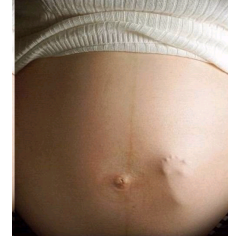


Safety and Cell Phones

What Pregnant Women Should Know



By [Kristen J. Gough](#)

Results from a new study suggest cell phones may pose some health risks to a pregnant woman's developing baby. Before you toss out your wireless, find out exactly what those risks may be.

When you're pregnant you try everything you can to ensure your unborn baby's health. You avoid certain activities that might be harmful to your developing child—no hot tubs, scuba diving, or alcohol. But should you add cell phones to the list?

According to a study appearing in the July 2008 edition of [Epidemiology](#), researchers found evidence that pregnant women who used handset cell phones, which generate low levels of non-ionizing radiation, were more likely to have children with behavior issues after birth.

The study looked at responses from over 13,000 Danish women who answered questions about their cell phone use and then about their children's behavior until the age of seven. Scientists compared the behavior of children whose mothers regularly used cell phones to those who used them infrequently or not at all. Overall, researchers found that 54 percent of children were more likely to exhibit behavior problems if their mothers were more frequent cell phone users. If the children were also early cell phone users themselves, they were 80 percent more likely to have behavioral issues.

While the findings may seem startling at first, Dr. Leeka Kheifets MA, PhD, of UCLA, one of the study's authors, cautions that more research needs to take place before scientists conclude that cell phones pose a significant risk to unborn babies: "I think that we found an association between cell phone use and behavioral problems, but that doesn't mean for sure that there is a cause and effect relationship," says Dr. Kheifets. In other words, behavioral issues in children whose moms frequently used cell phones are not necessarily a direct result from cell-phone generated radiation. Perhaps mothers who used cell phones regularly didn't pay as much attention to their children, leading the children to act out and exhibit bad behavior.

What You Need to Know

At the heart of the debate over whether cell phone use can cause health problems—not just in pregnant women but in anyone—is the way wireless devices work. A cell phone uses radiofrequency waves, a form of electromagnetic radiation, to transit messages to and from cell towers. According to the [National Food and Drug Administration](#) (FDA), these waves are the same as those your microwave generates to heat food but at a *much* lower amount.

High amounts of these waves can disrupt body tissues—that's one reason you wear protective shielding when you get an X-ray. Because stronger forms of this radiation, such as that used for X-rays, can be harmful to the body by damaging cells and DNA, it is called ionized radiation.

Microwave ovens, cell phones, and other wireless devices also use electromagnetic waves to

function, but because the radiation they produce is not thought to damage body tissue, it's known as non-ionizing.

Still, the body absorbs non-ionizing radiation generated from your phone. According to the FDA, which regulates radiation levels in cell phones, the amount of RF energy your body absorbs "is called the Specific Absorption Rate," or the SAR level. Cell phone manufacturers voluntarily adhere to the industry guidelines of the Cellular Telecommunications and Internet Association (CTIA) and keep SAR levels at a low amount, not to exceed 1.6 watts per kilogram. You can find the SAR level of your particular phone by contacting its manufacturer. (The FCC no longer lists these levels. You can also go to Cnet.com and type "SAR levels" in the search box to find specifics.) While the FDA and FCC make these requirements, it's up to the cell phone manufacturers to police themselves.

Consumers shouldn't necessarily base their choice of cell phone on SAR levels. Jen O'Connell, who worked in the cell phone industry for over a decade and now acts as a consultant says, "The difference between SAR levels from one phone to another is so microscopic it's a moot point." O'Connell, the CEO of Voice of Wireless, reassures users that cell phones go through a vigorous testing process before becoming available to consumers. "Every wireless carrier has labs to thoroughly test their products. They spend close to \$1 million and two years of research before a product becomes available on the market. SAR levels are just one part of this testing."

Why Experts Are Concerned

What concerns researchers, however, is that the long-term effects of cell phone use are still largely unknown. Cell phones may emit low levels of radiation, but ***does constant, heavy use amplify the effects of the radiation?*** Dr. Kheifets says scientists are just beginning to explore the possible hazards of cell phone use, which may be especially acute in young children and unborn babies.

Many countries outside the US have already taken steps to curb cell phone use among pregnant women and young children. "In Europe now, Germany, the UK, France, and the Scandinavian countries [they] have recommended that children use cell phones only in emergencies due to potential [health] problems. They are practicing what they call the 'precautionary' principle," explains Dr. Lynn Eldridge, MD, MPH, a former practicing obstetrician and author of [Avoiding Cancer One Day At A Time: Practical Advice For Preventing Cancer](#). "In Europe they go by the philosophy guilty until proven innocent" when it comes to the potential risks posed by cell phones," says Dr. Eldridge. "But in the US it's innocent until proven guilty."

Several scientific studies, including a recent report from Israel which looked at brain tumors among cell users, point to the potential hazards with using RF energy regularly near sensitive areas of the body.

The FDA advises, "The available scientific evidence does not show that any health problems are associated with using wireless phones. There is no proof, however, that wireless phones are absolutely safe." They continue by saying, "Some studies have suggested that some biological effects may occur, but such findings have not been confirmed by additional research."

That noted, Dr. Kheifets says, "There's very little funding, particularly in the US" for research, despite the two billion people worldwide that use wireless phones."

What You Can Do

If you are concerned about the potential hazards of cell phone use on your unborn baby, there are steps you can take to minimize your exposure to radiofrequency energy (RF).

- O'Connell advises you **avoid anything that can interfere with your phone's signal strength**. The harder your phone has to work to send out its signal, the more RF energy it's putting out. Use your phone as it came out of the box, as the manufacturer has tested it. That means rhinestone-studded covers or rubber sheaths are out.
- O'Connell also recommends you **use a Bluetooth device**, which still emits some RF energy but at a much lower level. Just don't forget to put the cell phone away from your body while using the Bluetooth device, don't hold it next to your belly, in your pocket, or on a waist clip.
- Dr. Eldridge suggests **using landlines whenever possible** instead of relying on your cell phone to make calls.
- Also, consider **using your laptop computer to make calls or send an instant message**.

"Sometimes just taking a couple of little precautionary steps each day can make a big difference," says Dr. Eldridge. But the most important advice Dr. Eldridge offers to pregnant women who are concerned about the issue is, "Don't stress out about it."