

North Carolina Department of Public Health [https://epi.dph.ncdhhs.gov/oec/a\\_z/cellphones.html](https://epi.dph.ncdhhs.gov/oec/a_z/cellphones.html);

[https://docs.google.com/document/d/1fxPS3L20GPomgwZqoPE0G\\_5fC4TUO3VXHSnqf\\_Fdg5Q/edit](https://docs.google.com/document/d/1fxPS3L20GPomgwZqoPE0G_5fC4TUO3VXHSnqf_Fdg5Q/edit)

## Wireless Technologies, Non-ionizing Electromagnetic Fields and Children: Reducing Health Risks

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#### Recommendations to reduce RF radiation

##### 1. Medical Organizations

American Academy of Pediatrics (AAP)

##### [AAP Cell phone safety tips for families \(2016\)](#)

- Prefer texting to voice calls
- Use cell phones in speaker mode or hands-free to distance the cell phone away from the head.
- Make only short or essential calls on cell phones.
- Avoid carrying your phone against the body like in a pocket, sock, or bra.
- Do not talk on the phone or text while driving.
- If you plan to watch a movie on your device, download it first, then switch to airplane mode while you watch in order to avoid unnecessary radiation exposure.
- Minimize use in areas of low signal (i.e. how many bars you have). The weaker your cell signal, the harder your phone has to work and the more radiation it gives off.
- Avoid making calls in cars, elevators, trains, and buses. The cell phone works harder to get a signal through metal, so the power level increases.
- Remember that cell phones are not toys or teething items.

American Academy of Pediatrics Letters

- [AAP Letter to the FCC Chairman calling for the FCC to open up a review of RF guidelines \(7/12/2012\)](#)

- [AAP Letter to US Representative Dennis Kucinich in Support of the Cell Phone Right to Know Act 12/12/2012](#)
- [AAP to FCC Commissioner Mignon Clyburn and FDA Commissioner Margaret Hamburg calling for a review of RF guidelines 8/29/2013](#)

Santa Clara California Medical Association

Santa Clara California Medical Association Bulletin Articles on EMF

- [Wireless Silent Spring](#)
- [Wi-Fi in School: Are We Playing it Safe With Our Kids](#)
- [Shallow Minds: How the Internet and Wi-Fi in Schools Can Affect Learning](#)
- [A 5G Wireless Future: Will it Give Us a Smart Future](#)
- [Autism Rising Environmental Factors Part 1.](#)
- [Autism Rising Environmental Factors Part 2](#)
- [Saving Your Landline May Save Your Life](#)
- [What's the Diagnosis Doctor? Electromagnetic Sensitivity](#)

Santa Clara California Medical Association Best Practices For Schools

Purpose: To educate physicians, school officials and teachers of the complex health risks and potential health hazards of digital and wireless technology in schools, highlighting precautionary measures and recommendations for safer use of this technology.

Best Practice Policy Recommendations to Improve Health, Safety and the Learning Environment for Students

1. Create a "Safe Tech in Schools Program" to educate students and staff with materials including informational brochures, posters and/or lectures on potential health effects of wireless devices, how to use devices safely, reduce wireless use in the classrooms and reasons to prefer hardwire connections.

2. Educate students and staff about risks of carrying wireless devices in pockets or next to the body, where wireless radiation levels may exceed even FCC safety guidelines.

Examples of recommended ways to reduce RF exposure:

- Put devices on desks, not laps
- Text rather than call
- Prefer speaker phone
- Put devices in airplane mode when not in use.
- Carry phones in backpacks, etc., not on the body
- Turn devices on airplane mode when not in use
- Avoid or strictly limit the use of Virtual Reality headsets

3. Educate the school nurse about potential health effects of radiofrequency radiation (RFR) in students, including blue light effects, posture, RFR effects, and in some students, electrosensitivity (headaches, dizziness, etc.) along with creating a monitoring and reporting program

4. Establish and promote school cell phone-free policies.
5. Promote tech free breaks in classrooms during each class.
6. Use blue light reduction methods such as apps, blue light computer covers or blue light glasses.
7. Reduce RF radiation on campus and in classrooms:
  - Prefer and install hard-wired ethernet devices instead of wireless wherever possible. This includes hardwiring computers, tablets, whiteboards and cordless phones in the classroom. Consider placing fiberoptic cables for broadband access as it is faster, safer, more reliable and cheaper in the long run, with no radiofrequency radiation emissions risks
  - Disable devices so they are on airplane mode when on ethernet. Purchase Wi Fi routers which have access points that can be easily turned on or off at point of use and at multiple points, to reduce RF emissions, as well as energy use and to achieve ALARA (As Low As Reasonably Achievable) RF levels as per European Council Resolution 1815. Tech Safe Schools. Mitigation Techniques for Reducing RF Radiation in Classrooms. [https://www.techsafeschools.org/files/ugd/2cea04\\_9e0eac828f124de9ae4a956d81d1f802.pdf](https://www.techsafeschools.org/files/ugd/2cea04_9e0eac828f124de9ae4a956d81d1f802.pdf)
  - Turn off wireless devices, hotspots, printers “smart TV’s” and routers when not in use in the classroom with easy on-off access buttons or remote. Have timers on routers which can turn off routers at night and when not in use to reduce energy consumption.
  - Place routers as far away from students as possible and not overhead. Distance reduces RF exposure.
  - Decrease the power of the router. Typically the power can be reduced from 100% to 15-20% without interfering with function thus saving energy, as well as reducing RFR exposure. (c,d,e will likely allow the network to operate more efficiently with no interference and with good connectivity)
  - Disable 2.4 GHz Wi Fi and use only 5GHz for classrooms. This reduces energy use. Choose routers which are only on-demand and are silent unless in use. These can also be controlled by teachers using their laptops. Consult with an RF professional who can measure radiofrequency radiation (RFR) from Wi Fi, Bluetooth, cell phone frequencies, cell tower frequencies (600 MHz to 7 GHz and possibly select 5G millimeter bands). This includes peaks/maximum levels of radiation which are the most biologically active, not average exposures. It will be important to perform before and after Wi Fi adjustments, or before buying equipment. It is recommended that each school also purchase a professional grade EMF meter(s) to test for exposures. The teachers and students can measure and confirm the reduction in exposure.
  - Consider a Wi Fi Free Zone on campus with signs posted to turn off phones.
  - Reduce wireless radiation and distractions in students by having them download materials first, then disable applicable wireless antennas (Bluetooth, GPS, cellular, and Wi Fi) by using airplane mode as much as possible.
  - Consider using books instead of computers or tablets whenever possible for improved learning and less distraction
  - Keep tablets and computers at least 8 inches from the body and on a table (not lap) when used as per Federal Communications Commission recommendations.
  - Keep children's heads away from routers, screens and antennas as much as possible.
  - Avoid installation of smart meters on school premises. (Lamech 2014)
8. Consider a policy to restrict installation of cell towers on school property. The recommendation is at least 1640 feet (500meters) distance from a cell tower to a school. (Balmori 2022; Pearce 2020)
9. Develop and distribute state-level policies and/or guidance for schools on wireless radiation and technology safety.
 

[Link to Santa Clara California Medical Association Best Practices For Schools](#)

California Medical Association	
In 2014, the California Medical Association passed two resolutions regarding wireless standards: 1. To “support efforts to reevaluate microwave safety exposure levels associated with wireless communication devices, including consideration of adverse non-thermal biologic and health effects from non-ionizing electromagnetic radiation used in wireless communications”; and 2. To “support efforts to implement new safety exposure limits for wireless devices to levels that do not cause human or environmental harm based on scientific research.”	
Massachusetts Medical Association	
In 2021, the Massachusetts Medical Association passed <a href="#">a policy statement</a> in support of “continuing research, including quality epidemiologic studies, by appropriate agencies and entities to produce evidence-based data on the effect(s) of radio frequency radiation on human health. If indicated, study findings should be used to revise and update public health standards for safe limits of human exposure to radio frequency radiation.”	
Austrian Medical Chamber, Cyprus Committee on Environment and Children's Health	
<a href="#">The 16 Practical Rules to Reduce Cell Phone and Wireless Radiation</a>	
Athens Medical Association	
<a href="#">16 Recommendations to reduce human exposure to wireless radiation (2017)</a>	

### Public Health Organizations and Entities

California Department of Public Health	<p><a href="#">Cell phone advisory</a> (2017) includes</p> <p>Reduce or avoid using your cell phone when it is sending out high levels of RF energy.</p> <p>This happen mainly when:</p> <ul style="list-style-type: none"> <li>You see only one or two bars displayed. Cell phones put out more RF energy to connect with cell towers when the signal is weak. If you must use your phone when the signal is weak, try to follow the other guidance on this page.</li> </ul>
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	<ul style="list-style-type: none"> <li>● You are in a fast-moving car, bus, or train. Your phone puts out more RF energy to maintain connections to avoid dropping calls as it switches connections from one cell tower to the next unless it is in airplane mode.</li> <li>● You are streaming audio or video, or downloading or sending large files. To watch movies or listen to playlists on your phone, download them first, then switch to airplane mode while you watch or listen.</li> </ul> <p>Don't sleep with your phone in your bed or near your head. Unless the phone is off or in airplane mode, keep it at least a few feet away from your bed.</p> <p>Take off the headset when you're not on a call. Headsets release small amounts of RF energy even when you are not using your phone.</p> <p>Don't rely on a "radiation shield" or other products claiming to block RF energy, electromagnetic fields, or radiation from cell phones. According to the U.S. Federal Trade Commission, products that interfere with the phone's signal may force it to work harder and emit more RF energy in order to stay connected, possibly increasing your exposure.</p>
<p>Joel M. Moskowitz, PhD, Director, Center for Family and Community Health, U.C. Berkeley School of Public Health</p> <p>Electromagnetic Radiation Safety Website:  <a href="http://www.safere mr.com">http://www.safere mr.com</a></p>	<p><a href="#">Cell Phone Safety Tips</a></p> <ul style="list-style-type: none"> <li>● Keep a distance. Avoid holding your cell phone or cordless phone near your head or body during phone calls. Don't carry your cell phone in your pocket, in your bra, or close to your body when it is powered on. Especially keep the phone away from your head and reproductive organs. Use speakerphone, text, or wired headset. Avoid talking longer than necessary.</li> <li>● Wait for a good signal. When the signal is poor, your wireless devices emit more radiation so avoid use when surrounded by metal such as in an elevator, or while traveling in automobiles, buses, trains or aircraft.</li> <li>● Reduce secondhand exposure. Reduce the time you spend in locations where many people are using cell phones in close proximity to each another, especially on public transit.</li> <li>● Turn off wireless devices at bedtime. Turn off your cell phone, Wi-Fi router, and other wireless devices at bedtime and at other times when not in use.</li> </ul>

	<ul style="list-style-type: none"> <li>● Minimize children's use &amp; exposure to wireless radiation. Children's health risks are greater so limit their use of cell phones and other wireless devices. Turn off Wi-Fi and cellular on devices used by kids. Teach children to use wireless technology safely.</li> <li>● Pregnancy &amp; fertility. If you are pregnant or planning for a baby be especially careful as wireless radiation exposure is linked to reproductive health effects and also to sperm damage. Do not use a wireless tablet or laptop in your lap.</li> <li>● Use airplane mode. Turn off cell phones and other wireless devices when not in use or switch to Airplane Mode. Turn off Wi-Fi and Bluetooth when not in use.</li> <li>● Use wired connections. Use a wired, landline phone whenever possible. Forward cell phone calls to your landline and check on them when you get home. Use wired Internet connections.</li> <li>● Electromagnetic hypersensitivity. If you think you are developing allergic symptoms from wireless radiation exposure, keep a log of your exposures and your symptoms. Then reduce your exposures for two weeks, and see if your symptoms are reduced. Discuss the results with your healthcare provider.</li> <li>● Governmental action is essential. Send the International EMF Scientist Appeal (EMFscientist.org) to your elected representatives. Ask them to adopt policies to make wireless technology safer. Encourage them to fund education and research through a modest fee on mobile device subscriptions (e.g. a nickel a month). Work with others to get schools to remove Wi-Fi and provide students with Internet access via wired networks.</li> </ul>
<p>Maryland State Children's Environmental Health And Protection Advisory Council</p> <p>The <a href="#">Council's health experts</a> include Governor appointed</p>	<p><a href="#">The Maryland Children's Environmental Health and Protection Advisory Council Wi-Fi in School Report</a></p> <ol style="list-style-type: none"> <li>1. "The Maryland State Department of Education should recommend that local school systems consider using wired devices" "WiFi can be turned off" and instead "a wired local area network (LAN) can provide a reliable and secure form of networking...without any microwave electromagnetic field exposure."</li> <li>2. New construction and renovations: "If a new classroom is to be built, or electrical work is to be carried out in an existing classroom, network cables can be added at the</li> </ol>

pediatricians, health care providers, Maryland State House/Senate appointees and representatives of the Department of Education and Department of Health.

- same time, providing wired (not wireless) network access with minimal extra cost and time.”
3. The Maryland State Department of Education should recommend that local school systems use strategies to minimize exposures: “Have children place devices on desks to serve as barrier between the device and children’s bodies; Locate laptops in the classroom in a way that keeps pupil heads as far away from the laptop screens (where the antennas are) as practicable; Consider using screens designed to reduce eyestrain; Consider using a switch to shut down the router when it is not in use”.
  4. “The Maryland Department of Health and Mental Hygiene should provide suggestions to the public on ways to reduce exposure: Sit away from WiFi routers, especially when people are using it to access the internet. Turn off the wireless on your laptop when you are not using it. Turn off WiFi on smartphones and tablets when not surfing the web. Switch tablets to airplane mode to play games or watch videos stored on the device.”
  5. “The General Assembly should consider funding education and research on electromagnetic radiation and health as schools add WiFi to classrooms.”
  6. The Maryland Department of Health and Mental Hygiene should “ask the United States Department of Health and Human Services to formally petition the FCC to revisit the exposure limit to ensure it is protective of children’s health and that it relies on current science.”
  7. The Report should be shared with the United States Department of Health and Human Services, Federal Communications Commission, Maryland State Department of Education and Maryland General Assembly

[Letter to the Federal Communications Commission](#) May 1, 2019

“The current FCC guidance on RF is decades old and we are calling for it to be updated to reflect current science on thermal and non-thermal health effects and newer (or emerging) exposures, especially to children.”

[The Maryland Children’s Environmental Health and Protection Advisory Council Guidelines to Reduce Electromagnetic Field Radiation](#)

## The Basics of Reducing RF Exposure

### Increase Your Distance

- The closer you are to a cell phone or wireless device, the higher the exposure to your brain and body. The further away you are, the lower the radiation your body absorbs. Notice how close children are to you when you are using a cell phone or wireless device, and minimize their exposure. For example, do not rest a cell phone on your baby or hold a transmitting device near their bodies.

### Minimize Time on Wireless

- A child's daily exposure adds up over time. Every time you reduce your child's exposure, even in small ways, you can decrease the overall cumulative exposure to mitigate risk.

### Choose Safer Technology Solutions

- As consumers, parents and caregivers have safer options when it comes to connecting to the internet or choosing which electronics to purchase. Once you are aware of this issue, you can make low RF radiation choices and choose corded connections whenever possible. Take a look at what you have in your home and swap wireless devices with corded connections if possible. For example, use a corded keyboard or earbuds with a wire.

### Recommendations to Reduce Cell Phone and Wireless Device Radiation Exposure

- Cell phones, wireless devices, and WiFi routers emit RF radiation all the time, even when you are not using them. Even in standby mode, your phone emits RF radiation because it is constantly searching for service or new messages. If you do not need your cell phone, simply turn it off or put it in airplane mode. This applies to all other wireless devices, including laptops, tablets, video gaming consoles and smart speakers. Additional recommendations are provided below as general guidelines.

### Around the Home



- Replace cordless phones with corded home phones.
- Unplug cordless phones when not in use (if you have at least one corded telephone in the house, you can always be reached, even if the cordless phone is off at night).
- Remove electronics from the bedroom and especially around your bed and the crib.
- Avoid sleeping with electric blankets and heating pads; if you use an electric blanket to preheat your bed, unplug it before sleeping. If you only turn it off, the electromagnetic field will still be present.
- Do not stand close to a microwave oven when it is on or let your child press their face up to it watching the food cook.

#### Cell Phones

- Try to keep devices, especially cell phones, away from the head and body. Keeping them an arm's distance away significantly reduces exposure.
- When you are talking on a cell phone, use the speakerphone to reduce exposure to your head.
- Avoid carrying your phone against the body like in a pocket, sock, bra, or spandex pants. Cell phone manufacturers cannot guarantee that the amount of radiation you are absorbing will be at a safe level.
- Make only short or essential calls on cell phones so that you minimize your daily exposure.
- Use text messaging rather than voice calls when possible.

#### Laptops and Computers

- Choose wired Internet (ethernet cable modems) at home instead of wireless systems, if possible.
- Place WiFi routers as far away from children as possible.
- Consider using a switch to shut down your wireless router when it is not in use.
- Instead of laps, place electronic devices, tablets, and laptops on desks and tables which can serve to increase the distance between the device and children's bodies.

#### Turn Wireless Antennas Off

- Airplane mode is a setting that turns transmitting antennas off in wireless devices.

- If you plan to watch a movie on your device, download it first, then switch to airplane mode while you watch to avoid unnecessary radiation exposure.
- Teach children to turn off WiFi when not in use, especially if they are sleeping (also see bedroom suggestions below).
- Newer phone models turn most of the wireless antennas off with Airplane mode, but Bluetooth or WiFi may stay on, so check that all antennas are set to off such as 4G, 5G, Bluetooth, WiFi hotspot, location.

#### Learn About When Your Cell Phone Goes to Highest Exposure

Reduce or avoid use of cell phones and wireless technologies when the devices are going to maximum power, which means the device will result in higher radiation exposures.<sup>2,3</sup>

You are in an area of low signal: Keep an eye on your signal strength (i.e. how many bars you have). The weaker your cell signal, the harder your phone has to work and the more radiation it emits. It is better to wait until you have a stronger signal before using your device.

You are traveling in a car or vehicle: Avoid making calls in cars, elevators, trains, and buses. The cell phone works harder to get a signal through metal, so the power level increases. When vehicles are traveling, the device also increase power to switch connection to each cell tower the vehicle passes.

You are streaming video and large files: The more streaming data, the higher the radiation exposure.

If your tablet or laptop does not have an ethernet port you can get a special adapter that allows you use ethernet with thunderbolt or USB ports.

Many cell phones can also be plugged into ethernet port with an adapter made for cell phones.

Use wired peripherals and accessories (e.g. a wired mouse, wired speakers, and wired printers) rather than wireless.

Wireless virtual assistants emit RF so choose wired tech whenever possible.

Wireless gaming consoles emit RF even when not in use so keep these out of the bedroom and choose wired handsets.

### **In the Bedroom**

Cell phones should be powered off at night

- If your child or teen needs an alarm clock, get a battery powered alarm clock for the bedroom.<sup>2</sup>
- If they must use a cell phone for an alarm clock, teach them to turn the phone to airplane mode with wireless antennas off every night (the alarm will still work).<sup>2</sup>
- Do not charge a cell phone or wireless devices near your child's bed. Charging creates higher electromagnetic fields even if you are not using the device.
- Children should not sleep with their head near a wall that has the electric panel, electric meter, or appliance on the other side.

### **Read the Fine Print**

- Read the "fine print" from the manufacturer's instruction manual which may tell users to keep a distance between the phone and your head and body. These fine print warnings range from a few millimeters to almost an inch. The fine print warnings on other wireless devices such as WiFi routers, home cordless phone base stations, and baby monitors generally state devices should be at 20 cm, or about 8 inches. If people are closer than the manufacturer-stated separation distance, then they can be exposed to RF levels that violate the US government FCC limits for this type of radiation.

### **Beware Radiation Protection Devices**

- Do not rely on a "radiation shield" or other products claiming to block RF energy, electromagnetic fields, or radiation from cell phones. According to the U.S. Federal Trade Commission, products that interfere with the phone's signal may force it to work harder and emit more RF energy to stay connected,

	<p>possibly increasing your exposure. There are no standard protocols for testing and comparing devices to ensure they work. It is best to use wired corded electronics to reduce RF radiation rather than rely on an untested product.</p> <p><b>If You are Pregnant</b></p> <p>Findings on prenatal impacts have led doctors to sign onto an EPA-recognized educational campaign developed by Environmental Health Trust and Grassroots Environmental Education called The BabySafe Project urging pregnant women to reduce wireless exposure to minimize risks to their babies' brain development. They recommend many of the same things listed above, including:</p> <ul style="list-style-type: none"> <li>● Keep your cell phone away from your body. Never carry it in a pocket or bra.</li> <li>● Do not sleep with your phone. Switch your phone to airplane mode whenever you are not using it.</li> <li>● Keep your wireless laptop or tablet away from your body. Never rest your wireless device on your tummy.</li> <li>● Use a corded landline if at all possible, rather your cell phone or cordless phone.</li> <li>● Don't sit anywhere close to your router or smart meter. Turn off routers at night.</li> <li>● Whenever possible, connect to the internet using wired (ethernet) connections.</li> </ul>
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Schools and Buildings

<p>Collaborative for High Performance Schools</p>	<p><a href="#">Low EMF Best Practices Summary</a></p> <ul style="list-style-type: none"> <li>● Evaluate for common wiring errors, correct them and ensure compliance with National and state electrical codes.</li> </ul>
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	<ul style="list-style-type: none"> <li>● Measure magnetic field levels to ensure compliance with 1 mG in new construction and 2 mG in existing.</li> <li>● Ensure devices (tablets laptops) are used on a desk. Operation on the lap or body is prohibited.</li> <li>● Workstation equipment must be at least 2 feet away</li> <li>● Computers and devices are TCO-certified or lab tested to meet TCO Criteria "Mandate A.4.2" for EMF emissions.</li> <li>● Laptops or notebooks must have an Ethernet port and a physical switch to disable all wireless radios at once and an adaptor with a 3-pin plug.</li> <li>● Install and use wired local area network (LAN) for internet access instead of Wi-Fi.</li> <li>● Prohibit use of DECT and cordless phones (2.4 GHz and 5.8 GHz) unless they have been lab tested to demonstrate that they do not emit in standby mode.</li> </ul>
<p>Building science and radiofrequency radiation: What makes smart and healthy buildings</p> <p><a href="#">Clegg et al. 2020</a></p>	<ul style="list-style-type: none"> <li>● Consider alternative approaches to wireless technology. Recommendations include:</li> <li>● Neighborhood infrastructure with cable access for high-speed, wired telephone and Internet;</li> <li>● Within buildings use cables, preferably shielded, in Local Area Networks (LAN) to provide wired access points for all networking and data transmission, including wired connections for modems, routers, Internet and media; lighting, heating, ventilation, air conditioning (HVAC), thermostats and humidistats; surveillance and security systems; fire detection and response (e.g., sprinklers); pool equipment such as pump and treatment controls, etc.;</li> <li>● Install easily accessible wired (not cordless) phones and prohibit installation and use of cordless phones;</li> <li>● Throughout the building, provide connections to hardwired CAT6 or CAT7 Ethernet cables, preferably shielded, to service devices such as computers, tablets and other devices. Use wired peripherals and accessories. Ensure that all wireless features are turned off or disabled;</li> <li>● Install wired RJ11 phone jacks for corded and landline telephones; and</li> <li>● Use analog, non-transmitting utility (water, electricity, gas) meter options, that do not transmit data wirelessly.</li> </ul>

## New Hampshire State Report on 5G Health and Environment

The New Hampshire Commission issued a [Final Report](#) with 15 recommendations to “to protect people, wildlife, and the environment from harmful levels of radiation” after a year-long investigation with numerous meetings and expert testimony.

### **Strengthen Regulations**

- A resolution to US Congress to require the FCC to commission an independent health study and review of safety limits.
- Engage agencies with ecological knowledge to develop RF-radiation safety limits that will protect the trees, plants, birds, insects, and pollinators.
- Under the National Environmental Policy Act, FCC should do an environmental impact statement as to the effect on New Hampshire and the country as a whole from 5G and the expansion of RF wireless technologies.
- New measurement protocols needed to evaluate high data rate, signal characteristics associated with biological effects and summative effects of multiple radiation sources.

### **Reduce Public Exposure**

- New Hampshire schools and libraries should replace Wi-Fi with hardwired connections.
- Require setbacks for new wireless antennas from residences, businesses, and schools.
- Cell phones and wireless devices should be equipped with updated software that stop cell phones from radiating when positioned against the body.
- Support statewide deployment of fiber optic cable connectivity with wired connections inside homes.
- Establish RF-radiation free zones in commercial and public buildings
- New Hampshire health agencies to educate the public on minimizing RF exposure with public service announcements on radio, television, print
- “Warnings concerning the newborn and young as well as pregnant women”

### **Increase Transparency**

- State should measure RFR and publicly post maps.
- Require 5G structures to be labeled for RFR at eye level and readable from nine feet away.
- RFR signal strength measurements for cell sites should be done by independent contractors.

- NH professional licensure to offer education so home inspectors can include RF intensity measurements.
- Warning signs to be posted in commercial and public buildings.

## Scientific Appeals

Scientists have organized [numerous appeals](#) highlighting the existence of non thermal biological effects and the need for new policies to reduce exposure.

The International Scientists Appeal to U.N. to Protect Humans and Wildlife from Electromagnetic Fields and Wireless Technology" was started in 2015. As of November 2022, 257 scientists from 44 nations and 15 supporting scientists from 11 nations have signed this appeal requesting: which has nine collective requests:

1. Children and pregnant women be protected;
2. Guidelines and regulatory standards be strengthened;
3. Manufacturers be encouraged to develop safer technology;
4. Utilities responsible for the generation, transmission, distribution, and monitoring of electricity maintain adequate power quality and ensure proper electrical wiring to minimize harmful ground current;
5. The public be fully informed about the potential health risks from electromagnetic energy and taught harm reduction strategies;
6. Medical professionals be educated about the biological effects of electromagnetic energy and be provided training on treatment of patients with electromagnetic sensitivity;

7. Governments fund training and research on electromagnetic fields and health that is independent of industry and mandate industry cooperation with researchers;
8. Media disclose experts' financial relationships with industry when citing their opinions regarding health and safety aspects of EMF-emitting technologies; and
9. Safe zones (radiation-free areas) be established.

There have been many appeals over the years such as the [Reykjavik Iceland Appeal on Wireless in School](#) (2017), the [Scientist 5G Appeal to the EU](#) (2017) , the [Nicosia Declaration](#) (2017), [the International Society of Doctors for Environment 5G Appeal](#) (2018) and the [2020 Consensus Statement of UK and International Medical and Scientific Experts and Practitioners on Health Effects of Non-Ionising Radiation](#).

### **Examples of Fine Print Warnings for Cell Phones and Wi-Fi Devices**

Furthermore, all cell phones and Wi-Fi devices like routers, speakers, and gaming consoles have fine print instructions in their manuals stating that the user should maintain a specified minimum distance between their body and the phone or device in order to ensure compliance with regulatory safety limits.

Examples of fine print instructions include:

#### [LG G8](#)

"Body-worn Operation: This device was tested for typical use with the back of the device kept 0.39 inches (1.0 cm) from the body. To comply with FCC RF exposure requirements, a minimum separation distance of 0.39 inches (1.0 cm) must be maintained between the user's body and the back of the device."

#### [Apple iPad IOS4](#)

"To be sure that human exposure to RF energy does not exceed the FCC, IC, and European Union guidelines, always follow these instructions...Orient the device in portrait mode with the Home button at the bottom of the display, or in landscape mode with the cellular antenna away from your body or other objects."

#### [Playstation 4 Pro](#)

"This equipment should be installed and operated with at least 20 cm (8 inches) or more between the radiator and the person's body."



[Amazon Echo Dot \(4th Generation\) Kids Edition](#)

"...it is advised to use the Products in such a manner that minimizes the potential for human contact during normal operation...This Device should be installed and operated with at least 20 cm between the radiator and your body."

[OC1A Owlet Baby Monitor Camera](#)

"This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body."

[Samsung Galaxy Z Fold 3 5G \(2021\)](#)

"Body-worn SAR testing has been carried out at a separation distance of 1.5 cm. To meet RF exposure guidelines during body-worn operation, the device should be positioned at least this distance away from the body."<sup>19</sup>

When cellphones are tested in body contact positions, (i.e closer than the instructions recommend), the way most children and teenagers use phones today, some cell phone models have been found to [violate allowable levels](#) up to 11 times the U.S. regulatory limits. However, most parents are unaware of these manufacturers' instructions.

### **Selected Books**

Prevent, Survive, Thrive: Every Woman's Guide To Optimal Breast Care

By John G. West, MD

Overpowered: The Dangers of Electromagnetic Radiation (EMF) and What You Can Do about It by Martin Blank

[Alliance of Nurses for Healthy Environments Textbook of Environmental Health in Nursing 2nd Edition Includes Cell Phone, Cell Tower and Wi-Fi Radiation and Electromagnetic Fields.](#)

Microwave/Radiofrequency Radiation and Human Health: Clinical Management in the Digital Age by Devra Davis, Margaret E. Sears, Anthony B. Miller and Riina Bray. Chapter 10 in Integrative Environmental Medicine Edited by Aly Cohen and Frederick S. vom Saal [Oxford Press Link](#)

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