

# How to Protect Your Family

- 1. Do not hold the phone directly against your head or body**  
Use speakerphone, other hands-free device, or another device that meets EHT guidance.
- 2. Beware of a weak signal**  
Your phone works harder and emits more radiation into you when the signal is weak or blocked.
- 3. Protect children, the pregnant abdomen, and men who want to become fathers**  
Children absorb twice as much radiation as adults. Sperm are especially vulnerable.
- 4. Do not sleep with your cell phone**  
Phones do not emit radiation when off or in airplane mode.
- 5. Corded landlines are swifter, safer, and more secure**  
Cordless phones also emit microwave radiation.
- 6. Do not text while moving e.g. driving, biking, blading, walking, skiing.**  
Milliseconds can make the difference between life or death.

## Brought to you by:

The Global Campaign for Safer Cell Phones provides open-source resources that educate and motivate health professionals, teachers, parents, and students about simple and safer ways to use cell phones. Our multi-media toolkit can be downloaded at [EHTrust.org](http://EHTrust.org).

*Prepared by physicians, biomedical scientists, and neurosurgeons:* including Kevin O'Neill, FRCS (SN); Ronald B. Herberman, MD; Charles Teo, MD; David Servan-Schreiber, MD, PhD; Annie J. Sasco, MD, DrPh; Stephen Sinatra, MD; John West, MD; Richard Stein, MD, PhD; Devra Lee Davis, PhD, MPH

Find out more about how to reduce your risk and get the latest news on our website [EHTrust.org](http://EHTrust.org) and [#PracticeSafeTech](https://twitter.com/PracticeSafeTech).

## Doctors' Advice to Patients & Their Families

# Cell Phones & Health: Simple Precautions Make Sense



This pamphlet reviews precautionary advice by governments to reduce your exposure to cell phone radiation.

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Cell phones are two-way microwave radios that were never properly tested for safety.

Antennas for cell phones are continually searching for signals from towers to send and receive information. The body or brain absorbs about half the radiation emitted from a phone at any time.

### Children absorb more radiation than adults



Courtesy Om P. Gandhi and Green America

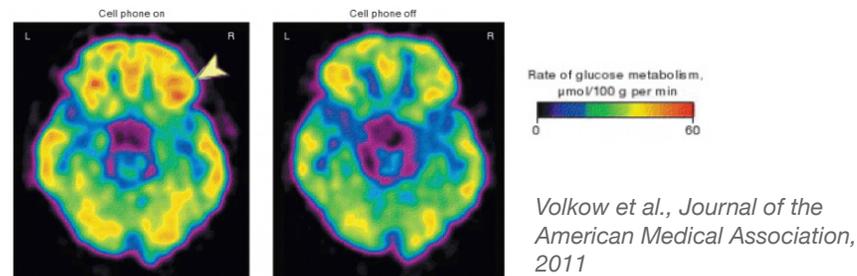
People who use cell phones more than 30 minutes per day (average) for 10 years have a doubled or higher risk of brain cancer. Teenagers who start to use cell phones develop 4 to 5 times more brain cancer in less than a decade. Links to studies can be found at EHTrust.org.

### WORLD HEALTH ORGANIZATION (2011)

On May 31, 2011, the World Health Organization/International Agency for Research on Cancer classified the electromagnetic radiation from cell phones as possibly carcinogenic to humans based on an increased risk for glioma, a malignant type of brain cancer, associated with use of mobile phones.

### Can Cell Phones Cause Cancer and Disease?

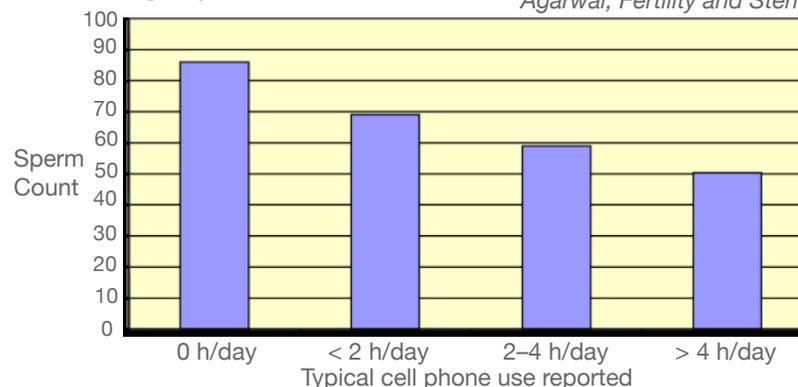
A number of well-designed studies indicate that cell phone use increases cancer risk. Cell phones change the brain. After 50 minutes of holding a cell phone on or next to the ear, the brain of a healthy adult shows significant changes in glucose metabolism—the brain’s fuel—at precisely those areas reached by cell phone radiation. The long-term impact of these changes is unknown. Recent research suggests that cell phones, cordless phones, and other wireless devices can also disturb heart rate.



### Cell Phones Lower Sperm Count

Men who use cell phones 2 to 4 hours per day have 30% lower sperm count than non-users; daily use over 4 hours results in 40% lower sperm count. Studies have shown that microwave radiation can damage sperm.

Agarwal, Fertility and Sterility, 2008



### HEALTH CANADA (2011)

“Health Canada reminds cell phone users that they can take practical measures to reduce RF exposure. The department also encourages parents to reduce their children’s RF exposure from cell phones since children are typically more sensitive to a variety of environmental agents.”

# How to Protect Your Family

## Choose wired over wireless

- Get a corded landline phone and forward cell phones to it.
- Use corded plug-in (non-wireless) connections for printer, mouse, internet, gaming, and routers, etc.—with all wireless functions OFF.

## Safeguard sleep

- Stop use of and power off computers, tablets and phones one hour (or longer) before bedtime.
- Do not sleep with a cell phone, tablet or laptop.

## Maximize distance from self and others

- Radiation decreases as you move away from the source.
- Locate devices away from laps, bras and pockets, as the radiation can damage sperm and may be linked to breast cancer.
- Use air tube headset or use speaker phone at maximum distance from head and body.

## Protect children

- Children are particularly vulnerable and should not use cell phones except in an emergency.
- If children are using a phone or other device for work or play, select all 3 of the following settings to turn off the radiation from cell phones and wireless devices: Airplane mode ON, and Wi-Fi OFF, and Bluetooth OFF.
- Don't use a mobile device while a child is on your lap or in your arms.

## Power off in vehicles

- Mobile devices distract drivers, emit more intense radiation during travel, and metal surroundings create radiation hot-zones.

more & news  
[EHTrust.org](http://EHTrust.org)

## Doctors' Advice to Patients & Families

# Wireless & Health: Simple Precautions Make Sense



This pamphlet reviews  
precautionary advice  
by Doctors and governments to  
reduce exposure to wireless radiation.

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**Brought to you by:** Physicians, biomedical scientists, and neurosurgeons—including Charles Teo, MD; Martha Herbert, MD, PhD; Anthony B. Miller, MD; Süleyman Kaplan, PhD; Annie J. Sasco, MD, PhD; Stephen T. Sinatra, MD; Dr. Erica Mallery-Blythe, BMBS; Devra Lee Davis, PhD, MPH

# Wireless Radiation Exposures

Wireless devices—such as tablets, laptops, game consoles, baby monitors, and wifi routers—all emit the same type of wireless microwave radiation as cell phones. Children, pregnant women, and men hoping to father healthy children are more vulnerable to this exposure.

## The Child Brain and Skull Absorb up to Ten Times More Invisible Wireless Radiation than the Adult

(Gandhi et al., 2012)



Cell phone radiation absorbed into brain, skull, and eyes of 6-year-old

(Fernandez et al., 2015)

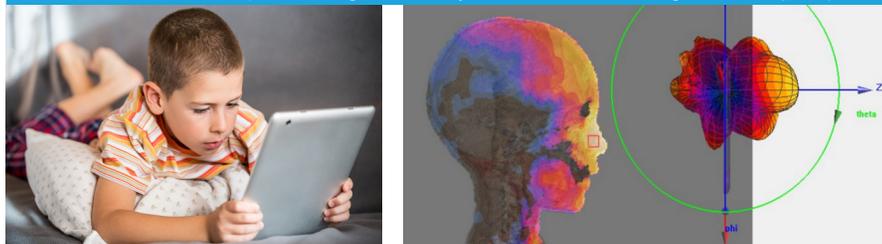
New anatomically based research shows radiation absorption.

## Increased Cancer Risk

Wireless radiofrequency radiation was classified as a Class 2B “Possible Human Carcinogen” by the World Health Organization’s International Agency for Research on Cancer in 2011. Evidence *has increased* since 2011, indicating that cell phone and wireless radiation should be classified as a “probable carcinogen” because of increased brain cancer (Davis et al., 2015).

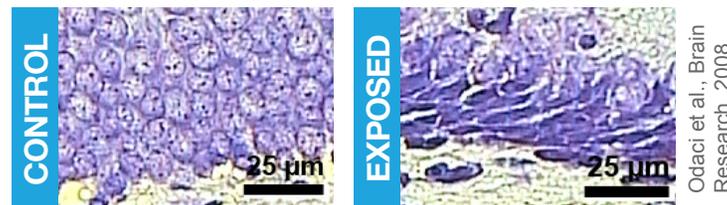
Those exposed at younger ages show up to eight times more brain cancer risk.

### Radiation Absorption from Tablet into a 6-Year-Old’s Brain (in this image: white & yellow areas are the highest absorption)



Federal University of Rio Grande do Sul, UFRGS Ferreira and de Salles (2015)

## Wireless Exposure Damages Brains



Animals prenatally exposed to cell phone radiation develop damaged and fewer brain cells.

## How Wireless Impacts Children’s Health

Accumulating research shows that wireless microwave radiation affects fetal brain development, the immune system and reproductive function. *Even very low doses* of wireless radiation affect brain metabolism and electrical activity.

Yale University researchers found that when pregnant mice were exposed to radiation from a simulated operating phone, their offspring had impaired memory, increased hyperactivity and altered brains. Several research studies show wireless impairs brain development at various ages.

## The Reproductive System

Numerous studies indicate that wireless exposures decrease sperm quantity and quality (including altered DNA) and damage testes and ovaries.

### Testes Damaged by Wi-Fi Equipment Radiation



Long-term Wi-Fi exposure decreases testes volume

(Dasdag et al., 2015)

## Government Protections Worldwide

Over 20 countries—including France, Belgium, Israel and the European Union—have taken policy actions to “reduce exposure to children,” addressing cell phones, laptops, cell towers and Wi-Fi in schools in order to protect public health.

detailed references available at [EHTrust.org](http://EHTrust.org)