

CELLPHONES AND TEMPER TANTRUMS: A POSSIBLE LINK¹

Emily Main[©]

Very few of us know somebody who doesn't have a cellphone. Yet, very few of us have any idea what impact our handy, must-have cellphones have on our health. So far, some research suggests that their overall health impact could be as minor as causing ringing in the ears, but other studies suggest that cellphones cause other biological changes that aren't yet entirely clear. Earlier this year, the U.S. Senate even pressed researchers to provide them with more concrete evidence that cellphones are either safe or are potential cancer causers.

"It's impossible to know what the real long-term risks are," says Diana Zuckerman, PhD, president of the Cancer Prevention and Treatment Fund, "and we're probably not going to know for 20 years." But that doesn't mean we shouldn't be concerned about how cellphones affect our health right now—or the health of our kids. Adding to the concerns: A recent study published in the *Journal of Epidemiology and Community Health* has found that cellphones could be associated with bad behavior among children.

THE DETAILS: The authors looked at data collected from an ongoing study in Denmark on pregnant women and their children. In an earlier study, the research had found that children born in 1996 and 1997, the early days of cellphone use, were more likely to have behavioral problems by age 7 if their mothers were regular users of cellphones both during and after pregnancy. Because those mothers may have been early adopters of technology (a personality trait that is usually associated with behavioral issues that can be passed on to children, according to the study authors), they repeated their analysis with children born between 1998 and 2002. Mothers of those children answered questionnaires about their cellphone use during and after pregnancy, and when the children turned 7, their mothers answered questions about their psychological history and any potential behavioral problems.

Just over 17 percent of the mothers in the new study (children born between 1998 and 2002) reported using cellphones during pregnancy, and in both the first study (children born in 1996 and 1997) and the new study, approximately one third of children were using cellphones by the age of 7. Though the difference was small, the children with the highest risk of behavioral problems were more likely to have mothers who used cellphones both before and during pregnancy than children whose mothers didn't use them at all. To determine whether the increase in behavior risk may have had something to do with a mother's inattention (moms who are always on the cellphone may not pay as much attention to their children, thus leading to cranky kids), they looked at breastfeeding rates, which helped determine how much time they spent with a child in his or her first months of life. But that didn't seem to have any affect on child behavior.

WHAT IT MEANS: The "why" behind these findings isn't immediately obvious, says the study's lead author Leeka Kheifets, PhD, professor of epidemiology at the University of California–Los Angeles. "People have postulated different things, like it could interfere with hormones, but there's no reason to think it's true or not true." "We do know that cellphones would be bad for developing brains," Zuckerman says, referring to the radiation emitted by phones. A child's skull is thinner than an adult's, and previous research has shown that

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children's brains are exposed to higher levels of radiation than adults'. Zuckerman, who's also a psychologist and president of the National Center for Women & Families, adds that it's concerning that some of the highest risk for behavioral problems occurred in children of women who used cellphones during pregnancy, when infants' brains are forming and are highly susceptible to environmental influences. Whatever the potential cause, however, "you don't want your children suffering from ADD or aggressive behavior because you're on the cellphone all the time," she says.

Mothers don't need to eliminate cellphone use during pregnancy, says Kheiftes, but she does suggest that they should be more responsible with use:

- (1) **Go hands-free.** Using a headset or the speakerphone is the easiest way to limit cellphone radiation exposure, says Zuckerman, as well as keeping the phone as far away from you as is feasible while talking.
- (2) **Watch where you store it.** Especially if you're trying to get pregnant—and that goes for dads-to-be, too. Keeping a cellphone close to your genitals can hamper fertility, especially among men, says Zuckerman. "I find it interesting that even the people who think the [cellphone] radiation issue is overblown admit that you shouldn't put it in your pocket," she says, because the heat from cellphones lowers sperm quality and motility. She also advises women, whether pregnant or not, avoid keeping their phone near their breasts (either in a bag or coat pocket).
- (3) **Keep it away from the kids.** Zuckerman says that she's heard stories of parents putting iPhones in their babies' cribs to play them lullabies. That's a definite no-no, she says. And be careful with how reliant your kids become on iPhones and iPads for entertainment. She isn't sure what sort of radiation levels children are exposed to in those cases, but it's a good idea to limit cellphone games and movies on the iPad to an hour or so.
- (4) **Buy a low-radiation phone.** Even though it's isn't known whether radiation is leading to behavior problems, or if it's some other factor of cellphone use, it's best to err on the side of caution. The Environmental Working Group recently released a database of cell phones based on the levels of radiation they emit. Search for your model, or view the group's list of the 10 best and 10 worst radiation emitters. While you're at it, find other ways to limit your radiation exposure: Stay in one place while you talk (cellphones emit more radiation when you move around), and use the phone when you have a high signal strength (cellphones emit higher radiation levels as they try to search for a nearby tower).