

Ten Steps To Safe Technology

Environmental Health Trust

Please take the time to become wise about the safer use of wireless transmitting devices (WTDs) such as smart phones, home cordless phones, tablets, laptops, gaming devices, desktop and computers.

1. Distance is Your Friend

The amount of radiation absorbed into the human user decreases very rapidly with distance from whatever WTD you may be using. *Decrease* your exposure by *increasing your distance* from emitting sources.

2. Airplane Mode ON, and Wi-Fi OFF, and Bluetooth OFF

“Airplane mode”, also known as “flight mode,” is a setting on your wireless device that stops the microwave radiation emissions. Whenever you hand a child a technology device such as cell phone, tablet, or laptop, please set the Airplane mode to ON, and Wi-Fi to OFF, and Bluetooth to OFF.

3. Prefer Non-Wireless Connections

For home phones (landline), internet, printer, speakers, and entertainment gear, connect by cord or cable with all wireless features off.

- *Wi-Fi Internet Connections at Home:* As an easy first step, power off the Wi-Fi router at bedtime. Then ask your internet provider how to connect with plug-in cords and turn off the antennae feature of the modem or router. Many companies allow you to manage the wireless settings online.
- *Trade in your home cordless phones for corded phones.* Most cordless phone base stations constantly emit high levels of microwave radiation regardless whether or not any connected handset is in use. The cordless phone handsets also emit microwave radiation. Corded landlines have no wireless radiation emissions and therefore this simple step can substantially reduce your daily microwave radiation exposures.
- *Wire Up Game Stations and Controllers:* Choose gaming devices that have the option to connect the hand controllers with a cord.
- *Hardwire Accessories (Printer, Keyboard, Mouse, Speakers, etc.):* Wi-Fi printers are a hidden source of constant Wi-Fi emissions, just like a Wi-Fi router or cordless phone base. The safest choice is a hardwired non-wireless printer. Some wireless printers allow the wireless antennae to be turned off via an internal network setting so contact the manufacturer for directions. A mouse with a cord has no wireless radiation emissions (there is no setting to change).

4. Turn It Off When Not in Use

Wireless enabled devices are *always* transmitting radiation *even* when you are not surfing the internet or using the device to talk or message. The only way to stop these emissions is to set the wireless antennas to OFF.

- Why? Wi-Fi devices continuously check in with their main network (cell tower or Wi-Fi router to be sure a connection exists. This radiation activity called a digital handshake. For example, a Wi-Fi router emits a beacon signal at regular intervals to signal the available network (whether or not any person or machine is using the network).
- You can easily decrease your family's firsthand and secondhand radiation exposure *by turning off wireless networks and devices whenever you aren't actively using them.*
- Turning off wireless devices (and their related gear)—for example, gaming, entertainment, and computer systems—*when not in use* also saves significant energy and makes all around good sense.

5. Power Off Wireless Devices When Driving

Mobile devices distract drivers even if hands-free. Cell phones and streaming tablets and laptops also emit higher power radiation during travel because the metal surroundings reflect the radiation and create radiation hotspots inside the vehicle.

- *Going on a road trip and your children want to watch movies?* Before you leave, download the movies onto the device beforehand.

6. Practice Safer Phone Use

For adults who must use a mobile phone: use speaker phone or a plug-in earpiece, and when you are not using the phone be sure to power off or set the phone on Airplane/Flight mode and the Wi-Fi to OFF and the Bluetooth to OFF.

- Children should not use mobile phones except in emergency. The *safest way* to use a cell phone is to turn it off and use a corded landline.

7. Safeguard Your Sleep

Be aware that wireless radiation and light seriously impact our sleep so be sure to *power off* all screens and electronics *well before bedtime*. Locate screens in family areas—not in bedrooms.

- Many newer TVs, gaming systems, and computers plugged into electricity or on battery power will have radiation emissions even if in power off mode, so it is best to remove them from the bedroom.
- Need an alarm on your phone? You can set the phone to Airplane/Flight Mode ON and the Wi-Fi and Bluetooth to OFF *and still use the alarm feature*.
- Be sure to charge cell phones and tech devices outside the bedroom, because charger gear generates other types of electromagnetic fields that are also linked to health issues.

8. Decrease the Power of the Signal

If necessary to have Wi-Fi on, you can significantly reduce your exposure to that radiation by decreasing the signal strength.

- Home Wi-Fi routers are often set to cover all areas within 100 meters with the radiation. This distance is usually not necessary in a home. At a minimum, contact your internet provider to *turn down the signal strength on your router*, and ask your neighbors to do the same. The fewer the bars on your cell phone or wireless enabled device, the higher the radiation it is outputting. So *minimize your use when the signal is weak*.

9. Decrease Time and Length of Wireless Device Use

The longer you connect wirelessly, *the more radiation you absorb*. So keep your wireless phone calls and Wi-Fi use *short*—whenever possible. *We all* need internet access and good long phone calls, so be sure you have a landline corded phone and wired home computer to use *most of the time*. No wireless radiation is emitted from ethernet cables. Minimize your time spent in Wi-Fi hotspots.

10. Read the Fine Print

All device manufacturers advise that each wireless device should be at some distance away from human bodies and brains. *For example*, printers, computers, and wireless routers instruct that the distance between the device and a human body must be at least 20 cm (about 8 inches).

- Keeping these devices closer than the manufacturer's designated distance can result in a violation of the federal government's official radiation exposure limit. Exceeding these levels can result your body absorbing thermal level of microwave radiation. Such levels can heat your body and lead to sterility, burns and brain damage.
- Before a phone, tablet, Mp3 player, etc. is placed into a pocket or bra or tucked into clothing, set Airplane mode to ON and Wi-Fi to OFF and Bluetooth to OFF. Always also use those settings before devices are near a pregnant abdomen.