



Mother's Use of Cell Phones May Lead to Children's Behavior Problems

A Surprising Finding

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It's certainly a provocative and surprising finding —almost to the point of being unbelievable. A joint U.S.–Danish team has reported that young children born to mothers who had used cell phones during pregnancy were more likely to have behavioral disorders, such as hyperactivity and emotional problems.

Using a phone as little as two or three times a day during pregnancy was enough to trigger behavioral issues. The incidence was up to 80% higher among those children who had also used cell phones by the age of seven. The survey, carried out in 2005-06, found that 30% of Danish seven-year-olds were already using a cell phone, though less than 1% for more than one hour a week.

These new results will appear in the July issue of *Epidemiology*. An electronic copy of the [paper](#) has already been posted on the Internet.

What is far from clear is what type of radiation exposure, if any, the fetuses actually received. As the researchers themselves concede, "The exposure reaching the fetus (either during conversation or when the phone is in standby mode) is likely to be extremely low." An alternative explanation is that the cell phone radiation caused biochemical changes in the mother which then affected the fetus. The team notes that the vast majority of the mothers "carried their cell phones in a bag during their pregnancy" rather than on their bodies. Very few of them used a hands-free set.

Even some members of the EMF activist community are somewhat incredulous. "The findings are remarkable and without obvious explanation," commented Graham Philips of [Powerwatch](#), a U.K. group. "Direct RF exposure to the fetus from a mobile phone

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handset is basically non-existent." Philips was one of the first to spot the new paper on the [PubMed Web site](#).

The "lack of biological plausibility" is one of the key issues, [Jørn Olsen](#), a coauthor of the new paper, told *Microwave News*. Olsen is the chair of the department of epidemiology at the UCLA School of Public Health and is also associated with the University of Aarhus in Denmark. "We do not have a biological mechanism that could explain the findings," he said, "That is, we do not know the 'how' or the 'why'."

The researchers make it clear that the observed findings need to be replicated before they are taken too seriously. "These results were unexpected and should be interpreted with caution. Observed associations are not necessarily causal," they wrote. Yet they close the paper with the following warning, "If they are real, they would have major public health implications." Among the other coauthors are [Leeka Kheifets](#), a professor-in-residence at UCLA, and Hozefa Divan, a doctoral student.

Powerwatch's Alasdair Philips suggested that, if electromagnetic signals from cell phones were indeed behind the observed behavioral problems, he would favor ELF magnetic fields rather than the microwave transmissions. "The batteries powering mobile phones give off 217 Hz pulses and these can induce relatively strong currents in the human body." But, he added, "there are many other non-EMF stressors that are in fact more likely to have been responsible."

Sam Milham, an epidemiologist based in Olympia, WA, thinks it would be a mistake to dismiss the new findings. "It's a solid study," he said. Milham pointed to a [paper](#) published last month by [Michael Persinger](#)'s group at Canada's Laurentian University, which shows that weak magnetic field pulses —as low as 30 nT (0.3 mG)— can cause structural changes in the brains of prenatally-exposed rats.

When asked whether he thought it is a good idea for a seven-year-old to use a cell phone, UCLA's Olsen replied, "It would be reasonable to be cautious."

*behavior, Leeka Kheifets, Jørn Olsen, Michael Persinger,
Sam Milham, Powerwatch,*
