

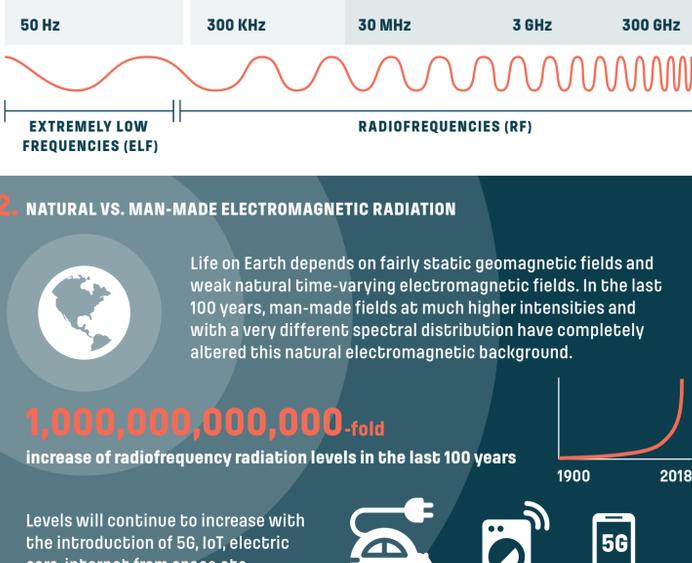
Electrosmog - the Silent Killer?

INFOGRAPHICS BY 

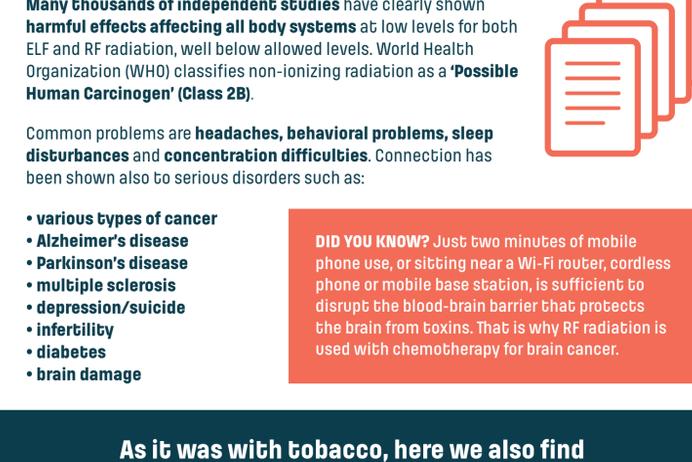
Is man-made electromagnetic radiation harmful?

While most people realize that ionizing radiation (radioactivity, x-rays etc.) can be very dangerous, not many are aware of the hazards of man-made non-ionizing radiation (from electrical wiring, mobile phones, household appliances etc.). It is said that there is not enough evidence of harm, but nothing could be further from the truth. This infographic was made to inform the public about possible hazards, as well as ways to protect themselves.

1. SPECTRUM OF MAN-MADE NON-IONIZING RADIATION



2. NATURAL VS. MAN-MADE ELECTROMAGNETIC RADIATION



3. HEALTH HAZARDS

Many thousands of independent studies have clearly shown **harmful effects affecting all body systems** at low levels for both ELF and RF radiation, well below allowed levels. World Health Organization (WHO) classifies non-ionizing radiation as a **'Possible Human Carcinogen' (Class 2B)**.

Common problems are **headaches, behavioral problems, sleep disturbances and concentration difficulties**. Connection has been shown also to serious disorders such as:

- various types of cancer
- Alzheimer's disease
- Parkinson's disease
- multiple sclerosis
- depression/suicide
- infertility
- diabetes
- brain damage

DID YOU KNOW? Just two minutes of mobile phone use, or sitting near a Wi-Fi router, cordless phone or mobile base station, is sufficient to disrupt the blood-brain barrier that protects the brain from toxins. That is why RF radiation is used with chemotherapy for brain cancer.

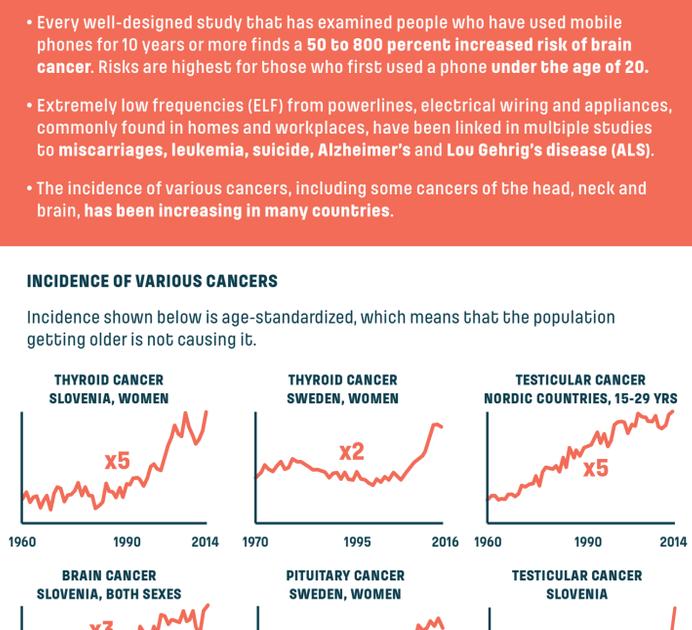
As it was with tobacco, here we also find the problem of industry bias...



EMF Scientist's Appeal

EMFSCIENTIST.ORG

236 independent scientists and health experts from **41** countries around the world who published more than **2000** peer-reviewed studies on biological effects and the hazards of non-ionizing radiation have issued an appeal to United Nations, in which they warn about the following radiation dangers:



WHAT RESEARCH SHOWS

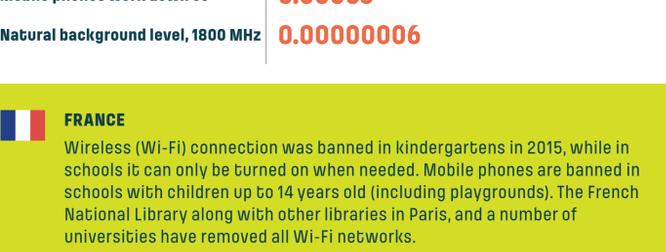
- More than 130 studies show that male fertility can be damaged by non-ionizing radiation at very low intensities, similar to those resulting from wearing a mobile phone on the belt or using a wireless laptop computer on the lap. This is an important finding since sperm counts fell by 60% in the last 40 years in nations that have been using this technology the longest.
- The two world's largest animal studies on mobile phone and base station radiation reported a higher incidence of brain and heart cancers in exposed animals.
- Every well-designed study that has examined people who have used mobile phones for 10 years or more finds a 50 to 800 percent increased risk of brain cancer. Risks are highest for those who first used a phone under the age of 20.
- Extremely low frequencies (ELF) from powerlines, electrical wiring and appliances, commonly found in homes and workplaces, have been linked in multiple studies to miscarriages, leukemia, suicide, Alzheimer's and Lou Gehrig's disease (ALS).
- The incidence of various cancers, including some cancers of the head, neck and brain, has been increasing in many countries.

INCIDENCE OF VARIOUS CANCERS



2-10 times more amount of microwave radiation that children's brains, eyes and bone marrow absorb compared to adults

400 nT (4 mG) Association between an increase in childhood leukemia and ELF radiation is consistent in more than 20 studies across time and across many countries. Official ICNIRP guidelines allow levels 500 times higher than 400 nT (4 mG).



4. OFFICIAL AND UNOFFICIAL GUIDELINES

The International Commission on Non-Ionizing Radiation Protection (ICNIRP) set a limit of 58 V/m for microwave radiation from base stations at 1800 MHz, but other countries, cities or organizations have set much lower limits:

Guideline	Value
ICNIRP guidelines	58
Russia, China, Italy	6
Average 100 m from a base station	1.9
Salzburg 1998 (sum GSM)	0.6
Powerwatch UK guidelines (for sleeping areas)	0.05
Bioinitiative 2012 guidelines	0.03
Baubiologie guidelines	0.006
Mobile phones work down to	0.00003
Natural background level, 1800 MHz	0.0000006

- FRANCE**: Wireless (Wi-Fi) connection was banned in kindergartens in 2015, while in schools it can only be turned on when needed. Mobile phones are banned in schools with children up to 14 years old (including playgrounds). The French National Library along with other libraries in Paris, and a number of universities have removed all Wi-Fi networks.
- ISRAEL**: Wi-Fi was banned in kindergarten and restricted in elementary school. In 2016 the Mayor of Haifa ordered removal of Wi-Fi from all schools. Health Ministry recommends reducing exposure, especially to children.
- CYPRUS**: Cyprus has removed Wi-Fi from kindergartens and elementary schools and supports a strong educational initiative to educate children and families about mobile phones and wireless radiation.
- BELGIUM**: Banned sales and advertising of mobile phones for children. City of Ghent banned Wi-Fi internet from pre-schools and day care facilities.
- AUSTRIA**: The Vienna Medical Association guidelines state that mobile phones should be used as little as possible and that children under 16 should not use these phones at all. Salzburg Region Public Health Department advises against the use of Wi-Fi connection and digital phones in schools or kindergartens.
- GERMANY**: The Federal Office for Radiation Protection recommends using a landline phone instead of a mobile phone and cautions against schools connecting wirelessly to the internet.
- EUROPEAN PARLIAMENT**: A call to European governments to "take all reasonable measures" to reduce exposure to electromagnetic fields, "particularly the exposure to children and young people who seem to be most at risk from head tumours."

5. IN NEED OF NEW STANDARDS

Current standards (ICNIRP, SAR, most national regulations...) are **inadequate to protect human health and therefore need to be re-evaluated**. For mobile phones and other wireless devices, they are based on the long outdated theory that the only harmful effect of radiation is tissue heating.

SAR = AN OUTDATED AND INADEQUATE STANDARD

The SAR (specific absorption rate) is not a good measure of mobile phone safety. The best dummy size represents only 3% of users, the liquid inside is not representative of the human body and averaging calculations masks peak radiation exposures to human tissue.

In 2017 France released the results of mobile phone radiation measurements on hundreds of mobile phones. When the phones were tested in body contact positions, **up to 90% of the phones exceeded radiation limits**, some over 3 times the European limits and over 9 times the equivalent US limits!

DID YOU KNOW? Even the mobile phone manufacturers admit that microwave radiation is not safe - in fine print, they warn users to keep the phone at a distance from the body and to minimize the amount of time they spend with the phone up to their ear.

6. RECOMMENDATIONS FOR SAFER USE

- ✓ It's good to reduce your exposure where you can, and have places (particularly where you sleep) where you are minimally exposed.
- ✓ Avoid holding any wireless device against your body when in use.
- ✓ Reduce your mobile phone use and turn it off (or use the airplane mode setting) more often. Use an air-tube headset or the speakerphone as much as possible, remembering that 'distance is your friend.'
- ✓ Children should never use mobile phones.
- ✓ Make sure you only use and store your mobile phone in areas where reception is good. When the phone cannot easily get a signal out, it significantly increases the power output!
- ✓ Turn off your Wi-Fi connection. Hardwire as many devices as possible to avoid microwave radiation. This includes mice, keyboards and printers. Disable the wireless setting on all "smart" devices.
- ✓ Use your laptop (or tablet) on a table rather than your lap.
- ✓ If you have a smart meter, take steps to have it removed and replaced with an old analog meter. If your area is planning on installing them, be proactive in preventing its installation.
- ✓ Don't stand next to a microwave oven when it's running; it can often leak a substantial amount of radiation.
- ✓ Avoid using a cordless phone unless you absolutely have to. Use a wired phone instead.
- ✓ Avoid using your wireless devices in cars, trains or elevators. Radiation increases due to reflection and the mobile phone works harder to get a signal through metal.

7. QUOTES

"I have no doubt in my mind that, at the present time, the greatest polluting element in the Earth's environment is the proliferation of electromagnetic fields." Dr. Robert O. Becker, Nobel Prize nominee, interview with Linda Moulton Howe, 2000

"Over the past decade, the evidence of serious risks has been increasing and accumulating worldwide. As physicians, we observe a clear increase in health symptoms when radiofrequency exposure levels increase with regard to distance and time - especially in the case of heavy cell phone use, and in the vicinity of DECT cordless phones, Wi-Fi, and cell towers - including problems falling asleep and staying asleep, chronic fatigue, headaches, migraine, vertigo, tinnitus, unhealthy blood pressure levels and arrhythmias, concentration and memory problems, learning and behavioral disorders, a more frequent incidence of ADHD among children. Numerous studies by independent scientists have now confirmed many of these observations made by physicians." International Doctors' Appeal 2012, supported by more than 1000 physicians

"Based on the existing science many public health experts believe it is possible we will face an epidemic of cancers in the future resulting from uncontrolled use of cell phones and increased population exposure to Wi-Fi and other wireless devices." David Carpenter, MD, professor of Environmental Health Sciences, director of the Institute for Health and the Environment, School of Public Health, University of Albany, SUNY, co-Editor of the Bioinitiative Report

"Our grandchildren and children are being used as lab rats." Devra Davis, PhD, MPH, president of Environmental Health Trust, served as the President Clinton appointee to the Chemical Safety and Hazard Investigation Board

"Bioeffects are clearly established and occur at very low levels of exposure to electromagnetic fields and radiofrequency radiation. Bioeffects can occur in the first few minutes at levels associated with cell and cordless phone use. Bioeffects can also occur from just minutes of exposure to mobile phone masts (cell towers), Wi-Fi, and wireless utility 'smart' meters that produce whole-body exposure. Chronic base station level exposures can result in illness." The Bioinitiative Report 2012, written by 29 scientists from 10 countries

"Increasing evidence shows that electromagnetic signals from cellular antennas, mobile phones, DECT cordless phones and Wi-Fi interfere with birds' and bees' navigational systems and their circadian (daily) rhythms, which in turn reduces their resistance to disease." Andrew Goldsworthy, PhD, professor emeritus of biology at Imperial College, London

SOURCES & MORE INFORMATION

- ehttrust.org
- powerwatch.org.uk
- emfscientist.org
- bioinitiative.org
- emfresearch.com
- bund.net
- diagnose-funk.org
- stralskyddsstiftelsen.se
- slora.si