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Family Chiropractic

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CARE FOR A BETTER LIFE

Healthy Dose

Is Your Health on the Line?

New studies show that some mobile gadgets we use every day might pose serious risks. Here's how to stay safe in a wireless world.

By Sascha de Gersdorff

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Unless you've had your cell phone permanently glued to your ear, chances are you've heard the recent health buzz: Mobile devices may cause cancer. While it's true that the National Cancer Institute has ruled them safe, a growing number of independent researchers disagree.

Those experts point out that the FCC wireless regulations on cell phone safety are largely based on something called specific absorption rate (SAR) levels, or the rate at which our bodies absorb radiation. Most phones *do* comply with the federal standards, but SAR monitors only thermal effects. (In other words, if the radiation from your phone isn't cooking your brain, it's regarded as safe.) But mounting scientific evidence suggests that *nonthermal* radio frequency radiation (RF)—the invisible energy waves that connect cell phones to cell towers, and power numerous other everyday items—can damage our immune systems and alter our cellular makeup, even at intensities considered safe by the FCC.

Protect your
brainpower.

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"The problem is that RF can transfer energy waves into your body and disrupt its normal functioning," explains Cindy Sage, an environmental consultant in Santa Barbara, California, who has studied radiation for 28 years. "Here's why that's crucial: Overwhelming evidence shows that RF can cause DNA damage, and DNA damage is a necessary precursor to cancer."

The 2010 Interphone study, the largest to date on RF exposure from mobile phones, has spawned a quagmire of controversy, says health researcher and medical writer Kerry Crofton, Ph.D., who spent four years reviewing RF science for her book *Wireless Radiation Rescue: Safeguarding Your Family from the Risks of Electro-Pollution*. Many groups, including the National Cancer Institute and the telecom industry, read the results of that study as a green light for wireless calling. Others, like Crofton, point out that because it was largely based on lower cell-phone usage in the '90s, the research has little bearing on today's world, in which 285 million Americans have mobile phones and 83 percent of 18- to 29-year-olds are "wired" all the time and sleep with their cell phones next to their heads.

One thing the Interphone study did find? People who chatted via cell for just 30 minutes a day for 10 years saw their risk of glioma (the type of brain tumor that killed Ted Kennedy) rise 40 percent.

As a result, many European countries are considering banning cell phones for children under age 6 (RF penetrates little kids' brains more easily), and France has already banned all wireless technology in some schools and many public places, notes physician and epidemiologist Samuel Milham, M.D., a leader in the growing field of electromagnetic research.

All parties agree on this: More studies need to be done. In the meantime, it's best to take easy precautions—and not just with mobile phones. "Never before in human history have we gone from one radiated environment to another," says Crofton. "We're going to wireless offices and living in wireless homes. Even beaches and parks are going wireless. We're exposed everywhere."

The good news is that you don't need to ditch your gadgets. This advice will let you stay plugged in—and keep you healthy.

Cell Phones

When your phone is on (which it probably is even as you read this) it's constantly sending and receiving RF signals to and from the nearest cell tower to keep you in service. The farther you are from a tower, the harder your phone has to work and the more RF it emits, explains David Carpenter, M.D., director of the Institute for Health and Environment at the University at Albany. The activity really amps up when you're, say, driving through rural areas.



1996
THE LAST TIME
THE FCC UPDATED
ITS GUIDELINES ON
CELL-PHONE
SAFETY STANDARDS

Plus, within the close confines of a car, your entire core is exposed to the radiation.

• **The safer solution:** Keep your phone off when driving until you really need it, says Carpenter. And no matter where you are, avoid holding a cell phone directly to your noggin (the Interphone study showed gliomas were more prevalent on the side of the head people continuously pressed phones to), always keep it at least six inches or more from your body (in your purse, not your pocket), and use either speakerphone or

a corded headset (not a wireless headset). Or text up a storm. If you have a smartphone that's loaded with games, music, and movies, turn your wireless settings off while playing or rocking out. Similarly, don't ever use your cell phone as a bedside alarm clock without first disabling the wireless mode.

Cordless Phones

These stealth wireless threats "have become so powerful, they're often as strong as cell phones," says Sage. "The phone base is like a mini cell tower. It radiates 24-7 and can have a range of up to 300 feet." Particularly suspect are digital enhanced cordless telecommunication (DECT) phones. Preliminary blind studies have found that, when sitting beside a DECT phone base, some people experienced arrhythmia, a troubling heart-beat irregularity that could eventually lead to stroke or coronary disease, says Sage.

• **The safer solution:** You might feel somewhat retro, but "just get a corded phone with an extra-long cord so you can

BUMP WATCH

The evidence is in and one thing's for sure: **Expectant mothers should quit gabbing on wireless phones**, whether cordless or cell. (If you absolutely must, use a headset and hold the phone far away from your womb.) Environmental consultant Cindy Sage points to preliminary studies that show mobile radiation affects fetal brain development in utero, which could mean a severely heightened risk of learning problems later on. Research is now being done on the full reproductive repercussions of RF (and some European governments have already issued official warnings), says David Carpenter, M.D. "It's another thing you should avoid while pregnant—just like smoking or drinking," says Sage.



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still walk around," says Crofton. "They're better, they're cheaper, and they work in a power outage. Every time you replace a DECT with a corded phone, you're cutting the RF levels in your home significantly."

Wireless Routers

Your neighborhood coffee shop's wireless Internet access may often seem like a godsend, but the router that's needed to provide the service is continuously emitting high levels of RF (up to 200 feet out), and that constant exposure has been linked to deadly diseases. "If the whole body is radiated by a router's RF emissions, the greatest concern is cancer, especially leukemia," says Carpenter. Also, be aware of your at-home router and any plug-in wireless USB cards you often use.

☞ **The safer solution:** Ditch your wireless router and plug your computer directly into a cable modem, says Sage. That Ethernet technology doesn't leak RF and is often faster and more secure. If you just can't give up your wireless router (e.g., if you live in a home with a handful of computer users), make sure you sit as far away from it as possible, says Crofton, and turn it off at night and whenever you're not online. Another easy fix: Plug your router into a surge protector with a timer, and set it to go off each night so you don't have to remember to flip the switch.

Laptops

"When you hold your laptop on your lap, what you're essentially doing is radiating your pelvis," says Carpenter, "so all the cancers that affect that area are of concern." Indeed, early studies point to a heightened risk of testicular cancer for men who keep RF-emitting devices close to their belts. For women, adds Carpenter, "the studies aren't quite there yet, but I think we can say that anything that might cause cancer almost always causes birth defects, so pregnant women—or those wanting to become pregnant soon—should take extra precautions."

☞ **The safer solution:** Keep your laptop off your lap (if you have to rest it there, buffer it with a sturdy pillow that's at least six inches thick). Try to use a desktop computer at home and treat your laptop as an on-the-go convenience. One thing to keep in mind: Laptops are a high RF radiation

risk only while connected to wireless Internet, so when you're watching a DVD, fiddling around with your photos, or writing that dissertation, just disable your connection and you'll be much safer.

Baby Monitors

"Baby monitors release more RF than cell phones do, and putting them next to a crib is very, very unwise," says Carpenter. He points to a recent University of Utah study that shows RF radiation can penetrate almost entirely through a child's brain, which doesn't form completely until nearly 20 years of age. "It's very clear from all the existing research that the younger the child is, the more vulnerable he or she is to the effects of RF radiation."

☞ **The safer solution:** Consider not using a baby monitor. If you absolutely must use one, place it far from your baby's crib—at least 10 to 15 feet away.

Other Household Hazards

Two more RF emitters to watch out for

➤ **Microwave ovens:** Though most new and properly working units are tightly sealed, it's nearly impossible to see if a seal is broken or damaged. And if that's the case, your microwave could be leaking RF radiation. Your best bet is to hit start and "just get out of the kitchen," says environmental consultant Cindy Sage. Or stand at least 10 feet away while nuking your food.

➤ **Compact fluorescent bulbs (CFBs):** The harmful radiation swilling around most of these bulbs could outweigh their eco-friendliness. (They're also made with mercury, a toxic pollutant.) "Avoid CFBs, and buy LED bulbs instead—they conserve energy without the environmental problems," advises Sage.



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