

Electromagnetic Fields (EMFs) What is Really Going on Here?

By Jeannie Tower, BBEI

In today's world we are constantly bombarded by invisible man-made electromagnetic fields (EMFs) that cover the surface of the earth with increasing density. If EMFs were visible, we would see a tightly interwoven net totally surrounding the earth. These man-made EMFs have a profound and far-reaching effect on everything from our health to the weather. Every building and neighborhood has the latest wireless technologies, exposing us to ever-increasing frequencies and pulses that create electromagnetic smog/pollution and biological stress on our bodies.

To grasp the complexities of electromagnetic pollution, one needs to understand the electromagnetic spectrum, which makes the invisible visible. It is a graph that shows different categories of EMF frequencies from 1 hertz (oscillations per second) to infinity.

At the low end of the spectrum are human brainwaves, measuring between 1-22 hertz. The human body, comprised of 90% water, is an excellent conductor of electricity. The higher on the spectrum, the more oscillations; the higher frequencies thus have a pulsing versus a wave characteristic. Constant exposure adds an immense stress to the body's natural systems. The combination of the lower frequencies and the pulsing energy of the higher frequencies disrupt our nervous system, which is an intricate web of tiny electrical pulses.

The Electromagnetic spectrum consists of:

- ELF or extremely low frequencies come from power generating equipment, household appliances, and household wiring. These are 60 hertz in the USA, 50 hertz fields in the UK.
- RF or radio frequencies are communications equipment, AM/FM transmitters, and CB radios. (1 KHz – 100 GHz)
- Microwave frequencies (a subset of Radio Frequencies) are cell phones, digital cordless home phones, WiFi, microwave ovens, MRIs, and ultrasound. (1GHz-100Ghz)
- Infrared radiation includes alarm systems and motion detectors.

All of the above frequencies are categorized as Non-Ionizing radiation. Scientists believe that because they are non-ionizing, there is no biological effect on the human body. However, recent epidemiological studies suggest that non-ionizing radiation does have biological effects. Scientists know that Ionizing radiation (x-rays, etc.) causes cellular damage to the human body.

All frequencies have an electrical field (EF) and a magnetic field (MF), therefore the term electromagnetic refers to two different components. Each component has their own set of characteristics, measuring devices, guidelines for exposure and shielding capabilities.

Electric fields are present all the time, even if a lamp, TV etc. is turned off. The only way for no electric field to be present, is to turn off all the electricity in your home. When an appliance is turned on, both an electric field and a magnetic field are present.



Most research into the health effects of EMFs focuses on exposure to high magnetic fields, which are measured in milligauss with a gauss meter. A 1-2 milligauss reading is considered safe. In most homes, magnetic fields can vary greatly from 2 milligauss to over 1000. Because magnetic fields are higher the closer you are to an appliance and cannot be easily shielded, use "prudent avoidance" by moving electrical items as far away from the body as possible.

In addition to electric gadgets, certain wiring methods, while safe and to code, may inadvertently cause high EMFs. Mitigation devices are available. However, the only way to determine if your home has high EMFs, is to have an inspection by a trained professional. An inspection can document high EMF areas and outline the most effective and safe ways to reduce or eliminate them.

High EMFs contribute to a range of health issues from sleep disorders, depression, ADD, autism, fatigue, bedwetting, nervous disorders, and diseases such as leukemia and cancer. They can also influence any healing process. By increasing your knowledge and awareness about EMFs and following the suggestions below, you can begin to reduce your exposure and help your body maintain its natural health.

Here are just a few ways to reduce your exposure to EMFs:

- Throw out your microwave; cook delicious organic food.
- Remove all electrical appliances from the bedroom, including, TVs, computers, cordless phones, routers, cell phones, and their chargers. Use a battery or wind-up alarm clock.
- Never use a laptop on your lap.
- Avoid electric and synthetic blankets; use natural bedding.
- Make sure you know what is on the other side of the wall from the head of all beds. If a TV is on that wall, then move it or the bed.
- Do not use fluorescent lighting of any kind. Use ordinary full spectrum light bulbs throughout the house EXCEPT in the bedroom, where you can use normal incandescent bulbs. Compact fluorescent energy efficient bulbs emit radio frequencies and are difficult to dispose of because of their mercury content.
- Keep cell phone use to an absolute minimum. Try not to use it in the car, and at home use corded phones.
- Use DSL for your internet.
- Have your home inspected by a trained Building Biology Inspector. www.buildingbiology.net

To learn more read *Electromagnetic Fields: A Consumer Guide to the Issues and How to Protect Ourselves and Cell Tower: Wireless Convenience or Environmental Hazard?* by B. Blake Levitt

Jeannie Tower, BBEI is a Bau-Biologie Environmental Inspector and Feng Shui Consultant. Her web site is www.fengshuimagic.com and she can be reached at 703.684.6502 or fsmagic88@aol.com.

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