

Children's Environmental Health Center of the Hudson Valley

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CHILDREN'S ENVIRONMENTAL HEALTH CENTER OF THE HUDSON VALLEY
PROTECTING CHILDREN AGAINST ENVIRONMENTAL THREATS
www.ChildrensEnvironment.org

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Cell Phones and Brain Tumors: Vulnerability, Health Threats, and Protection

September 2016: Wireless signals are everywhere today because of the electronic signals being sent between cell phones, Wi-Fi and other networks. People are constantly surrounded by the radio frequencies of these signals. Cell phones, smart meters, magnetic fields, radio towers, and Wi-Fi can all be threats to the population's health. Although cell phones do not produce high levels of radio frequency, studies suggest that long-term use of cellphones can pose possible health risks. 5 billion people today use cell phones, but not all are aware of the health risks. Research reveals that there may be an increased risk of developing brain tumors, cancer, genetic damage and other health problems from cell phone usage.

Who is the most vulnerable: David Carpenter, director of the Institute for Health and the Environment of the University of Albany and co-author of the Bioinitiative Report , stated that "the evidence is overwhelming" that cell phone usage increases your risk of brain cancer and children are at a 5 fold greater risk. Children are the most vulnerable because their nervous systems are still developing. Since children's heads are smaller than the heads of adults, they have a greater proportional exposure to the radio frequency radiation of cell phones. Even with the same amount of radio frequency exposure people under the age of 20 have a greater risk than older adults. Prolonged exposure to radio frequencies increases a person's risk of developing brain tumors, especially at a younger age.

Health Threats: The main concern with cell phone usage is the potential to cause development of brain tumors. Many studies have been conducted with conflicting results. Since cell phones are often held near the head when in use, tumors found in this area are studied, including

gliomas, meningiomas, acoustic neuromas, and tumors of the salivary glands. Although some studies suggest that increased radio frequency exposure is associated with an increased development of tumors, there is no evidence that there is a direct causal relationship. Although multiple studies have shown no evidence of brain tumors caused by the radio frequencies of cell phones, other studies have announced an increased risk in tumors on the side of the head where the cell phones are used, specifically with 10 or more years of cell phone usage. If there are any health risks, they are more significant in children because their bodies are more susceptible to the effects of radio frequency energy.

How to protect yourself and others: It is not fully proven that cell phone use causes brain tumors, but it is still important to be cautious by following these guidelines:

- Use the cell phone on speaker phone mode or use a Bluetooth or earphones. This moves the antenna away from the head, which causes a decrease in the radio frequency waves that reaches the head.
- Texting instead of talking on the phone. Unless you are driving.
- Limit the amount of time you or your children spend on the phone.
- Avoid using the cell phone when there is a weak signal or when moving at a high speed. Usage in these situations causes the power to increase when it continuously tries to connect to a new antenna.
- Try not to carry your cell phone on your body as much as you can. If carrying it on your body is necessary make certain that the keypad is positioned toward your body so the transmitted electromagnetic fields move away from you.
- Switch the ears regularly, limiting the power of the electromagnetic fields emitted near your ear.

For more information:

<https://www3.epa.gov/radtown/wireless-technology.html>

<http://www.mayoclinic.org/healthy-lifestyle/adult-health/expert-answers/cell-phones-and-cancer/faq-20057798>

<http://www.cancer.org/cancer/cancercauses/othercarcinogens/athome/cellular-phones>

<http://emfsafetynetwork.org/dr-david-carpenter-talks-about-wireless-cancer-risks-and-what-you-can-do-to-protect-your-family/>

<http://www.saferphonezone.com/tools/10-things-you-can-do-to-reduce-the-cancer-risk-from-cell-phones/>

