

Electrical Sensitivity EMF Frequencies

For over 50 years, the American Academy of Environmental Medicine (AAEM) has been studying and treating the effects of the environment on human health. In the last 20 years, our physicians began seeing patients who reported that electric power lines, televisions and other electrical devices caused a wide variety of symptoms. We have also noticed a marked increase in the number of reports showing EMF/ELF priorities.

We are all living in the Technology Age, which exposes us to the new phenomena of toxic radiating, waves, signals, pulses and emissions. These invisible emissions are emitted by radar, communication equipment, mobile phone base stations, high voltage lines, radio and television transmitters as well as electrical substations. They are also being increasingly emitted by many of our personal electrical and remote control devices at home and work. This constant bombardment of toxic emissions surrounds most of us 24 hours a day.

These odourless and invisible emissions are causing some of us to show symptoms of 'Electro Sensitivity'. Scientists have found that low frequency electrical wave emissions disturb our own cellular electrical pulses. This fact is of concern, as the electro emissions can have a cumulative effect on our bodies' regulatory systems.

In the last five years with the advent of wireless devices, there has been a massive increase in radiofrequency (RF) exposure from wireless devices as well as reports of hypersensitivity and diseases related to electromagnetic field and RF exposure. Multiple studies correlate RF exposure with diseases such as cancer, neurological disease, reproductive disorders, immune dysfunction, and electromagnetic hypersensitivity.

It has been found that low frequency electrical pollution (E-Smog) causes increased Calcium Signalling, which stresses our inner regulatory systems. The result of this is the causation of enzymes and proteins to produce Free Radicals that create Oxidative Stress. Oxidative stress, from the oxidative metabolism causes DNA base damage, as well as strand breaks.

Free radicals are reactive molecules that can be produced during the conversion of foods into energy through oxygen. The formation of free radicals is an oxidation reaction that occurs on an oxygen basis. Since oxygen is essential for survival, the formation of free radicals cannot be avoided. However, factors including ionizing and non-ionizing electrical radiation alter the transcription and translation of genes. Free radicals can also disrupt cell membranes and damage the interior lining of your blood vessels, leading to a higher risk of heart disease and stroke.

Electro Sensitivity also produces disturbances in the normal redox state of blood cells. This can cause toxic effects through the production of peroxides and free radicals that damage all components of the cell, including proteins, lipids, and DNA. Some of the other impacts of Electro Sensitivity include: Headaches, Anxiety, Depression, Brain fog, Nausea, Fatigue and loss of Libido.

Some Tips to Reduce Exposure to EMFs

- Increase your consumption of probiotics and fresh vegetables, including green apples
- Keep all technology devices away from your bedroom, never charge the phone, laptop, tablet etc, near you while you are sleeping
- Never carry your phone in a pocket, especially if the pocket is close to body organs ie, Heart, Groin etc
- Never use your laptop/tablet when placed on your lap

- Try to always use the speaker on your mobile phone (phone manufacturers advise keeping the phone 8 cms from your head)
- It is thought that buildings with roofs being used for large relay masts and aerials are not suitable for long term occupation
- If you must use earphones with your phone, use the air tube variety rather than direct wired ear phones
- Try to use a timer, to switch off the homes Wi Fi router during your hours of sleep
- Try to avoid installing smart meters in your home
- Avoid using microwave ovens near you and reduce the consumption of micro waved food
- Spend more time in forests or on the beach, as this helps to discharge electro sensitivity

Some Examples of EMFs

Type	Frequency Range	Examples
Computer monitor	50-60 Hz	Computers, laptops, tablets
Mains power	50 Hz	Household electrical supply
Electromagnetic AF (Alternating frequency)	50-60 Hz	Electromagnetic emissions from AC (alternating current) devices and power sources: Household and office power supply, household electricals (washing machine, dishwasher, refrigerators), motors using AC power
Esmog		General pollution to all EMF/ELF from electrical supply and products
Electrostatic Field		Static created when materials store different charges and dissipate these through grounding or touch. Synthetic materials accumulate electrostatic around electrical devices. Use natural materials as much as possible.
Extremely low frequency	3-30 KHz	Power Lines, underground power lines, household electrics, electric meters, water pipes
Low frequency	30-300 KHz	Long distance communication, aircraft beacons, navigation systems, weather stations, time signal stations
Magnetic Constant Field		Electric motors and generators, alternators, magnets
Microwave	300 MHz – 10 GHz	Microwave ovens, GPS, Speed cameras, doppler radar, antennas, 3G Phones, wireless LAN (wifi), telecoms, satellite, cosmic (background)
Mobile GSM 0.9 GHz		Mobile phones operating at 0.9 GHz

Mobile GSM 1.8 GHZ		Mobile phones operating at 1.8 GHz
Radio frequency	3 KHz – 3 GHz	Shipping and aircraft communication, shortwave radio, cordless phones, satellite, radio broadcast, radio astronomy, remote sensing
Traction Current		Railways, railway lines, railway stations, rail overhead lines and power
TV screen	500 MHz	Cathode ray, flat screen/plasma

Beneficial Links to Read Regarding EMFs

Headaches (migraine): <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5279981/> AND <https://mdsafetech.org/problems/electro-sensitivity/electrosensitivity-overview-of-relevant-research/>

Fatigue and tiredness (and more): <https://mdsafetech.org/pst-summary-wireless-technology-and-public-health/>

Concentration difficulties/Hyper Activity: <https://www.who.int/peh-emf/publications/facts/fs296/en/>

Digestive Disturbances: http://www.ehs-mcs.org/en/intolerance-susceptibility-hypersensitivity_114.html

Reduced Sperm count: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4074720/>

Pre-Natal Risks: <https://mdsafetech.org/prenatal-effects/>

DNA Damage: <https://www.ncbi.nlm.nih.gov/pubmed/25175620>

Gene expression and redox balance, body's regulatory system: <https://www.ncbi.nlm.nih.gov/pubmed/27960592>

Neurological dysfunction and mobile phones: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3137841/>

Other insights can be discovered by reading: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6025786/>

There are many, many more authoritative research docs on the Internet, here is one from NASA, https://www.nasa.gov/mission_pages/station/research/experiments/754.html