

How to Reduce Electromagnetic Fields



Wireless radiofrequency (RF) and magnetic fields (MF) are two types of non-ionizing electromagnetic fields (EMF). Research has linked RF and MF to memory problems, headaches, reproductive damage, cancer, and oxidative stress.

Create A Sleep Sanctuary

- ✓ Remove all cell phones, screens, TVs, and electronics from bedroom.
- ✓ Use a battery-powered alarm clock that is not connected to a network.
- ✓ Do not sleep near a plugged in charging device or charging cord.
- ✓ Do not sleep near a cordless phone base.
- ✓ Power OFF wi-fi and wireless networks at bedtime. Note: Safest internet connection is wired (not wi-fi).
- ✓ Replace nightstand lamp with battery-powered reading light.
- ✓ Remove electrical cords that are underneath or near the bed.
- ✓ Electric blankets can pre-heat. *Turn off AND unplug* the blanket before getting into bed.
- ✓ Do not sleep at a wall where any electrical panel, utility meter, or always-on appliance is on the other side.

Sources of Wireless RF

For each of these items, you can replace it with a safer non-wireless option.

- Mobile phone
- Home/office cordless phone
- Cordless phone base station
- Tablet/Laptop/Desktop Computer
- Wi-Fi router/modem
- Video game console and handsets
- Baby monitor (near baby & near parent)
- "Smart" speaker & virtual assistant
- Wireless peripherals such as headphones, printer, speaker, keyboard, mouse, microphone
- Wireless-enabled MP3 player
- Signal booster
- Security home hub
- Wireless "wearables" such as "smart" watches & jewellery, fitness wristbands, sleep trackers
- "Smart" appliances
- Wi-Fi
- Bluetooth

Reduce Cell Phone RF Radiation

- Minimize your overall use.
- Prefer a corded phone, especially for long calls.
- Use speaker phone.
- Text rather than voice/video chat.
- Maximize distance between phone and person.
- Do not carry a powered ON phone in your pocket or bra or hat.
- Stream videos using a corded connection.
- Use cords for high data transfers (such as video and photos) to greatly decrease RF emissions.
- Learn how to use Airplane mode to turn off RF-transmitter antennas.
- Avoid use inside metal vehicles—radiation reflects & increases in a car, bus, elevator, train, plane, etc.
- Reduce active apps & background apps.
- Replace wireless earbuds and wired earbuds with airtube headset.
- *Children should not use mobile phones except in an emergency.*

Reduce Wireless RF in Your House

- ☑ Replace cordless phones with corded phones.
- ☑ Forward mobile phones to home corded phone line so mobiles can be off more often.
- ☑ Replace Wi-Fi with ethernet cable for internet, and set Wi-Fi to OFF.
- ☑ Replace Bluetooth with cord connection (e.g., mouse, keyboard, speaker/headphones, printer, etc.) and set Bluetooth to OFF.
- ☑ Remove unnecessary wireless technology.
- ☑ Remove fluorescent light fixtures.
- ☑ Wire up gaming systems and controllers, TVs, and other entertainment systems.
- ☑ Arrange to replace your "smart" utility meter with an analogue meter.

Tips & Tricks

- A battery-powered alarm clock in all bedrooms.
- Replace wireless speakers with wired.
- Learn how to use an ethernet cable and adapters to connect your tablet, laptop, and mobile phone to internet.
- Text, social media, and stream from an ethernet-connected computer.
- Say no to Wi-Fi virtual assistant speakers.
- Buy devices and accessories that are wireless-free or can be set to turn off wireless antennas.
- Use an electricity timer or a power strip to power off electrical/electronic items when not in use.
- Purchase, rent, or borrow an EMF meter to "see" the levels in your home.

In Cars & Other Vehicles

Metal surroundings can reflect signals, increasing RF exposures inside the vehicle.

A cell phone that is not in Airplane Mode or powered off can automatically go to high power RF in traveling vehicles, even if the phone is not actively being used.

- Power OFF all phones and wireless devices (or at least set to Airplane Mode with both Bluetooth and Wi-Fi OFF).
- To navigate, get a GPS (without Bluetooth) or pull directions up on the phone and then Turn On Airplane mode on for the ride.
- Turn OFF the vehicle's Bluetooth.
- Contact manufacturer about turning OFF other wireless antennas.

Airplane Mode

In settings Turn ON Airplane mode. Then also Turn OFF Bluetooth/Hotspot/5G/Location and any other antennas. Use these settings often, to halt RF.

"Smart" Meters

These electric/water/gas utility meters emit 3 types of EMF: RF, MF, and EMI.

- Opt out of smart meters.
- Analogue meters are the safest.
- Join with others in your community to ensure everyone has a free "Opt-Out" with analogue meter availability.

Prefer a Corded Telephone

Cordless phones and their base stations emit RF radiation continuously.

If a corded landline is not available, then consider VoIP or a telephone line connection from your internet provider.

Safer Charging

While cell phones and other electronic devices are charging, high levels of MF are generated.

- Do not sleep next to a charging device.
- Do not use a cell phone while it is charging.
- Charge devices away from your body.
- Charge devices during the day on a hard surface like a table (*not on a bed, couch, clothing, or soft cushions*).
- Unplug both ends of cord after fully charged.
- Do not use wireless charging.

Magnetic Fields (MF) & Dirty Electricity

Sources of Magnetic Fields

Exposure to magnetic fields (MF) is linked to miscarriage, leukemia, and other biological effects. Experts are most concerned about long-term exposures to hours and hours of MF in our everyday environments.

- High-voltage powerlines
- Electrical panel
- Microwave oven
- Induction stovetop
- Private automobiles (measure at all seats)
- Electrical substation
- Electrical wiring errors (electrician can fix)
- Appliances & motors
- Power strips
- Charging cords

Electromagnetic Interference (EMI), also known as Dirty Electricity

EMI occurs when unwanted EMF contaminates your electrical system. The best way to reduce EMI is to remove the sources:

- Dimmer switches
- CFL lightbulbs
- Fluorescent light fixtures
- Several types of LED lightbulbs
- Digital utility electric/gas/water meters
- Devices with switched-mode power supply
- LCD TVs & Plasma TVs
- Solar panel inverters
- Chargers
- Variable-speed motors (HVAC, portable fans and heaters, other portable or stationary appliances, treadmills)
- Electronic power converters
- ... and many other items

Increase Distance

For most small indoor MF sources, simply increasing your distance by even a few inches or feet greatly decreases your MF exposure. Note: Devices like laptops and tablets and desktop computers emit MF from their electrical power, even when Wi-Fi and Bluetooth are off.

- Do not place laptops or tablets on laps.
- Use screens and electronics on a table.
- Distance powered tech and appliances *away from your body*. Some examples: do not work at a desk with the printer, microwave, or fridge nearby within inches of your body.
- Charge devices away from sleep/work/play space.
- Get a MF meter to measure and mitigate levels in your home, especially the bedroom.

Safer Lighting

- Do not use CFL bulbs.
- Do not use fluorescent light fixtures.
- Choose incandescent or halogen bulbs (with edison screw base), or cleaner LEDs.
- Minimize/remove bright white LEDs.
- At bedside, use *battery-powered* light that is designed as low in blue light or has no blue light.

Reduce EMI by Removing Sources

1.
 - Replace dimmer switches with on/off switches.
 - Replace CFL and fluorescent lightbulbs/fixtures with safer lighting.
 - Choose machinery without variable-speed motors.
 - Prefer electronics without a switched-mode power supply.
 - When devices or chargers are not in use, unplug them from the power source.

Checklist for Low-EMF Computer

Set-up For Any Computer

- ✓ Device always on a table. User's feet flat on floor. Screen is at — or slightly below — eye level.
- ✓ The "high-five test": If you can't properly high-five your computer screen, you're sitting too close. Position screen/monitor at least 24 inches (61 cm) away from users.
- ✓ Reduce glare by adjusting screen tilt/position.
- ✓ Light your area with soft light *beside* (not directly behind) the screen. [Soft light means not fluorescent and not strong LED.]
- ✓ Prefer to use laptops and tablets powered only by battery. Avoid or minimize use during charging. Unplug after charged.
- ✓ Use a three-prong grounded power cable for laptops, tablets, and desktop computers.
- ✓ Distance electrical wires, chargers, and electrical equipment away from your body.
- ✓ Connect to internet with ethernet, not Wi-Fi.

Reduce Blue Light on ALL Screens

We highly recommend a covering that is applied to the entire screen & more.

- Thin blue light blocker covers are available for all screen sizes and are nearly invisible after attached.
- Wear blue-blocker eyeglasses.
- Download software that reduces blue light and flicker.

Replace Wi-Fi with Ethernet

Yes, you can connect your computer, laptop, tablet, and most smartphones to the internet using an ethernet cord instead of Wi-Fi. This way the data travels *inside the ethernet cord* to reach the internet, instead of being pumped into the air.

- First, check if your device has an ethernet port. If not, get the correct ethernet adapter for the ports on your device. Two examples of adapters are: USB-to-ethernet or USB-3-to-ethernet. There are other adapters; you may want to ask the manufacturer of your device.
- Connect an ethernet cord from your modem to the adapter that plugs into your device.
- Disable Wi-Fi and Bluetooth on your device.
- Confirm the device is connected to the internet via wired ethernet connection when the "Ethernet" tab appears in the settings.
- Turn OFF/disable wireless antennas in your Wi-Fi router/modem. [Best is to replace with a modem that has no Wi-Fi capability.]

Multiple users? Your modem may have more than one available ethernet port. Or you can connect a corded ethernet switch to the modem or to the ethernet cable, and then you can add more ethernet cords to connect numerous devices.



Use Corded Accessories

Prefer wires, cords, and adapters — not Wi-Fi, not Bluetooth — for mouse, keyboard, printer, speakers, microphone, and other electronic tech that connects to the computer.