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EMF*D

5G, Wi-Fi & Cell Phones: Hidden Harms and How to Protect Yourself

A NOTE FROM DR. MERCOLA

I am glad you are concerned about how EMFs can damage your health. The following material is taken from my new book EMF'd that comes out in February, 2020. The book goes into great detail as to why you are likely in the dark about EMFs and the science as to precisely how they can harm you.

The information in this PDF is so important that I did not want to wait until the book comes out to share it with you. I am providing you with essential information so you can start to get to work immediately on reducing your EMF exposures.

Dr. Mercola

GUIDING PRINCIPLES TO REDUCE YOUR EMF EXPOSURE

The good news is that there are a wide variety of strategies to protect yourself from EMFs. The flip side of that is that it can be overwhelming to decide what strategies you'll implement and in what order. I want to help you prioritize your efforts and understand what you need to do, and why.

Briefly, you want to seek to do the following four things, in this order:

1. Avoid unnecessary exposure to EMFs, especially inside your own home and particularly in your bedroom, and from your personal devices (such as your cell phone), where you have the most control. Fixing your bedroom is a high priority as you spend eight hours every night there.

   Compliance of doing a therapy every day is really hard but once you shield your bedroom you get complete compliance every single night and your body is able to use its own innate healing mechanism to detox the brain, the lymphatic system, and the glymphatic system, and to activate that NRF2 pathway via the melatonin that floods your brain while you sleep.

2. Put as much distance as you can between you and the EMFs you can't avoid.

3. Decrease the amount of EMF exposure coming into your house from external sources.

4. For any exposure you can't reduce, shield yourself

FIRST STEP:
Make the Invisible Visible

Part of the reason why EMFs are so dangerous is that, like X-rays, they are invisible, silent, and odorless. Unless you are EMF hypersensitive, you won't see, feel or hear your EMF exposures. This is why it's crucial to invest in devices that can accurately locate and measure all hidden sources.

Before you do anything to remediate your physical exposure to EMFs, it's vital for you to measure radiation levels already present. Measuring first provides you with a baseline and dramatically helps you fine tune your mitigation efforts so they can be as effective as possible. The ability to see and hear current readings detected by EMF measuring devices will highly motivate you to take immediate action to address them.

Even if you are hyper-diligent and seek to address all the sources in the comprehensive list in this chapter, you can rest assured that some sources will escape your searches. The best way to locate these stealth sources in your home will be with an EMF meter.

The easiest but more expensive way to measure these fields would be to hire a professional who is trained and certified to analyze indoor environments and systemically seek to reduce chemical and electric irritants.

The most well-known professionals who offer this service are building biologists, who are trained and certified to analyze indoor environments and systematically seek to reduce chemical, mold and electric, magnetic, and radio frequency irritants.

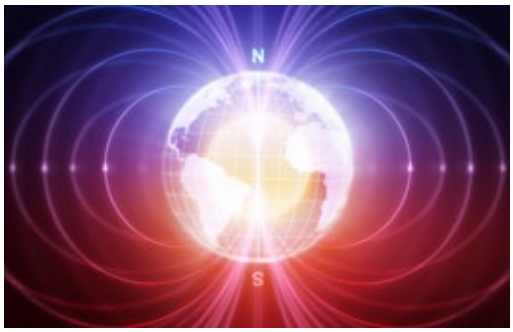
They can also help you learn how to use your own meters, and add to your knowledge of how to determine, reduce, and eliminate EMFs that lurk in your home.

EMF professionals are particularly helpful to find wiring errors in your home. These errors can result in very high magnetic fields throughout your home and are relatively common.

Some experts also find it necessary to test the ground of your home and track down Wi-Fi signals and other non-transmitting signals in your home that require specialized meters to find because some devices like fans, battery chargers, and other items that don't have Wi-Fi or Bluetooth are often found to be emitting harmful EMFs.

The more affordable version though is to purchase your own EMF meter and do the measuring yourself. Professional meters from Gigahertz Solutions, GeoVital and other companies cost thousands of dollars, but you don't need to spend that much. Typically, a decent meter designed for consumers can be obtained for somewhere between $200 and $400.

Even if you hire a professional, it is best to purchase a few meters to measure your different EMF exposures as they will change over time. There are different types of meters to measure the following four types of EMFs:



Magnetic fields

Electric fields

Dirty Electricity

Radiofrequency for cell phones, Wi-Fi and smart meters

There are many inexpensive meters out there that measure the first three, but some of these combination meters, particularly older versions, may not be able to accurately measure some of the fields.

Of course, meters do cost money, and when you need to buy more than one, the investment can become significant. Perhaps you can pool your resources with your neighbors or family members and purchase meters together and share them.

When I interviewed Magda Havas, Ph.D., who has studied the health effects of electrosmog for decades and who researches and teaches courses on electromagnetic pollution at Trent University in Canada, here is how she described the process of measuring EMFs on your own:

> ***The more you play around with [using meters], the more comfortable you become with it. You'll find some real surprises when you have the meters, because things that you think might be turned off or aren't radiating may be and increasing your exposure. Doing your own testing is something I highly recommend.***

Whatever meter you choose, you will want to search YouTube for videos on how to use it properly. When it comes to selecting which meter to buy, it's important to know that there is no 'best meter.

Lloyd Burrell became a dedicated researcher on how to reduce EMF exposure
after experiencing dizziness and pain whenever he used his cellphone, has done many videos in this area and posted them on his website, https://www.electricsense.com/.

Your choice of meters depends upon your answers to the following three questions:

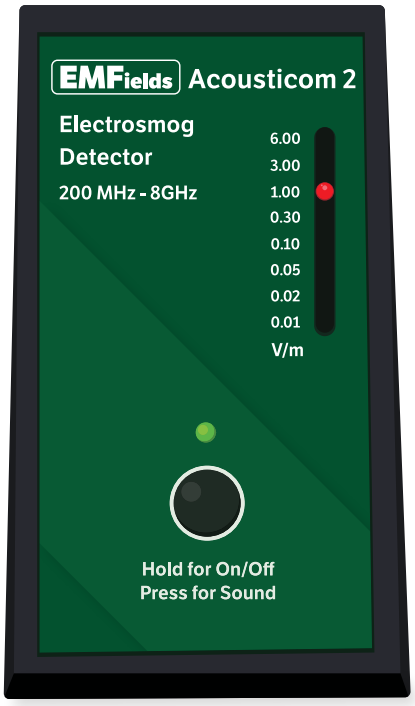
1. What are your EMF concerns? The cell tower down the street? Your neighbor's Wi-Fi? The overhead power lines? Get clear on your concerns and then look at meters that can measure that type of EMF.

2. How technically minded are you? Some meters are more novice-friendly than others. Make sure you consider your tolerance for learning to use new technology when selecting your model.

3. Are you willing to invest in your health? If you pay cheap, you get cheap. This is particularly true with EMF meters. There are a few EMF meters out there that are so insensitive and inaccurate they are a total waste of money. Your meter purchase is an investment. Do your research and invest wisely.

Once you have a meter and are familiar with how to use it, you are in an optimal position to start lessening your exposure. The book goes into great detail on the best inexpensive meters out there and if you want to learn more about them I would encourage you to read the full chapter in the book.

My primary recommendation is the Acousticom 2. This RF-only meter is about the size of a deck of cards and very portable and easily fits into your pocket. I bring it with me when I travel. This meter does not give you a digital display of the actual measurement; it merely blinks LED lights at different levels. But I have found this more than adequate to guide my RF debugging strategies



The Acousticom 2 is easy to use and has great sensitivity. It measures RF sources between 200 MHz and 8 GHz and emits an audio sound for each wireless source that gets louder as you get closer to the signal. This feature makes the Acousticom 2 very intuitive to understand your RF exposure levels and to locate sources.

The Acousticom 2 displays a numeric reading of the RF level in Volts/meter present for the peak value, which is the measurement I recommend you focus on (not the average value).

Cost: Under $200.

PRIORITY NUMBER 1:
Reduce Exposure to EMFs Within Your Home

Remediating your home from the EMFs that originate from inside it is the vital first step. If you shield your home from these outside sources without first remediating internal sources of EMFs, the strategy can backfire and increase EMF levels inside because the shielding will be reflecting EMFs from your home right back inside.

Reduce EMFs Emitted by Your Computer and Your Internet Connection

This is one of the two most important strategies for reducing your radiofrequency exposures as Wi-Fi in your home is typically the largest contributors to your RF exposure load, especially Wi-Fi from your routers and other devices. This is also because Wi-Fi produces a modulated signal that is especially harmful to your body.

Your long-term goal is to use a hard-wired Ethernet cable (Local Area Network, or LAN) to connect your home computer and printer to the Internet instead of wirelessly through a Wi-Fi enabled router. This is particularly important because your RF exposure is exponentially increasing every year.

Ideally you can hire a low voltage/audio video contractor or a nearby home theater company can typically install Ethernet wires in your walls so you can have a professional solution. If you rent or have a small home, you can do it yourself

by running Ethernet wires from your modem and router along the walls at the baseboards to save money.

The less expensive flat Ethernet cables, readily available at online retailers, work best in this scenario. Most new laptops do not have an Ethernet port so you will need to purchase an inexpensive adaptor that fits into the USB A or C or Thunderbolt port.

It's important to realize that your Ethernet connection will not be grounded, so if you have a laptop and you disable your Wi-Fi and plug in a standard Ethernet cable to get on the internet, you will still have high electric fields when you put your hands on the laptop. You are essentially swapping one type of EMF for another.

Please understand that most cable and telephone company modem/routers are Wi-Fi enabled by default. Fortunately, the Wi-Fi can be turned off through the software. Contact your cable or telephone company to walk you through how to do this, or they can do it for you remotely over the phone.

But be sure to check for yourself as they may be giving you incorrect instructions. You will need to take out your RF meter and confirm that there is no wireless radiation coming from your device.

Additionally, your cable company may automatically update your modem's software and turn Wi-Fi back on without making you aware of it, which is why it is wise to regularly check for this with your RF meter. You can then easily confirm whether or not the wireless is truly disabled.

One solution is to purchase your own cable company-approved modem and your own separate router. Then you can avoid paying the monthly fee to rent the modem/router they install and avoid having Wi-Fi turned back on automatically with updates. Choose a model that does not have Wi-Fi, or allows you to turn the Wi-Fi signal off.

You will only have one Ethernet port, so if you have more than one computer in the house, you will need your own router. Purchase a router that doesn't come with Wi-Fi at all, or a router model that has switchable Wi-Fi —

Also realize that just because you are using a wired Ethernet connection, it doesn't mean your computer is not emitting a Wi-Fi signal. You will need to go to your settings and be sure and place your device in airplane mode. Most laptops have a wireless button or icon to switch it on and off. You can search for your model online to find out where it is or just look for a key that looks like an antenna sending signals.

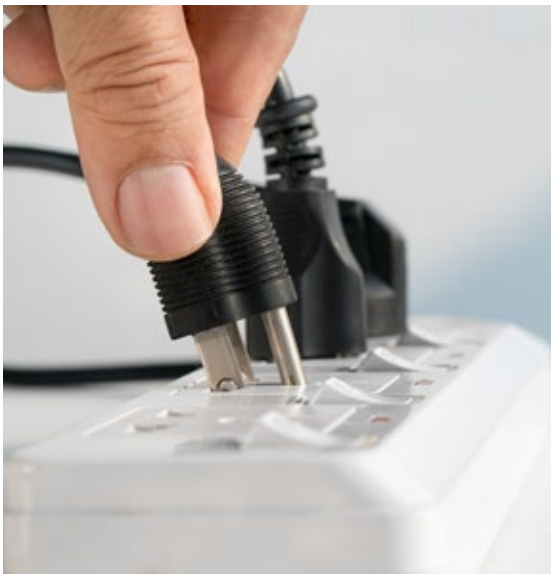
You can do that on Windows 8 and 10 on a PC, or by disabling the Wi-Fi on the upper right of the menu bar on a Mac (look for the pie-shaped icon and make sure there are no curved lines in it once you have disabled Wi-Fi).

Be sure to also disable Bluetooth on your PC or Mac, but only after replacing your wireless mouse and keyboard with a wired mouse and keyboard. You may need to actually unplug a Bluetooth dongle from a USB port to disable the Bluetooth on your computer.

If for whatever reason you are unable to disable the Wi-Fi on your router, the minimal first step is to either use an electronics timer to turn your Wi-Fi router off every night, while sleeping, or a wireless switch that can turn it off and on when you need to. Just make sure it is always off when you are sleeping and place it far from a desk, couch or anywhere people sit or stand in the daytime.

Those in your family who insist on using their portable wireless devices will still get a signal but at least the RF signal from the router and other wireless devices will be less for those in the room. Ultimately, try to locate routers far away from bedrooms

and where people spend a lot of time in the daytime.



For any electric device that you put your hands on—especially your personal computer(s)—make sure it has a grounded AC power cord with a three-pronged plug that is plugged into a properly grounded outlet. This is a crucial for protecting against EMFs when using a laptop. If your PC computer doesn't have a power cord with a three-pronged plug, you can buy one that plugs into your USB port.

For a Mac laptop, slide off and throw away the adapter on the transformer (the white brick in the power cord) that has two blades that swing out and allows you to plug the transformer into an outlet or power strip. That adapter is not grounded. Use the grounded AC power cord with the three-pronged plug that came in the box with older MacBooks. New MacBooks don't come with that grounded AC power cord. You can, however, purchase it online from Apple or other retailers.

For added protection, purchase shielded AC power cords for your desktop computer, monitor and printer.

Take Control of Your Phone

Your cell phone transmits radiofrequency radiation even when you are not on a call because it is constantly updating its location and communicating with the nearest cell phone towers for updates, downloads, emails and texts. Whenever you don't need to be making a call on your phone, switch it to airplane mode in order to avoid the continuous radiation it emits.

Also put your mobile phone in airplane mode if you carry it on your body. This is the second most important strategy and for some the most important step you can take. Unless you have an emergency, it is best to avoid having your phone

on when it is on your body.

Unfortunately, it's not as easy as it once was to disable the wireless antenna on your phone by simply selecting "airplane mode" in your phone's settings. Now you have to not only select "airplane mode," but also turn off Wi-Fi, Bluetooth, and near-field communications (NFC).

Fortunately, you can do this by swiping up on an Apple phone and down on an Android; this will bring up a screen that shows you the icons for airplane mode, Wi-Fi, and Bluetooth so you can turn them all off in just a couple of taps. (You can also configure this page in the edit screen to put all the icons near each other to make it even easier.)

BEWARE OF "HARMONIZERS"

Avoid the mistake that many make and believe that a "harmonizer" will protect you from EMFs. There are a wide variety of them out there, but an example would be a sticker that enshrouds a polycarbonate disk that you place on your phone or laptop, which sellers claim emit a negative electrical field that counteracts, or "harmonizes" the radiation emitted by the phone—making it "safe" to use your phone.

I have met hundreds of people who have something attached to their phone that they believe makes them "protected". I have tested many of these devices and have never found any that actually reduce radiation exposure. If you don't trust me then measure the radiation yourself with an RF meter. If your measurements are above the safe biological thresholds described above, there's your proof.

I won't dispute that many find symptomatic improvement with some of these devices, but the danger here is believing that you are solving the problem and then go on using your devices, rather than taking the necessary measures to reduce your exposure.

Remember EMF levels activate your calcium channels leading to peroxynitrite oxidative stress damaging your nuclear and mitochondrial DNA, cell membranes, mitochondria, stem cells and proteins. The only way to prevent that is through avoidance or actual shielding, not harmonizers.

Avoid using your cellphone when the signal is weak, because in these moments when the phone has to work harder to establish a connection to the cell tower, it emits higher levels of radiation. In fact, 2019 study found that phones emit up to 10,000 fold more EMF radiation when the connectivity is low. Much better to wait until you're in a spot with full bars—and even then, to use speakerphone so that the phone is farther away from your body.

I know this may sound challenging, but you also want to avoid using a cellphone in your car, or while you're on a plane, bus or train, even when the connection to the cell tower is strong. Because you are in motion, the phone will need to work harder to stay in communication with the cell tower, and again, will emit more radiation as a result.

Additionally, because you are encased in metal, all that extra radiation reflects off the inside surfaces of the vehicle, thereby intensifying the radiation. Better to keep your phone in airplane mode when you're in the car. If you typically use it to listen to music or podcasts, download the content before you leave so that you can still enjoy them without being connected to the network.

Avoid sleeping with your cell phone in your bedroom unless it is in airplane mode (making sure the Wi-Fi and Bluetooth are also switched off) or powered off completely. If possible it is also wise to place it in a Faraday bag (which I discuss in more detail on page TK). While that may seem excessive, it is possible for you to unknowingly download spyware to your phone that will still keep your phone on even when you put it in airplane mode. But a more common scenario is that you forget to put your phone in airplane mode. So the bag serves as a great back up strategy.

These programs can be difficult to find so the double precaution of using a Faraday bag seems to be a simple solution in addition to guarding against you making the mistake of forgetting to put your phone in airplane mode.

Sadly, many people, including children, will sleep with their phones on right under their pillow, with their head within inches of a device that transmits intermittent radio signals all night long. This is one of the worst things you can do for brain health and is a virtual prescription for neurodegeneration and an increased risk of brain cancer.

Many people use their cell phones as alarm clocks. This is also not a good idea. If you chose to do this, the minimum precaution is to put your phone in airplane mode and in a Faraday bag. A better option is to use a talking clock that has no lights and will therefore not interfere with your sleep by disrupting melatonin. They are available through online retailers.

Don't use wireless chargers for your cellphone, especially anywhere near your bed, as they too will increase EMFs throughout your home. Instead, use a standard plug-in charger and keep that charger and its cord well away from the bed. Wireless charging is also far less energy-efficient than using a dongle attached to a power plug, as it draws continuous power (and emits EMF) whether you're using it or not.

Wireless charger

Wired charger

For a way to use your cell phone and protect yourself from EMFs, you can copy a simple trick I use. When I am home, I have a wired Ethernet connection on my desktop and I keep my phone in airplane mode so it doesn't emit any RF.

When someone calls my cell phone it goes to my voicemail that I have configured using a free service called YouMail, which will send me an email with an audio attachment of any voicemails someone leaves for me. Best yet, the YouMail service is free and you can also use it to report and block telemarketers.

You can also create a hardwired workaround that allows you to use your iPhone and iPad in airplane mode and still access the internet. Use an Ethernet adapter power cord.Then use the same grounded, shielded Ethernet cable and Ethernet grounding adapter kit that I recommended for your computer.

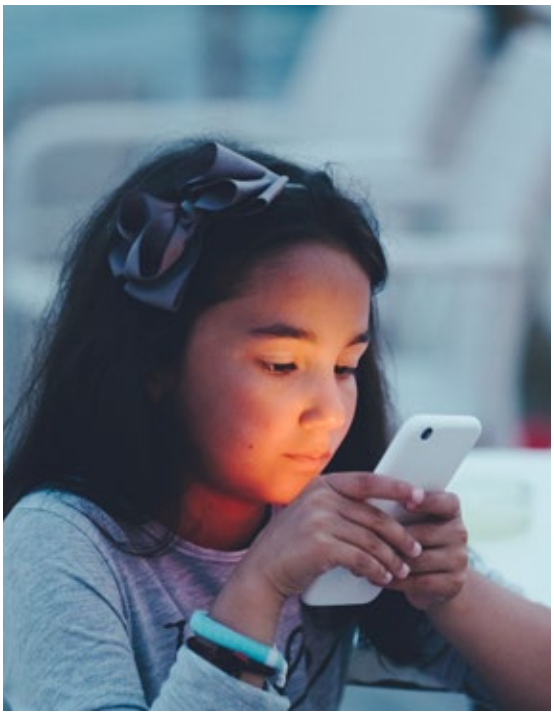
This workaround allows you to access the internet and other apps as you would on Wi-Fi without the radio frequency EMFs from the device. You also won't have the electric fields you would if you did not use a grounded, shielded Ethernet cable.

You won't be able to make or receive phone calls, but that is what a corded landline telephone is for when you are home. Sorry, this workaround does not yet work with most Android cell phones and tablets, only iPhones and iPads.

Your Children and Cell Phones

Barring a life-threatening emergency, children should not use a cellphone or a wireless device of any type, for all the reasons I outline in Chapter 4.

If your child wants to play a game on a tablet or phone, put it in airplane mode. Restrict their total access to mobile devices to less than two hours a week. Hold out as long as you possibly can before giving your child a cellphone, and especially a smartphone. There is a nationwide movement to Wait Until 8th (www.waituntil8th.org), a pledge that parents and kids take to say they won't get a smartphone until the eighth grade.



While the primary aim of the initiative is to "let kids be kids a little longer," the physical health benefits of subtracting years off your kids' lifetime exposure to cellphone radiation, especially when their bodies, brains, and skulls are still growing, is just as important, if not more so, than any social-emotional benefit.

Once a child is given a cellphone, it is essential that they learn how to use it safely by keeping it in airplane mode at all times except when making a call which should only be made using a speakerphone and kept at least two feet away from the body during the call.

Other Strategies

1 Replace all your wireless technology with wired alternatives. If you meet with resistance in your household, then you'll need to educate everyone about the information in this book. At the very least turning off all wireless devices in the house at night is the important first step and better than doing nothing.

Use wired versions of keyboards, mice, and game controllers and if these devices allow you to put them in airplane mode, please do so. Once you have replaced a wireless mouse and keyboard with wired versions, make sure to disable the Bluetooth on your computer. Otherwise, it will continue to emit radio frequencies.

Remember to leave printers and game consoles off until you use them. Many people leave these on all the time and they are constantly transmitting RF as strong as a Wi-Fi signal.

Connect your printer to your computer with a USB cable or networked through a hardwired router using an Ethernet cable (presuming your computer is also part of that hardwired network with an Ethernet cable). Then, disable the Wi-Fi on the printer.

2 Continue with your transition to wired technologies by re-thinking your home phone. Ideally you will want to use a traditional landline or a Voice Over Internet Phone (VOIP) at home or in the office, where you have a wired internet connection. You plug in the term "Free VOIP services" into

your favorite search engine and find a wide variety of options to use. One advantage is that all domestic calls will be free.

Whichever type of phone connection you have, make sure not use a cordless phone. They emit high levels of EMFs from their base at all times, even when the phone is not in use. If you have a cordless phone in your home, it should be on your list of one of the first things to remove. Choose a phone where the handset is connected to the base by an old-fashioned cord, and you will spare yourself a large amount of EMF exposure.

3 Remove all the fluorescent bulbs and fixtures from your home. This is for three reasons. The primary one is that they produce dirty electricity, typically in the range of 62 kHz. They also have toxic mercury inside the bulb and if you happen to break the bulb you have a toxic challenge to contend with. LED and fluorescent bulbs also flicker, which can impair your biology.

Lastly, they are a digital light source that can expose you to large amounts of blue light, which can disrupt your melatonin production and your sleep-wake cycles if you use them at night.

It is best to have LEDs only in areas that you don't use very much. This is because if someone accidentally leaves them on, they will not consume as much energy as the healthier incandescent alternative.

However, because most LEDs have the same digital blue light and flicker concerns, it would be best to use the old clear incandescent bulbs in areas that you frequently have lit at night, like your kitchen,

bathroom and bedroom.

Measure any light bulb you use for dirty electricity with a plug-in microsurge meter) with lights on versus off.

If the bulb raises the dirty electricity level above the baseline reading (with the bulb off), don't use it. Purchase "line voltage" LED bulbs that run straight off 120 Volts and don't have a switched mode power supply in their base, which is what produces the dirty electricity.

However, be careful to avoid "smart" LED lights, which can be turned on and off with your cell phone or even have their color change. These bulbs emit radiofrequency signals similar to your Wi-Fi router or cell phone.

Combining incandescent bulbs with zero flicker LEDs is likely your best strategy for home lighting. I personally use a SaunaSpace Photon light in my bedroom to help balance out the spectrum with more red and infrared and also drown out flicker and strobe effect from LEDs, fluorescent, and low wattage incandescent or halogen lighting.

4 Opt out of the Internet of Things (IoT) rage and avoid buying any smart appliances, thermostats, and digital assistants/smart speakers, as they are constantly seeking and receiving a Wi-Fi signal. Additionally, they are also invading your privacy and constantly listening to your conversations—particularly smart TVs and digital assistants/smart speakers such as Alexa and Google Home.

The other challenge with virtually every new smart TV is that it is impossible to disable the Wi-Fi. This means it will be regularly blasting you with Wi-Fi even when you don't have any Wi-Fi enabled on your router in your home.

Consider using a large high-resolution computer monitor as your TV instead, as they don't have this issue. They also typically have less flicker than a TV. The other benefit of watching your video on a computer monitor is that you can use software like https://iristech.co/ that allow you to filter out blue light when you watch TV at night.

Sony brand smart TVs do allow you to disable the Wi-Fi. Plug an Ethernet cable into the Ethernet jack that all smart TVs have on the back. On other brands of smart TVs, plug the TV's power cord into a power strip and flip off the power to the TV when not watching.

That kills the Wi-Fi in the room (which can emit upstairs into nearby bedrooms at night). Measure the RF in the room with your meter with your non-Sony smart TV on and sit far enough back that the RF level where you sit is as close to, or under, 10 uW/m2 (or less than 0.01 V/m2) as possible.

5 If you still use a microwave oven, consider replacing it with a steam convection oven, which will heat your food as quickly and far more safely. When they are on, microwave ovens are one of the largest radiofrequency EMF polluters in your home and they also emit a very high magnetic field several feet into the kitchen (when running).

You really don't want to be within 100 feet of a microwave that is running so best to

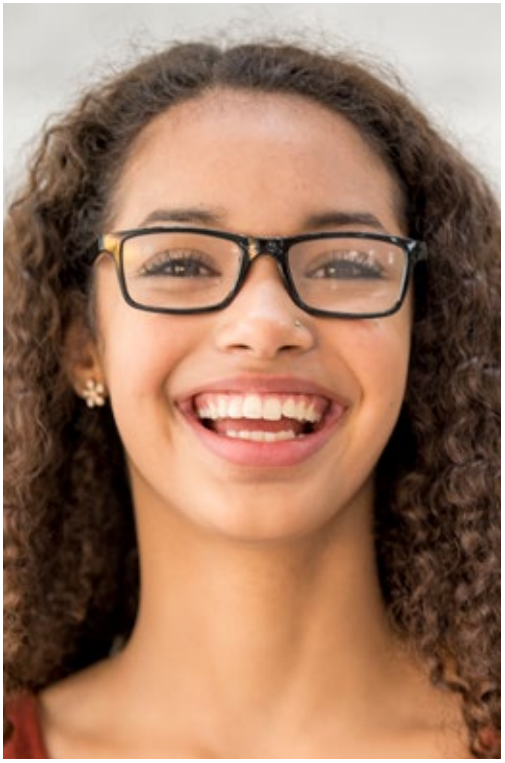
remove it from your home. Remember though, that cumulatively your cell phone and wireless router are the biggest EMF exposures in your home.

6 Plug a grounded Ethernet cable into the back of your Roku or Apple TV device. This will automatically shut off the Wi-Fi on the Roku, but it will take several minutes. You will then need to purchase an Infra-Red (IR) remote control from Roku to shut off the Wireless Connect, a separate RF transmitter in the Roku device that allows you to control it from your smart phone. The Wireless Connect feature does not shut off by simply plugging in an Ethernet cable.

On Apple TV devices, the Wi-Fi does not shut off at all when you plug in an Ethernet cable, but you can place the device inside a Signal Tamer to reduce the RF in the room when you watch TV, and plug it into a power strip that you flip off when you are done watching. That kills the Wi-Fi on the Apple TV device.

7 Avoid metal-framed glasses. Researchers have found that metal-framed glasses can, in certain cases, cause an increase in field levels by up to approximately 20dB which is about a tenfold increase over that seen without them. It would be best to switch to plastic frames for any glasses that you wear.

8 Replace your dimmer switches with regular on-off light switches, as the dimmer switches produce dirty electricity. If you want to control the level of lighting, look for incandescent light bulbs with multiple levels of intensity.



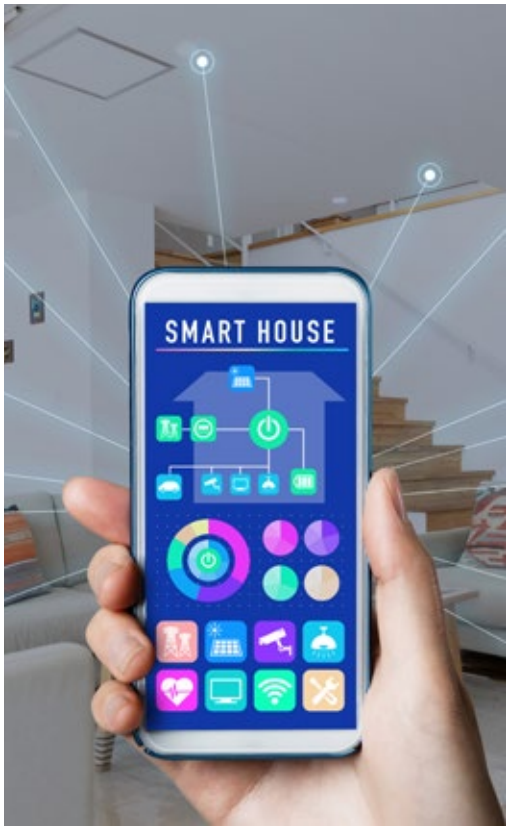
9 Choose alarm systems carefully. Make sure you are using a system that does not require a Wi-Fi router. Ideally wire as many of the sensors as you can. If you have a few wireless sensors, that should be fine as typically they do emit a continuous wireless signal but only go on for a few seconds a day.

Tell your security system contractor that you want to avoid a system that "polls" the sensors every 30 seconds or several times a day. This is done with radio frequencies, where the central control unit asks all the sensors to check back in with a radio signal of their own to make sure the system is working.

10 Toss out your baby monitor. In a cruel irony, most baby monitors are a major source of RF radiation. In fact, Building Biologist Oram Miller performed a live reading of the radiation being emitted from a baby monitor in a 2014 television interview for a local CBS news program and recorded levels of 6.14 v/m (100,000 uW/m2), which is 100 to 10,000 times higher, depending upon how you measure it, than the .06 V/m level (10 uW/m2) that many EMF experts view as an acceptable level.

Moving your baby's crib into your bedroom so that you can do away with the baby monitor altogether is the best way to avoid radiation emitted by these devices. If you must use an existing monitor, keep it as far away from your baby's crib and mom's bedside or kitchen countertop as possible.

For baby monitors that are either



hard-wired or emit low levels of EMF. You still want to keep all these monitors as far away from baby's crib, as well as mom's bed and kitchen counter, as possible, like across the room.

Remember, parents raised children for thousands of years without baby monitors; you too can do without one.

11 Refuse a smart utility meter on your home as long as you can. If your utility does not offer an opt-out program, put a smart meter guard over your smart electric, water and gas meter. They are available from smartmetercovers.com and smartmeterguard.com.

12 Avoid purchasing smart appliances like thermostats and refrigerators.

13 Hire an EMF experienced electrician, plumber, or EMF expert to fix wiring errors that can cause spikes in magnetic field exposures. Sources of magnetic fields from appliances, such as a refrigerator motor, or the back of a breaker panel can be shielded with special materials ordered from Europe but they need to be assessed and installed professionally.

14 Avoid electrical radiant floor heating systems, which emit both high magnetic and electric EMFs that can be measured even at waist height, unless you use a brand that neutralizes EMFs. Ideally it is best to consider another heating solution.

15 Keep unnecessary EMFs out of the bedroom by using a battery-operated

alarm clock instead of one that plugs into the wall, and don't use electric blankets. If you have a bed that has components that have electric cords that plug into a wall outlet, you will be sleeping in a huge electric field that does not allow for deep, rejuvenating sleep.

Some electric beds, like hospital beds for those that are disabled, also have a transformer mounted right up under the mattress, putting high magnetic fields into the middle part of your body all night long.

This is potentially very harmful. Make sure the cord is plugged into a power strip and that you shut off the switch on the power strip when you sleep. This eliminates both the electric and magnetic field at the same time.

Ideally it would be best to turn off the electricity to your bedroom altogether when you sleep. While this may seem like a challenge, there are relatively simple devices at emfkillswitch.com that, once installed, will allow you to easily turn off all the power in your bedroom from the bedroom by pressing one button.

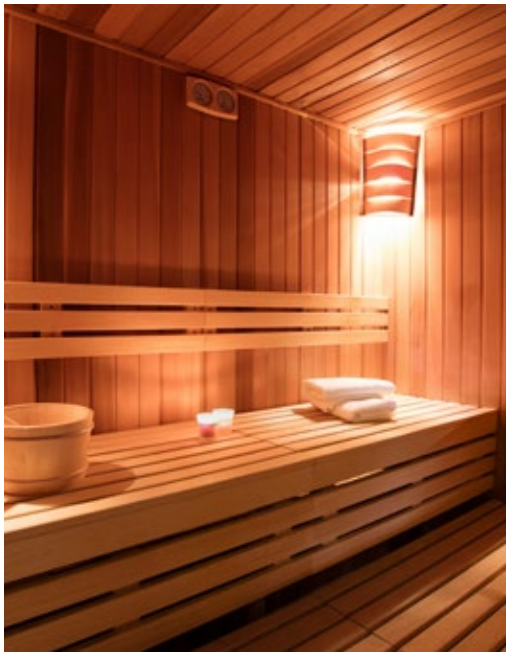
16 Keep plug-in chargers away from your bed at night. Unplug chargers and appliances from the wall outlet when not in use, or use a battery-powered power banks to charge your phones and devices at night. In combination with a shut-off switch, these power banks can be kept plugged into a wall and they will charge during the day and charge your

phone at night. Just remember to keep your phone in airplane mode, with Wi-Fi and Bluetooth also turned off.

17 For any electrical devices that you don't use all that often, plug them into a grounded power strip, available at any hardware store, and then switch the power strip off any time you aren't using those devices.

18 Choose saunas that have shielded wires in their walls to heating elements as well as the AC power cord to the wall outlet. Many, but certainly not all, saunas are designed to keep magnetic fields low, and they have certifications to prove that. These certifying labs, however, focus only on magnetic fields, the "M" of EMFs, and not also on electric fields, the "E" of EMFs.

As a result, EMF experts have measured high electric fields in saunas that tout their low EMF levels, and certain electrically sensitive clients who cannot tolerate electric fields, which is most of them, are not comfortable in saunas with high electric fields.



Turn Your Bedroom into an EMF Sanctuary

One final, but no less important, touch to remediate your home is to make your bedroom as EMF-free as you possibly can. Your body does an enormous amount of repair and regeneration at night.

If you have high EMF exposures and secondary oxidative stress, it will be nearly impossible to optimally activate these repair and regeneration programs where you can recover from the EMF exposures that you have no control over during the day when you are outside your home. This is why it is so important to create an EMF-free zone in your home and especially your bedroom where you sleep.

This is a really important topic that, unfortunately, I will need to save for the book. I hope you will read the rest of the details there.

PRIORITY NUMBER 2:
Increase Distance between You and the EMFs You Can't Avoid

When it comes to EMFs, distance is your friend. The strength of an electromagnetic field is subject to Newton's Inverse Square Law, which states that the strength of a force is inversely proportional to the square or cube of the distance from that force, depending upon the source.

So, if you're one foot away from an EMF, you're only exposed to ¼ to 1/8 of the radiation you would experience if you were in contact with the source. If you're two feet away, the strength of the field that reaches you is 1/16 less.

Magnetic fields drop off even more quickly as you move away from them the strength of the field drops off quickly as you move away from it, with 90 percent reduction often happening within one to two feet depending upon the source.

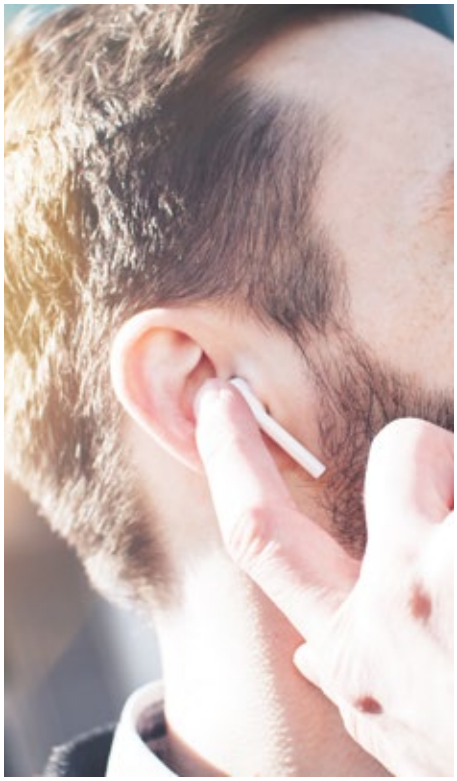
So, when you can't avoid a radiation-emitting device, find ways to put more distance between it and your body. This one little step can radically reduce your exposure. Here are some ways to do just that:

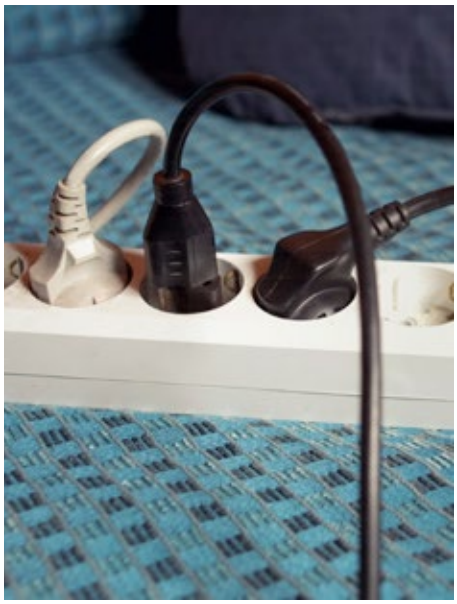
1 When on a cellphone call in a private place, use the speakerphone while placing the phone at least three feet away from you. If you need privacy, your best bet is an air-tube headset, which uses hollow plastic tubes to transmit sound between you and your phone. They don't allow EMFs to travel along with the sound, unlike headsets that use only metal wires, which can conduct EMFs all the way to your ear.

Avoid all Bluetooth headsets including Air Pods or their clones. You might think that using a Bluetooth headset would be good, but it isn't. Most people use them and have their phone on their body, but even if you had your phone 30 feet away, you would limit your cell phone exposure, but the Bluetooth signal would eradicate any benefit. This is because these Bluetooth devices will generate significant EMF signals and broadcast them directly into your brain.

2 If you can't make the transition away from a Wi-Fi router, at least move it as far from your living and sleeping areas as possible. Use a Signal Tamer, Wave Cage or Router Guard to further reduce the signal.

3 Keep extension cords away from your desks, couches, and beds—or any location where you spend long periods of time—as they emit electric fields unless you are using a shielded electrical cable. For devices that have the option of plugging the AC cord into them, such as desktop computers, monitors and some printers, purchase shielded AC power cables that will help lower your electric field exposure.



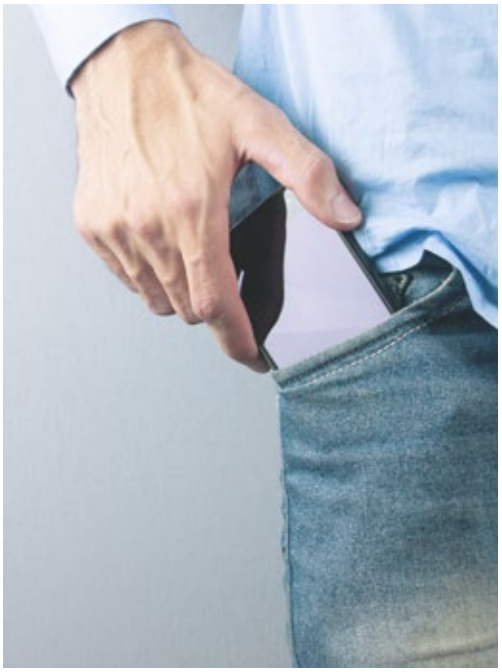


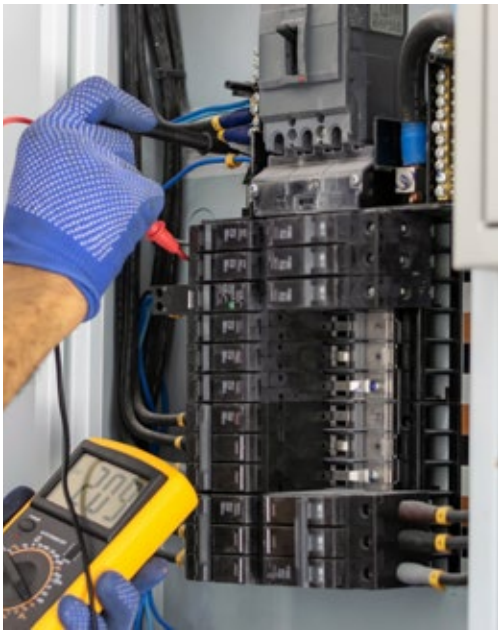
4 Avoid carrying your cellphone on your body unless it is in airplane mode. Of course, there are circumstances where you will need to be available and have to have your phone on, but it is best to not put it on your body. It is better to put it in your purse or backpack and remember to return it back into airplane mode as soon as you can. If you must carry it on your body, purse or backpack, use a Faraday bag, which will radically decrease if not completely eliminate the RF fields.

5 Have your bedroom tested for electric fields by an EMF expert and have them show you which circuits to shut off at night. If that is not possible, you could paint your wall and floor with shielded, grounded paint. Moving your bed and desk one foot away from the walls will only slightly reduce electrical field exposure emanating from wiring in the walls.

If you live in a newer home in Chicago or New York or are in a commercial building, however, shutting off breakers is likely not necessary as the building codes for these cities and commercial buildings require electrical wires to be encased in metal conduit. This was done for fire protection, but the side effect is that it also eliminates electric fields.

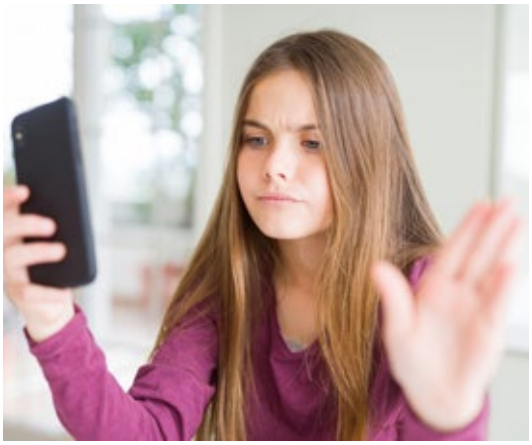
However, it would still be wise to use manual or remote plug-in switches to eliminate electric fields from unshielded AC power cords plugged into the wall that are within six to eight feet of beds when you sleep. Alternatively, you could change all the wires plugged into your bedroom





and have a lamp repair shop rewire bedside lamps with shielded cords

6 Train yourself and your child to keep as much distance as possible between your body and your wireless device. If you need to use a laptop, use it on a table instead of on your lap. If you must use it on your lap, put a large pillow between the device and your lap. Remember to turn off the Wi-Fi and Bluetooth on your laptop, use a grounded power cord (instead of the battery), and connect to the internet using a grounded Ethernet cable plugged into an Ethernet Grounding Adapter Kit



PRIORITY NUMBER 3:
Reduce Outside Sources of EMF

Although remediating the above sources is of primary importance, some remediators say the sources outside the home can be just as pervasive—if they turn off all the wireless devices inside the home they can still measure high EMF readings from the surrounding cell phone towers in many homes tested.

Much of the EMF radiation coming from outside your home originates from mobile phone towers, radio/TV stations, neighboring Wi-Fi, power lines, and smart meters. These are typically bombarding you 24/7 and they can't be turned off. This will only get worse when 4G/5G small cell transmitters go up outside homes in residential neighborhoods, particularly in large cities.

Even though they are pervasive, there is still a lot you can do to protect yourself from these external sources.

Shielding Priorities

Any time your body is in a parasympathetic response is when shielding from EMFs is most important, because that is when your body prioritizes healing. When there is a stress response, such as that generated by EMF exposure, your body cannot prioritize healing and instead prioritizes focusing on the stressor. For this reason, you want to prioritize shielding the areas where you are most likely to be in rest and digest (as opposed to fight or flight) function of the nervous system.

Bedroom

Your bedroom should be the lowest EMF exposure you have in your home. Your ancestors lived in mud huts, stone structures, and caves and were even protected from natural RF and ionizing radiation from stars while asleep.

Eating

Even eating in a higher EMF environment and then escaping to a place with low EMF will be beneficial for your digestion. It takes 1-2 hours for the main digestion of your food to take place.

Detoxification

Your body does not prioritize detox when it is in a sympathetic state. If your body is being stimulated by all these oxidative stress-inducing frequencies then it is not prioritizing detox as well as it should. That being said, even being in a high EMF-emitting sauna is still somewhat

beneficial due to the heat shock proteins it cues the release of. But taking a sauna in an EMF-free environment is key to superior detoxification. Saunaspace is the only truly EMF-free sauna I am aware of as it also blocks radiofrequency fields like Wi-Fi and your cell phone.

The book provides step by step details on how to shield your bedroom, along with many other important areas to safeguard your home.

Remember Your Priorities

I know that I have given you many things to consider in this chapter and you may be feeling overwhelmed. Remember to work on your EMF-remediation strategies following the order of priorities I outlined in the beginning of this chapter. They will help you tackle the most important things first and keep you on track.

Once you start taking some of these high-priority measures—like replacing as many wireless devices as you can with wired options, changing the way you use your cellphone, and making your bedroom as low-EMF as you can—you'll start to feel so much more energized and vital that it will be that much easier to keep going.

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