

Electromagnetic Fields (EMF): Are the Dangers for Real?

Return 2 Health

What is an electromagnetic field (EMF)?



An electromagnetic field is actually an area made up of two types of fields, an electrical field and a magnetic field. Both fields are produced when electricity (specifically alternating current) passes through a wire.

So, when you plug your iPhone (What model do we currently have? iPhone 17? Just kidding iPhone fans) into the wall outlet for charging, a rush of electricity charges the battery creating an electrical field. Continuous movement of electrons generates a magnetic field. You combine the two fields, and you end up with an electromagnetic field or EMF for short.

An electrical field is weakened by physical barriers like concrete walls. On the other hand, a magnetic field can traverse walls, our bodies and other materials. It's because of this fact that authorities (hardworking scientists, not the police) focus more on magnetic fields in relation to our health.



Throughout this article, we'll be using the terms EMF and EMR (electromagnetic radiation) interchangeably. Is there a significant difference between the two? Generally speaking (which is what we're concerned with here), both terms mean the same thing. Potato, potatoe...

What's all the commotion about electromagnetic fields (EMFs)?

There's much confusion as to whether EMFs can cause adverse effects on our health. First, let's see where the confusion lies. Most of us know that short-term exposure to EMFs at levels similar to the ones we encounter around us, don't cause any observable adverse health effects. If you're exposed to high levels in a short time span, the chances of them having an adverse effect on your health is increased. Lucky for us, such high levels are usually monitored by local and international agencies together with the implementation of certain guidelines. This means that we can only get exposed under special situations (like at work). So where do you think the problem lies, dear reader?

The problem lies in the long-term exposure (chronic exposure) to EMFs at low-levels. This happens every day with things that surround us. Devices like microwaves, cellular phones and others, have EMFs we're continuously exposed to. Do they really pose a threat? Are the dangers for real?

Do EMFs cause any change (effect) in our bodies at all?

The simplest answer is yes. EMFs have an effect on your body. A more precise answer would require a more detailed question. What type of effect are we talking about? Biological or adverse health effects?

Adverse health effects render noticeable impairment to your health or that of your children. Biological effects are measurable responses to a change in the environment (in this case your body) and are not necessarily bad, but if

these changes cause long term stress to your system, they may be hazardous to your health and become an adverse effect.

Most of the effects of EMFs are actually biological effects. Microscopically speaking, EMFs can have effects on our bodies at the cellular level. They heat up our cells and tissues and the amount our tissues are heated is roughly equivalent to the level of EMF we're exposed to.

In addition to the generation of heat in our cells, newer research now tells us that EMFs can also cause oxidative stress to our cells. This is the scary type of stress which damages all aspects of our cells, including the genetic material contained within each cell (DNA). This is truly disturbing. If our cells can't recover from this, they can't perform their functions. Consequently, this new data should alert us to be vigilant in our efforts to minimize everyday EMF exposure.

The Possible Adverse Health Effects of EMFs

Wrong information can certainly make people panic and respond with fear. This isn't helpful. Remember, these devices or gadgets which we're so concerned about were invented to make our lives easier.

THE USUAL SUSPECTS ARE THE FOLLOWING:



**Cellular phones
and cell towers**



Power lines



Microwave ovens



Computers



TV screens



**Security devices
like house alarms**



Radars



Smart metres

Note: Please remember that the level of EMF we're referring to here is low-level long-term exposure that we experience every day (that's the issue).

- 1. Do you like talking on your cell phone? Recent studies have concluded that the increased use of mobile phones is associated with an elevation of oxidative stress on the cells of your salivary glands (the glands in your mouth responsible for producing drool, er, I mean saliva). This can contribute largely to the development of salivary gland cancer. While a crystal clear cause and effect relationship has not yet been found, believe me they're working on it.

Studies on brain tumours in the past 10 or more years have shown an increase in the incidence of brain tumours in the general population. Can you guess why this is so? What's a common



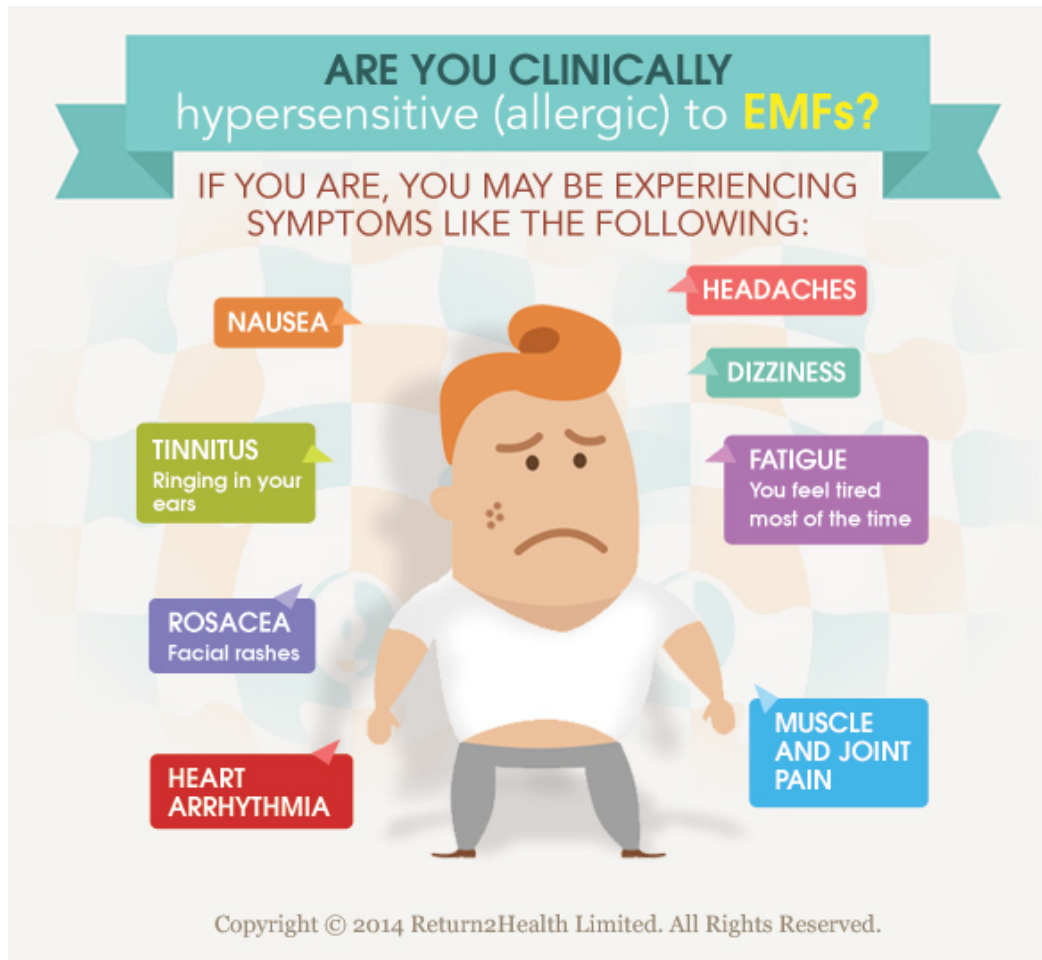
denominator for people like us? By people like us, I mean those who use cell phones and other new technologies (gadgets). A sudden explosion of these gadgets into the consumer world has definitely had a huge impact on several aspects of our lives. Could increased chances of having brain tumours be one of them? Some experts believe so. More animal studies are being done to investigate this further.

You know what's even more alarming? People who started using cell phones at an earlier age (during their teenage years) have a greater chance of developing a brain tumour when compared to people who started late (during their adult years). And yet parents these days are so eager to give gifts to their children in the form of cellular phones and tablets. It gets worse. The risk climbs notches higher when you only use your mobile phone on one side of your head. My goodness!



- 2. It's not just the increased risk of developing cancers we have to worry about. Long-term exposure to low levels of EMR can aggravate the symptoms of Alzheimer's Disease and dementia. Another study included heart disease in the list of chronic disorders which can be worsened by exposure to EMFs. Grr.
- 3. EMFs can weaken your immune system. Harmful microorganisms and infectious diseases will certainly have a feast with this one. Imagine getting sick more often and this time, you get the extended version (for example a prolonged course of the flu).

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Electrical Hypersensitivity Syndrome (EHS) is another name for this type of sensitivity. This recently recognized clinical condition is brought about by chronic exposure to low levels of EMF from electrical devices. But remember that these symptoms may also be caused by other conditions so consult your health practitioner to rule out other possibilities.

- o 5. Do you suffer from Diabetes mellitus? Did you know that EMFs have an effect on your blood sugar levels? Preliminary studies found an elevation of blood sugar levels at times of peak exposure to EMFs. Who could have thought that your mobile phone (or tablet) had so much sweetness in store for the unsuspecting you?

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6. People afflicted with Multiple Sclerosis (MS) are also getting pummeled by EMFs. They report substantial improvement in their symptoms when they're placed in an EMF-free environment. On the contrary, exposure to EMFs aggravates their symptoms. Their sense of balance and tremors (shaking) are among the top symptoms noted to worsen when exposed to EMFs.



- 7. Innocent children are perhaps the worst victims of EMFs. They're born into a society already charged with EMFs. They didn't even have a chance to defend themselves when they were inside their pregnant mothers.

The bodies of children are continuously growing at a fast rate. Their cells are multiplying, regenerating and being replaced very rapidly, making them especially vulnerable to EMR. Childhood leukemias (blood cancer) are at the top of the list of cancers shown to have an increase in incidence brought about by EMFs. The younger the child, the more vulnerable they are to EMR.



- 8. Of course, let's not forget about the harmful effects of EMFs on pregnant mums and their babies. Babies born to pregnant mothers who were exposed to higher EMF levels have a higher incidence of developing asthma (the babies, not the mothers). This was one of the surprising results of a recent study. A possible connection between asthma and EMFs could be that the EMFs were negatively affecting the immune system of the babies. In addition, the chances of having a miscarriage when chronically exposed to EMFs may be greater. More studies are being carried out to verify these initial findings.
- 9. Your mental health isn't spared from the adverse health effects of EMFs either. EMFs are associated with increased episodes of depression and mood swings. Accelerated aging (you grow old faster) is another problem suspected of being connected to EMFs which is could be related to the oxidative damage they cause to your cells.

The dangers are real my friend, and they're continuously unfolding, slowly increasing momentum. It's only a matter of time (and more research studies) until the facts become established and generally accepted. But let's not allow these dangers to catch us off guard. Let's explore some practical things YOU can do to minimize exposure to EMF.

- 1. Any electrical device in your home or your surroundings has an EMF when it's plugged in the socket and turned on. So it goes without saying that you should turn off, and unplug all appliances and electronic gadgets when you're not using them.
- 2. Keep clear of power lines as they produce both electrical and magnetic fields. The high voltage power pylons are the worst. The EMF emissions are strongest directly underneath the cables and the further you get away from them the lower the exposure. So keep well away from them and when moving into a new house, avoid houses with nearby power lines.

- 3. You're about to visit your favorite coffee shop to have a chat with your friend (who lives right across the street) using Skype. When you're about to open the door, you notice a sign which says, "We don't have Wi-Fi today, talk to each other in person instead!". Your coffee shop might have just saved you from your daily dose of EMR. Yes, Wi-Fi routers emit EMR.

If you're at home, use an ethernet cable (hardwired connection) to connect your computer to the router. Another way is to follow your coffee shop's advice and talk to each other in person (if your friend lives nearby). If you're going to contact him or her, use an old fashioned landline – the type with the handset attached. Yes, your iPhone (or any other cellular or cordless phone – even a cordless landline) emits EMR.

Your Wi-Fi router at home can also use a break. Turn it off at night if nobody is using it. You save on your electric bill and minimise your exposure to EMR at the same time. This is the only time your body is able to fully rest and recuperate. Don't deny your body of that. Also, don't place your Wi-Fi router in your bedroom. You don't need Wi-Fi and EMR while dreaming. Any other electronic device in your bedroom should also be turned off when you are not using it, especially at night. Get an alarm clock which uses batteries (or perhaps get a rooster).

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4. Let's focus on your cellular phone now. Ah yes, the thingy you can't live without (next to your deodorant, just kidding). Many people are really dependent on their mobile phones. They may as well just live inside one. Are you one of those people? Well after reading through the adverse health effects of EMR, you may want to live your life outside the vicinity of your mobile phone. Take a look at these tips:

- Use the speakerphone function whenever you can. A headset can also minimize your exposure to EMR. Choose headsets with hollow air tubes instead of the usual wires. Dude, ask the sales lady where its at.



- Where's your cell phone right now? Please don't tell me it's in your pocket! This is for all you men who carry your phones in your pockets right next to your crown jewels. Very unsettling for them (the crown jewels). Ladies, we haven't forgotten you, you know it isn't hip or cool to carry your phone in your bra. You may as well say hello to breast cancer. Guys and Gals, get yourselves a cool handbag/man-bag to keep your phone further away from your precious body cells. If you must carry it right next to your skin, put it in flight/airplane mode. Your body will surely appreciate it!



- Don't clip your mobile phone on your belt or pants either. What are you, the lineman (or Batman) who puts all his tools in his utility belt? Your hip bones contain bone marrow, which produce important cells like red and white blood cells. They (the blood cells) don't like EMR either you know.
- When you're dialing, look at the display screen on your mobile phone. If the display screen tells you that it's still dialing, you don't need to put the phone near your ear just yet. When the person you're calling answers, the word 'dialing' disappears from your display screen. That's the right time to place the phone near your ear. Or, like I said earlier, use the speakerphone function or a headset whenever possible.
- Unless it's an emergency situation, don't use your mobile phone when the signal is weak as your phone has to work harder with a weak signal and will be emitting more EMF. Also phones emit more radiation when transmitting information compared with receiving information.

- 5. Smart metres are new devices added to electrical, gas and water metres in your home. They automatically send metre readings to your energy supplier. These smart metres only intermittently emit radio frequency microwaves, but this happens on a 24/7 basis. So even during the night you get no break from these microwaves.

If you already have one of these metres in your house, you can add shielding around it to deflect the emissions like a mirror. If your electrical or gas supplier wants to add one to the metre in your house, you can choose to say no to them installing it. Even though the amount of EMR coming from your smart metre is less than the amount present in your mobile phone, the effects of chronic exposure from smart metres have not yet been researched enough. So stay clear of them for now.

- 6. Let's not forget the microwave oven that started it all. That's the microwave for short. Microwave ovens emit EMR. Try cooking your food the old fashioned way, on the stove! It may take a little longer, but your cells will be thanking you for it. Besides, everything tastes better made the traditional, slow and loving way!

These are some of the obvious ways you can protect yourself and your family from EMF's. If you want to learn more about how to detect the strength of EMF in your environment, take some time to research the subject. Your body will thank you for it!

Related Links

[Natural Support For Depression](#)

[Heavy Metal Toxicity: A Brief Overview \(Part 1\)](#)

[An Overview of Common Autoimmune Diseases](#)

[The Slippery Path to Metabolic Syndrome](#)



References

- <http://www.epa.gov/rpdweb01/power-lines.html>
- <http://www.prevention.com/health/healthy-living/electromagnetic-fields-and-your-health?page=2>
- <http://www.safespaceprotection.com/harmful-effects-electromagnetic-fields.aspx>
- http://www.neilcherry.com/documents/90_m1_EMR_Australian_Senate_Evidence_8-9-2000.pdf
- <http://stopsmartmeters.org.uk/wp-content/uploads/2012/04/Biol-Effects-EMFs-2012-NZ1.pdf>
- <http://www.ehjournal.net/content/12/1/5>
- http://www.radiationresearch.org/pdfs/reasons_us.pdf
- <http://emfsafetynetwork.org/public-health-official-report-on-smart-meters/>
- <http://www.webmd.com/asthma/news/20110801/electromagnetic-fields-linked-asthma-kids?page=2>
- <http://emfsafetynetwork.org/maternal-exposure-to-magnetic-fields-during-pregnancy-in-relation-to-the-risk-of-asthma-in-offspring/>
- <http://www.rense.com/general19/emfs.htm>
- <http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html>
- <http://www.emfs.info/Sources+of+EMFs/Overhead+power+lines/>
- <http://emfsafetynetwork.org/smart-meters/complaints/smart-meter-questions/>
- <http://www.lessemf.com/faq-shie.html>
- <http://www.drlwilson.com/Articles/ELECTROMAGNETEICS.htm>
- <http://www.uswitch.com/gas-electricity/guides/smart-meters-explained/#step1>
- <http://www.es-uk.info/docs/front-03-es-smart-meters.pdf>
- <http://www.defenderpad.com/wifi-radiation-in-classrooms-may-be-as-dangerous-as-microwave-weapons/>
- http://www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208_E.pdf