chew up invading organisms.

Cardiovascular System Effects

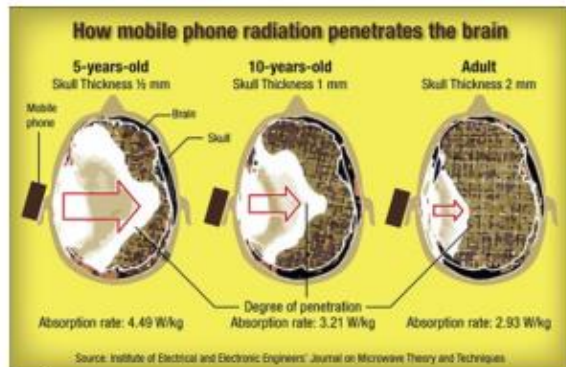
The cardiovascular system includes the heart and blood vessels that deliver oxygenated and nutrient-rich blood to our body's tissues. The heart is an electrically dynamic organ, producing its own EMF many times greater than the brain. Exposure to artificial EMFs can disturb the heart's natural rhythm, causing an abnormally rapid, slow or irregular heart rate. These EMFs cause artificial pacemakers to malfunction as well, which would indicate their risk to the heart. In addition to the typical cellular effects, EMFs can also alter blood chemistry and blood vessels. While a direct link to heart disease has not been established, these effects may increase the risk with chronic exposure.

Impaired Fertility

Numerous studies have shown that EMFs have serious impacts on human sperm morphology and function. Exposure levels similar to having a cell phone in the pocket or laptop on the lap can damage the sperm cell, and even the DNA, which sperm lack the ability to repair. The result is reduced numbers, poor viability and decreased motility, all factors that can lead to male infertility. The effects on female fertility are still unclear.

Children are at significantly more risk

Today, most children face a lifetime of exposure to artificial EMFs. Given the range of established effects on the human body, this long-term exposure is of particular concern. Children have smaller heads, thinner skulls and more fluid in the brain, allowing them to absorb more radiation than an adult. Their brains and immune systems are still developing, and since cells are



reproducing more quickly, they are susceptible to aggressive cell growth.

There is evidence that effects of EMF exposure begin in the womb. Children born to mothers exposed to modern EMFs have more learning disorders and behavioral problems by school age, and are more susceptible to asthma and leukemia.

In fact, a large number of epidemiology studies find increased risk of childhood leukemia from EMF exposure. Exposure also interferes with recovery, increasing risk of death by 300-450%. Other than ionizing radiation, no other environmental factor has been as firmly established that increases this risk.

It is clear that EMF exposure has non-thermal, biological effects on the human body. These effects can occur at various frequencies below infrared waves and at very low levels of exposure, often within minutes of exposure. Lower intensity fields are not always less damaging, and at times may be more. There appears to be an intensity window in which effects are most powerful; this window is at a level one billion times lower than thermal heating.

When exposure to modern EMFs can prevent the normal healing of damaged DNA, activate a stress response and disrupt our immune system, it is reasonable to presume that chronic exposure will result in cancer and disease. It is also reasonable to take precautionary actions that limit or avoid exposure in order to protect our health. If we're going to protect ourselves, what sources of EMF do we need to protect ourselves from?

Are you exposed to harmful EMFs?

The simple answer is YES! Virtually everyone is exposed to EMFs that alter the body's normal function. Sources that generate these EMFs can be found within and outside of our dwellings, in all corners of the planet. For many, the primary source of exposure is our modern technology. But for others, they may have the unfortunate, chronic exposure to geopathic zones within the Earth.

EMF Sources Inside

Most sources for EMF exposure are located within our homes and workplaces. Exposure to these sources may be the most important to mediate, given their abundance and our proximity to them during most of the day. Based on the frequency of radiation emitted, sources primarily fall into two categories - wireless communications devices and electrical devices.

Wireless devices produce EMFs as high-frequency radio waves, or microwaves, to transmit communications from one device to another without a wire or cable. This includes cell phones, smart phones or tablets, cordless phones and computers - anything that communicates via a cellular, Wi-Fi or Bluetooth signal. Most of the devices are used within very close proximity to the body, and even carried on the body. Harmful exposure to devices like Wi-Fi routers is possible if placed near sleeping areas.

Electrical devices in the home or office produce the EMFs often known as dirty electricity. Whereas the wireless devices produce EMFs intentionally as part of their function, dirty electricity is a pollution. It is generated when standard household electricity is converted by

devices into another form to operate, and when devices use standard electricity intermittently rather than continuously. Dirty electricity can spread throughout your home and to others via electrical wiring, some plumbing and outdoor power lines. But it's not just dirty electricity, EMFs are emitted from anything with an electrical current; this includes:

- Basic home electrical systems - the wiring, electrical panel or fuse box, outlets and switches
- Kitchen appliances, washer and dryer, heating and air conditioning (HVAC) units
- TVs, stereos, video game systems, desktop computers, laptops and printers
- Small appliances, such as multispeed fans, coffee makers, electric blankets, heating pads, hair dryers and clock radios
- Energy-efficient fluorescent light fixtures and compact fluorescent light bulbs (CFLs)

EMF Sources Outside

EMFs do not require a medium through which to move and can travel across empty space. Although their effect may decrease dramatically with distance, these fields can pass through many materials including most of our homes and buildings. This makes chronic exposure to external sources a threat to our body as well. These outside sources can be artificial, as in wireless and electrical technology, or they can be natural, as in geopathic stress.

Artificial sources of harmful EMFs that we frequently find outside our homes and businesses include:

- Cell towers that transmit wireless communication signals across the world
- Power lines and solar power systems that provide electricity to homes and businesses
- Smart meters on homes and businesses that transmit wireless information regarding the consumption of electrical energy and gas to the power company
- Neighboring buildings that are producing dirty electricity

These sources are relatively easy to identify, as are those inside your home. However, geopathic zones are not so obvious. These mostly natural sources of harmful EMFs seem to be a dirty little secret.

Geopathic Zones

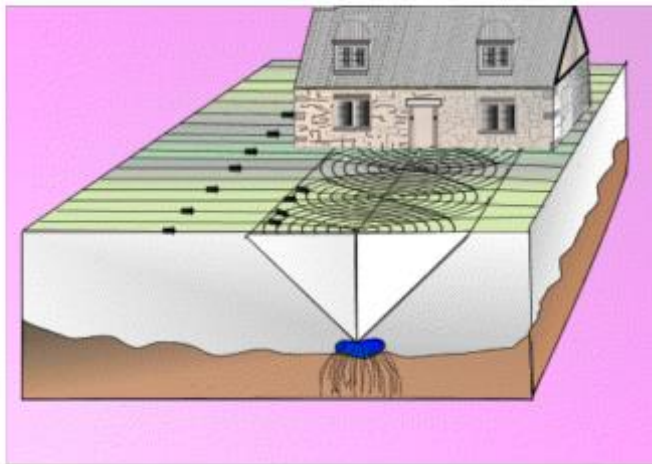
The concept of geopathic zones is given far less attention than the EMFs emitted by electrical and wireless technology, thus limiting the scientific explanation of this phenomena. However, researchers in the eastern hemisphere, particularly Europe, have documented extensive evidence over the last 100 years, describing where they are found and their effects on humans and other life forms.

Geopathic zones describe specific, geographical areas that produce weak, but harmful EMFs, typically due to natural properties of the Earth⁶. These include:

⁶ Areas affected by technology-based EMFs are sometimes also referred to as geopathic zones.

- **Geological formations and disturbances** - Natural features and manmade structures within the earth are believed to generate a local EMF, either due to their intrinsic nature or possibly by distorting the natural Earth radiation (earth rays or e-rays) that is emitted outward from within the planet. Most geopathic zones occur around underground streams, or water veins, but can also be found around mineral deposits or geological faults/fractures in the crust. Manmade structures that create these zones include sewers, water pipes, electricity, tunnels and underground railways.
- **Global energy grids** - Research has uncovered a number of energetic grids that overlay the Earth, creating a local EMF along the gridlines. These grids are believed to be caused by cosmic radiation or the Earth's magnetic field, depending on the grid. These straight lines run deep into the earth and reach miles above the surface. Their intensity and the spacing of the lines can vary by geographical location. The most well-known grids (or lines), named after the doctors that discovered them, are the **Hartman grid** and the **Curry grid**. The lines of the Hartmann grid run north-south and East-West, are approximately 8-12" in width, and are spaced 6-10' apart depending on the direction of the line. The lines of the Curry grid run diagonal to the Hartmann grid; they are 12-16" in width and spaced 8-12' apart. The Curry grid is found to be more intense at night, particularly during a full moon.

Geopathic zones can feel invigorating in small doses, but like other sources of radiation, it is



the intensity and duration of exposure to these zones that can cause harmful biological effects, or **geopathic stress**⁷. The energy is most intense in areas in which geopathic zones cross, such as in the intersection of gridlines or when gridlines overlap an underground water vein. Researchers and doctors find the greatest incidence of geopathic stress with individuals whose beds are positioned in crossing zones. Chronic exposure to these zones during sleep often localizes cancer or disease to the portion of the body exposed. Individuals suffering from geopathic stress are often therapy-resistant; until removed from the zone, their capacity to heal is greatly impaired.

If you haven't heard of geopathic zones, you're not alone. While awareness about geopathic zones has grown among doctors and health practitioners in Europe significantly over the last decades, the same is not true of North America. As a whole, western medicine has yet to address (investigate or debunk) the existence and effects of geopathic zones. Much like the effects of wireless technology and other sources of EMFs, why is it that this information isn't more widely available?

⁷ Geopathic stress is also used by some to describe the energy or field itself that emanates from geopathic zones.

Why aren't we being told the truth about EMFs?

There are thousands of published peer-reviewed studies that demonstrate adverse biological effects from EMF exposure. Most of us however, remain largely in the dark regarding these effects and our potential for harmful exposure. We trust that our industries and governments would make our good health and well-being a priority, but do they?

Follow the money – big industries bury the truth

Contrary to the evidence, the mainstream message is that there is no proof of harm. But this in itself is no proof of safety. So why would we be led to believe that cell phones, Wi-Fi and other EMF emitting devices are safe? The easy answer is MONEY! Some of our largest “big money” industries would stand to lose a significant amount if the truth came out - not just in revenues, but liability. And like all corporations, profit to stockholders is their principle objective.

Unfortunately, hiding the truth is an interconnected web. The telecommunications industry is now one of the most powerful, having become bigger than the pharmaceutical industry. They are able to bury the science and confuse the message by influencing the media, research and politics. Telecoms rank as one of the leading industries in advertising, which has a large impact on what gets reported by the media. In many cases, these same telecom companies own the mainstream media. They protect their investments by what they don't report.

Telecoms influences the science as well. Although they commission large studies, these are often to confirm the safety of cell phones. Any evidence of them being a detriment to human health is covered-up, and they focus on the data that says there is no effect. They select the research that supports their business, and make efforts to revoke funding or get peer-reviewed publications retracted for research labs that find harmful effects from cell phone radiation. They even go as far as hiring scientists to cast doubt on the research and confuse governments.

And shouldn't our government be concerned with the truth? Telecoms are also one of the top industry spenders for political lobbying. What affect has that had on government position regarding EMFs? Well in 2014, the Centers for Disease Control and Prevention (CDC) issued a FAQ about Cell Phones and Your Health, in which it was stated “Along with many organizations worldwide, we recommend caution in cell phone use.” A week after this was reported on, the CDC changed the language on the FAQ website to remove any official stance on the matter. Internal CDC records suggest great disagreements within the organization on cell phone risk. It's also interesting to note that the EPA had been instructed to stop monitoring frequencies in the ELF range of the electromagnetic spectrum since 1979.

The tobacco industry was found to be hiding evidence for years regarding the links between tobacco smoking and lung cancer. Isn't that enough to demonstrate that these large industries are capable of hiding the truth? The problem is that most environmental causes of cancer in the environment don't show up for over 10 years, and with EMF exposure, it's generally in specific groups, like children, and not the general population. Warnings on cigarettes appeared long before the tobacco industry was found guilty of concealing evidence, the same may be true for cell phones and EMFs.

The WARNINGS are there

While the big money industries may not be telling us the truth about the effects of EMF exposure, we are being warned... by scientists, doctors, the independent media, governmental organizations and even the telecom manufacturers to an extent. But these warnings are either dismissed or hidden from view.

Researchers and even mainstream doctors are warning that EMFs are potentially harmful, especially to children. In most cases, it is the independent media that report on these warnings and the evidence that supports them. The mainstream media, however, will often label these doctors as “quacks” and the research as “pseudoscience”. In both cases, they are putting up a strawman to bring deception to the argument and sway your opinion on the evidence. In effect, helping you to ignore the warnings.

So as the mainstream media and others try to cast doubt on these warnings, how do we explain the warnings from governments and even the telecom industry? The US may not take an official stance on the matter, but many other countries around the world do. The legal standards may differ, but countries such as Australia, Germany and Brazil set significant occupational and public exposure limits to non-ionizing radiation. In addition, the International Agency for Research on Cancer (IARC)⁸ has classified radiofrequency EMFs as a *Possible Human Carcinogen*. This would cover all wireless technology, like cell phone and Wi-Fi. The IARC could have chosen the Group 4 - *Not A Carcinogen* or Group 3 - *Insufficient Evidence* classifications, but did neither.

So no matter what the mainstream media tells us, the largest health organization in the world recognizes the evidence of effects from EMF exposure. We can even find warnings in the manuals or settings of our newer smart phones. They specifically state that phones are NOT safe if held directly against the body, often giving a minimum exposure distance. The problem here is that these warnings are often hard to find. For example, on the iPhone the RF exposure distance warning is buried deep within the settings.⁹

We are being warned and the evidence is there for us to find. Even if the truth is being buried or hidden, chances are that most of us have come across it. Why aren't we willing to listen? We can't see EMFs, harmful exposures can take years to manifest, or could it be that we want to believe our wireless “toys and necessities” are safe. With consumers wanting a new smart phone every 1-2 years in order to have the latest features, it's become too easy to dismiss the warnings and accept the mainstream message that EMF exposure is safe.

EMF exposures are and not going away anytime soon, but there is something you can do about it.

⁸ The IARC is a branch of the World Health Organization (WHO), a specialized agency of the United Nations that is concerned with international public health.

⁹ In OS9, the warning can be found here: Settings → General → About → Legal → RF exposure

What actions can we take to prevent harmful exposure to EMFs?

It is clear that EMFs are everywhere. The beneficial ones can be obvious, from the natural light that drives plant growth, to the ultraviolet light that helps our bodies synthesize vitamin D. Research is also showing that exposure to certain low-frequency EMFs has a therapeutic effect in treating disease. The dangerous ones aren't so obvious. When it comes to high-frequency, ionizing radiation, we do recognize that we incur more risk at higher intensities and longer exposure. For example, health care practitioners take precautions to avoid excessive X-ray exposure and the CDC recommends reducing exposure to the sun's UV light when it is most intense.

The problem lies with low-frequency EMFs. Unlike ionizing radiation, research shows that increased risk for biological harm can occur at very low intensities, often taking years to present itself. When it comes to risk factors, duration of exposure appears to be most critical. Given the proliferation of wireless technology in our environment, we are at risk for near constant exposure to harmful EMFs. There are, however, a number of ways to avoid or protect yourself from exposure.

EMF Avoidance

These days, complete avoidance of harmful EMFs is a difficult, but not impossible task. But this need not be the goal. With duration being the most critical risk factor for harmful exposure, avoiding some sources and reducing exposure to others may be sufficient. Here are a number of things you can do to significantly reduce or avoid EMF exposure.

Start with what's closest

EMFs rapidly dissipate with distance from their many different sources. Our primary concern here is with the EMFs generated by electrical current (ELF radiation) and wireless technology (RF/microwave radiation). So simply keeping your distance from these sources can significantly reduce your exposure. Start with the most commonly used devices that come closest to your body.

Cell phones, tablets or any handheld smart device - We use these electronic devices to talk, text, engage in social media, watch movies, listen to music, play games and the list goes on. These devices can be sending and receiving high-frequency RF waves, or microwaves, on an almost continuous basis. To begin with, the evidence suggests that *children should not use these devices*; and if so, only in airplane mode. Adults can do a number of things to reduce exposure:

1. Keep away from body when on, not in your pocket
2. Keep away from your head when talking or better yet used speaker mode
3. If using headphones, find ones that use sound tubes rather than wires, which produce an EMF
4. Disable Wi-Fi and/or Bluetooth when unneeded and turn off when not in use

5. Use where reception is good
6. Do not use in the car, as radiation levels are increased

Laptops - Like smart devices, these may be constantly producing EMFs through wireless communication. They also will generate an EMF when plugged in due to the AC electrical current moving through the cord. Use in battery mode and with an Ethernet cable instead of wireless to connect to the internet; make sure to disable the wireless communications. Most importantly, *avoid using laptops on your lap*.

Throughout the day, we will come into contact with many other EMFs generated by electrical wiring, lighting, appliances and more electronics. The recommended safe distance between you and the EMF source is only 4-6 feet for ELF radiation (electrical current), but it tends to be 40 feet or more for RF and microwave radiation (wireless technology). In many cases, this contact is only brief. However, at work or while sleeping, you may be under constant exposure.

Control your sleep and work environment

While sleeping, we may spend up to 8 or more hours in relatively the same position. If we're lucky, right? Not if we're significantly increasing our exposure to harmful EMFs. Given their effect on our circadian rhythms, it's no surprise our society is afflicted by so many sleep disorders. To improve your sleep and lower your risk of disease:

1. Remove all electrical devices from your sleeping area. Use a battery-operated alarm clock if possible and if not, keep any electric alarm clock at least 6 feet from your body when sleeping.
2. Avoid electric water beds, blankets and heating pads.
3. Do not sleep within 10 feet of an electrical panel and as far from a smart meter as possible.
4. Do not have a wireless router in your room, and turn off Wi-Fi in your house at night.
5. Get rid of baby monitors, or at the very least keep them 6 or more feet from your baby's head.
6. Move your bed from geopathic zones. More on this in the next section.

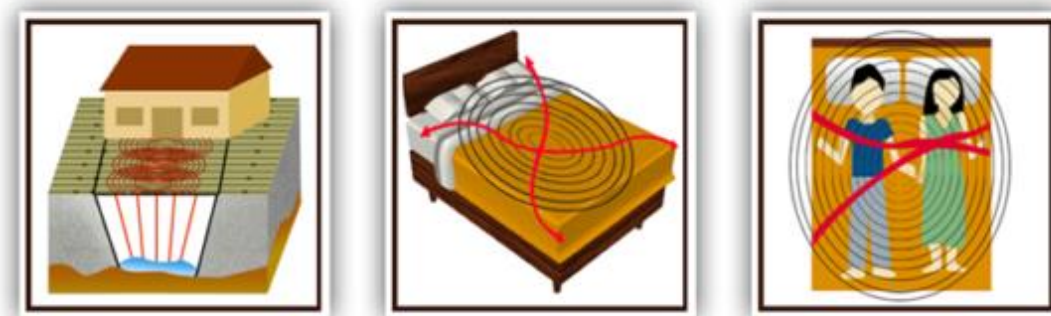
The same exposure risk may also occur if you work at a job that keeps you in relatively the same position for hours at a time. Controlling this environment is much like your sleep area. Other precautions include:

1. Moving power strips at least 3 feet away from your feet.
2. Replacing older CRT monitors with newer LCD ones.
3. Using a landline instead of wireless phones, especially cordless DECT phones
4. Connecting to the internet with an Ethernet cable
5. Avoiding wireless computer devices (e.g. keyboard, mouse, printer); using cabled ones instead.

Properly reducing your exposure to EMF may require testing. There are several EMF testing meters available that can detect EMF and measure their intensity, as well as online videos that demonstrate their usage. Seeing is believing - meters can show you exactly where the EMFs are the worst in your home or work environment so that you can avoid them.

Beware of geopathic zones

Geopathic zones are of special concern. These sources of EMF are generally underground, and therefore unseen like the radiation they emit. As mentioned, this radiation is most intense when zones cross, and chronic exposure to these areas while sleeping has been linked to disease.



This is how the **STRESS ENERGY** created below the ground, affects your sleeping position and results in **CANCER** and **TUMORS**

Until recently, geopathic zones could not be measured by conventional scientific methods. However, technology is not yet available for home detection. There are professionals in some areas that can help in detecting geopathic zones, but with a little research and practice, you may be able to detect them yourself using a compass or dowsing. In addition, watch the behavior of your infant or pets and take note of their favorite places to sleep or those they avoid. Babies and dogs tend to be radiation avoiders, while cats will seek out the geopathic zones.

If you suspect that your bed or workplace may be in a geopathic zone, move it! Even 1-2 feet can make a significant difference in exposure.

Consider extreme options

You may be suffering from electromagnetic hypersensitivity syndrome or geopathic stress, or just want to lower your exposure risk as much as possible. There are other options you can consider to avoid or reduce exposure:

1. Ask your electric utility provider to remove wireless smart meters and replace with a wired one.
2. Eliminate all wireless in your home (Wi-Fi, cordless phones). Replace Wi-Fi with Ethernet cables.
3. Switch out compact fluorescent light (CFL) bulbs for incandescent light bulbs, which are now available in versions more efficient than CFLs.
4. Stand 3-4 feet away from microwave ovens when in use, or stop using one altogether.
5. If you live underneath power lines or in close vicinity to cell phone towers, you may want to consider moving.

6. Call in an EMF mitigation specialist or Building Biologist to survey your property. Depending on your needs, the company Educating Wellness, LLC does property reports via distance dosing, and EMF measurements on a case by case basis. You can contact them via email: learn@educatingwellness.com.

This list is far from complete. In addition, there are a number of ways to protect yourself from EMF exposure without completely avoiding the source. Protection may be the best choice for those of us that embrace our modern, technology-based lifestyle.

EMF Protection

Some of us love our devices, but some of us simply don't have the resources or opportunities to make the necessary lifestyle changes to reduce, or even avoid EMF exposure altogether. In these cases, EMF shielding can play a vital role in protecting all of us from harmful exposure. This practice can significantly reduce the harmful EMFs in a space by either blocking the fields with a physical barrier or by changing the frequency of the fields, harmonizing them with the human body.

Blocking the fields

EMFs can pass through most anything, but not everything. Certain metals, like silver, copper and nickel, are used to reflect higher frequency radiation, while carbon will absorb this radiation. These elements are embedded into various materials designed to shield your body or specific areas of your house. For personal protection, there are radiation blocking cell phone cases that redirect the radiation from your phone away from your body. You can also find an array of hats, gloves and other clothing made from EMF reflecting fabrics. To block areas of your home, generally from smart meter and cell tower radiation, there are fabrics, paints and films to cover the walls, ceilings, floors and windows.

There are, however, a number of problems with the protection offered by blocking materials. First, most of the materials are reflective, meaning an EMF will work its way around any shield that is not a complete enclosure, reducing its effectiveness. In addition, not all products offer significant EMF blocking, and those that do use materials that only block wireless (RF) radiation. These materials would be unable to protect you from dirty electricity and the ELF radiation generated by power lines. Most importantly, there are some concerns with safety. This method of shielding can redirect the harmful radiation towards another person or other areas of your house, and using a cell phone within a shielded area can amplify the radiation you are exposed to.

Even with the drawbacks in using physical barriers to block harmful EMFs, they can be used successfully to offer protection from some harmful EMFs. If you're looking for more comprehensive protection without avoiding our modern sources of EMFs, then rendering these fields harmless by changing their frequency may be the ideal solution for you.

Harmonizing the fields

There are a number of devices today being marketed as EMF shields and harmonizers. They differ somewhat in how they offer protection. Some change, or optimize, your body's biofield¹⁰ or the water in your body's cells to offset the EMF effects, while others change the harmful EMF frequencies into beneficial ones. In the latter case, these harmful frequencies are brought into harmony with our body's own electromagnetic frequencies.

¹⁰ The human biofield is a field of electromagnetic energy and information that emanates from and surrounds the human body.

One particular source of [EMF harmonization devices](#) that stands out is The Hedron (for [personal protection, cell phones and other electronics, and living/working/vehicle areas](#) (up to 1000 ft²) developed by Hedron Life Source. Unlike other devices, the Hedron is currently the most tested and proven product to protect users from the harmful EMFs generated by modern technology and geopathic zones. This patented technology is a very specific crystalline matrix composed of a proprietary blend of 12 earth minerals and geometrically attuned crystals with the capability to harmonize EMFs for your body. Further, this matrix is embedded with scalar energy to enhance its effectiveness.

Scalar energy has a number of unique properties and applications. Unlike EMFs, scalar energy fields have zero frequency and do not radiate as waves. They simply occupy and expand in the open space around their source. These natural, static fields pass through solid matter and do not decay over time and distance. However, much like EMFs, they can be created artificially and have the capacity to carry information. In addition, this energy and the information it carries can be embedded into an object, so that the object now generates that scalar energy field. In the case of the Hedron, it is embedded with and generates the fundamental Schumann Resonance of 7.83 Hz.

The **Schumann Resonance** is the primary frequency of the Earth's EMF when uninfluenced by our modern technology. As previously mentioned, lightning discharges generate electromagnetic waves that pulse between the surface of the Earth and its ionosphere, creating the field. All forms of life came into existence, influenced by this natural background radiation, which is now often over-powered in our modern world. Studies have shown that the Schumann resonances have beneficial effects on human physiology.

So not only does The Hedron's unique mineral and scalar technology harmonize harmful EMFs, it generates a field that is beneficial to our health. Testing of this device has shown that it effectively shields 99.95% of radiation, reduces heating by over 80%, and restores and balances the human biofield in the presence of harmful radiation. There are three options for the device: The Device Shield for use on any mobile or electronic device, the Body Shield for personal protection, and the Home Harmonizers for large area protection.

Given their effectiveness and convenience, The Hedron options may offer the best protection available from harmful EMFs, while still allowing us to take part in all the conveniences of a modern lifestyle. No need to avoid the radiation or install blocking materials to protect specific areas of your environment. Simply use The Hedron on your devices, in your home or on your body for 24/7 protection in any environment.

[Support your body](#)

Taking action to prevent harmful exposure is just the first step to consider. Chances are most of us already live high EMF exposure lifestyles. The effects may be a build-up of toxic waste products in our cells, or damage to our gut flora. Make sure to support the gut with probiotics and consider a detox to clean your cells and restore them to optimum health.

You may also find it helpful and enjoyable to walk barefoot on the sand, grass or dirt. This common practice known as **earthing** or **grounding** allows the beneficial negative ions from the ground to flow into our body, and has been shown to reduce stress hormones and inflammation.

All of life is energy

Life as we know it couldn't exist without energy. In fact, as Albert Einstein has said "Energy is everything and that's all there is to it." Pioneers in physics and biology are currently rewriting our definitions of energy and matter, demonstrating the profound impact this concept has on our understanding of nature and our role in it. Given the energetic balance we find in nature, it should come as no surprise that our man-made energies can tip this balance, affecting the health of organisms, ecosystems and the Earth itself. Energy connects all of it - and us to it. Harmonizing the harmful EMFs in our environment with the beneficial, natural ones, can bring us into balance with nature, providing us with optimal health and wellbeing.