

Recommendations to the Maryland Children's Environmental Health and Protection Advisory Council On Public Recommendations To Reduce Radiofrequency Exposures To Children and Families

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Dear Dr. Clifford S. Mitchell;

On behalf of the scientists, physicians and engineers that provide state of the art advice to Environmental Health Trust, we applied recent efforts by the Maryland Children's Environmental Health and Protection Advisory Council to promote health professional and public understanding of why and how to promote safer technology in schools and homes. EHT has been pleased to publicize your past work in briefings we have held for the Ministry of Telecommunications of Mexico and with the Federal Environment Minister of Argentina, as well as in discussions with officials from Cyprus, Israel, France, and Switzerland.

We are writing to you with specific recommendations for the Council on guidance for reducing radiofrequency radiation exposure from digital devices.

In response to the results of the National Toxicology Program Cell Phone Radiation Study that finds increased risks of malignant brain cancer and rare tumors of heart nerves tied with cellphone radiation, The <u>American Academy of Pediatrics</u> (AAP), specifies ten steps parents can take to reduce exposure. These include:

"Make only short or essential calls on cell phones" and "Avoid carrying your phone against the body like in a pocket, sock, or bra" because "Cell phone manufacturers can't guarantee that the amount of radiation you're absorbing will be at a safe level."

In 2014, the Connecticut Department of Health issued <u>Advice on Cell Phones</u> which states, "*It is wise to reduce your exposure to radiofrequency energy from cell phones whenever possible.*" In the United States, recommendations have also been made by <u>Consumer Reports, San Francisco</u> and <u>Burlingame</u>, California. Worldwide, over a dozen governments have online <u>public resources</u> specifically recommending why and how children's exposure can be reduced.



The American Academy of Pediatrics has long called on the US federal government to update exposure limits, inform the public and ensure children are protected under FCC limits. Considering that children will have a lifetime of exposure, it is critically important to educate the public on how to reduce childhood RF exposures.

In addition to the American Academy of Pediatrics, the <u>Vienna Medical Association</u> and <u>Athens Medical Association</u> are among the many <u>international medical organizations</u> which have issued practical measures for the public to reduce exposure to cell phone and wireless devices in their daily lives.

Recent information from the French national agency that tests radiation from phones reported that the most cell phones exceed regulatory limits by over 3 times when tested in body contact positions. Most people are unaware of the <u>fine print warnings</u> in cell phones warning that at body contact, government radiation limits can be exceeded. In addition to cell phones, other devices that have fine print warnings include baby monitors, wireless laptops, Wi-Fi routers and even video gaming consoles. Most of these devices state that the device needs to be 20 cm or about 8 inches from the body in order to stay within as tested levels.

Based on these expert recommendations, it is sensible for the Maryland Department of Health to take the following steps.

- 1. The Maryland Department of Health should advise the public with a simple factsheet on specific methods for reducing radio frequency exposure from cell phones and wireless devices, with special emphasis on protecting children. Resources should also be prepared for doctors and pediatricians.
- 2. The Maryland Department of Health should create and maintain a webpage with this information.
- 3. The Maryland Department of Health should provide and regularly update factsheets for doctors to hand to their patients regarding specific scientific studies and their findings and practical advice for controlling and reducing exposures especially to young children and to those who wish to become parents.
- 4. The Maryland Department of Health should convene an inter-agency work group with the Department of Education to issue joint recommendations on technology use in the classroom that no students or teachers use cellphones while in school, consistent with advice from Israel. This would include specific recommendations about why and how to convert from wireless to wired systems, especially for elementary and middle schools.
- 5. Call for the Governor and Maryland State to review government liability for damages to student and employee health from cellphone and wireless radiation in light of growing evidence from the U.S. National Toxicology Program, as interpreted by the American Academy of Pediatrics, the American Cancer Society, Environmental Health Trust, and others, and the failure of secondary insurers to provide coverage for such damage to major telecommunications providers and manufacturers. We note that the California Department of Health has <u>drafted recommendations</u> regarding California State employee cell phone use.



Prepare a Factsheet for Parents About the Sources of RF and How to Reduce Exposure.

Facts to include:

1. Cell phones and wireless devices emit radio frequency (RF) radiation.

Examples of wireless devices that emit RF include tablets, laptops, digital baby monitors, cordless phones and the cordless phone base, wireless printers, iPod Touch, wireless tv service, signal boosters, portable internet sticks, projectors, wireless gaming consoles, cordless keyboards, cordless speakers, "smart" watches, wifi or bluetooth fitness wristbands, and even your cordless computer mouse. If a device can "sync" with your phone *without a cord*, then the device is wireless.

- 2. Children, babies and pregnant women are more vulnerable to cell phone and wireless radiation.
- 3. Parents can reduce exposure with simple steps developed by medical doctors.

Recommendations to Reduce Cell Phone and Wireless Device Radiation Exposure

*Indicates this is a specific recommendation of the American Academy of Pediatrics

- Try to keep the cell phone away from your head and body. Keeping it an arm's distance away significantly reduces exposure to the low-level radiation it emits. *
- When talking on the cell phone, use speakerphone or wired airtube headset to reduce your exposure.
- Read the "fine print" from the manufacturer's instruction manual which tells users to keep a distance between the phone and your head and body. These fine print warnings range between phones from a few millimeters to almost an inch. The fine print warnings on other wireless devices such as Wi-Fi routers, home cordless phone base stations and baby monitors ranges is 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 radiation.
- Use text messaging rather than voice calls when possible. *
- Avoid carrying your phone against the body like in a pocket, sock, bra or spandex pants. Cell
 phone manufacturers can't guarantee that the amount of radiation you're absorbing will be at a
 safe level *
- Do not talk on the phone or text while driving. This increases the risk of automobile crashes. *
- Make only short or essential calls on cell phones so that you minimize your daily exposure. *
- Exercise caution when using a phone or texting while walking or performing other activities. "Distracted walking" injuries are also on the rise. *
- If you plan to have a child watch a movie on your device, download it first, then switch to airplane mode while you watch in order to avoid unnecessary radiation exposure. *
- 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 gives off. It's better to wait until you have a stronger signal before using your device. *



- 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. *
- Avoid sleeping next to your cell phone. Cell phones should be powered off at night. If you use your cell phone as an alarm clock, turn the phone to airplane mode and the alarm will still work or get a battery powered alarm clock for your bedroom. Keep electronics out of bedrooms.
- Remember that cell phones are not toys or teething items and young children should not be handed cell phones to play with. *
- Used a corded landline phone whenever possible to minimize the need for a cell phone. Cordless home phones emit RF so replace these phones with corded home phones. One initial step is to unplug the cordless phones when not in use because the base station emits RF nonstop.
- Educate yourself about the RF sources in your home and replace the devices that you can with hardwired ethernet cabled connections.
- Choose non-wireless options for technology communication such as computers, laptops, printers, security, mouse, keyboard, video cameras, HVAC, speakers, headphones, microphones and other accessories. Connect digital devices with wired ethernet connections for internet connections and turn the Wi-Fi off and the bluetooth OFF in settings.
- Laptops and tablets should never be placed on a lap, always on a table. Turning the wireless off your device removes RF electromagnetic radiation but does not remove the ELF electromagnetic radiation- so always keep electronics on a table.
- Turn your phone off or on airplane mode with Wi-Fi OFF more. Even in standby mode, your phone emits RF energy because it is constantly searching for service or new messages. If you do not need your cell phone, turn it off. This also applies to all other wireless devices whereby the Wi-Fi antennas can be powered off. Wifi laptops tablets and other devices such as gaming devices are always transmitting *even if you are not using them* so remember to power them off.

Note: The above recommendations are mostly verbatim from the <u>American Academy of Pediatrics</u>, <u>Vienna Medical Association</u> and the <u>Connecticut Department of Health</u>.

We also recommend including a statement on pregnant women and children's greater vulnerability to ensure the public understands why these recommendations are so important. The statements below are from the Connecticut Department of Health.

"Children may be at greater risk than adults from exposure to RF energy when using a cell phone. Their bodies and brains are still developing and are more vulnerable to exposures that could cause harm. Because their heads are smaller than those of adults, children have a relatively greater exposure to the field of RF energy cell phones. Children also will accumulate many more years of cell phone exposure than adults."

"It is wise to limit a child's use of cell phones as much as possible."



Environmental Health Trust would be glad to help develop further advice with the Council. For example, recommendations could be developed for each type of device to make it easier to understand. As an example, EHT developed a "Do's and Don't's for Technology." Environmental Health Trust has created materials for the public, including "What Parents Need to Know About Technology", "The American Academy of Pediatrics Recommendations", "Doctor's Advice on Cell Phones", "Doctor's Advice on Wireless." We also recommend reviewing "The BabySafe Project Poster".

Sincerely,

Devra Davis, PhD MPH

Devra Davis

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American Academy of Pediatrics Letter to the FCC Chairman calling for the FCC to open up a review of RF guidelines (7/12/2012)

American Academy of Pediatrics Letter to US Representative Dennis Kucinich in Support of the Cell Phone Right to Know Act (12/12/2012)

American Academy of Pediatrics Letter to FCC Commissioner Mignon Clyburn and FDA Commissioner Margaret Hamburg asking for RF guidelines to protect children and pregnant women (8/29/2013)

American Academy of Pediatrics Webpage: "Cell Phone Radiation & Children's Health: What Parents Need to Know"

American Academy Of Pediatrics Webpage on EMFs and Cell Towers: "Electromagnetic Fields: A Hazard to Your Health?"

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