

Health & Pregnancy

Noise Pollution Hurts Kids' Learning

Living Near Airports Impairs Reading

By [Salynn Boyles](#)

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Oct. 11, 2002 -- Children who are repeatedly exposed to loud environmental noises learn to read more slowly than their peers, a German study of kids living near airports finds. The research is the best direct evidence yet that noise pollution has a negative impact on learning and long-term memory.

Researchers analyzed data on children in Munich who either lived near the city's old airport, which was scheduled to close, or near the site of its new airport. They assessed reading and other learning skills prior to and after the airport switch and found that reading scores improved for children who went from the noisy to the quiet environment, while they declined for those who went from the quiet to noisy one.

"This is the first long-term study of the same children before and after airports near them opened and closed," says environmental stress researcher Gary Evans, who was the study's lead researcher. "It nails down that it is almost certain that noise is causing the difference in children's ability to learn to read."

The latest research, published in the journal *Psychological Science*, joins about two dozen studies linking environmental noise to impaired learning in children. The evidence is so strong that a federal committee recently issued a report assessing the impact of aircraft noise on classroom learning. The committee concluded that repeated exposure not only interferes with reading, but with motivation, memory, language and speech acquisition

But researcher and anti-noise activist Arline Bronzaft, PhD, tells WebMD that there is still a great deal of denial among government officials about the impact of environmental noise on learning.

In landmark research published in the 1970s, Bronzaft studied children in a New York school in which some of the classrooms faced a loud, aboveground subway rail and others did not. She found that by the sixth grade, children in the noisy rooms were a year behind their peers in reading skills. After acoustical tiles were installed to lower noise levels she did the research again and found no difference in reading skills among children in the different classrooms.

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"Even after all these years I still hear officials say there is little direct evidence that noise impacts learning, Bronzaft says. "Well, there is nothing contradictory in these studies. The literature is full of direct evidence

While the strongest studies link noise pollution with impaired cognitive development, there is also some

evidence that excessive noise affects kids physically. In a study published in 1998, Evans found that children living near busy airports had elevated [blood pressure](#) and stress hormone levels, compared with kids living in quieter areas.

"There is no question that noise affects us physically, independent of its very direct impact on hearing," says Les Blomberg, executive director of the Noise Pollution Clearinghouse.

Blomberg points out that humans are evolutionarily hardwired to become stressed when they hear loud noises. And since stress plays a role in most human illnesses, it only makes sense that noise pollution can make us sick.

"When we evolved as a species it was a much quieter planet," he says. "If we didn't wake up in the middle of the night when we heard noises, we might get eaten. These days, we are assaulted by half a dozen loud noises every time we walk down the street." -->

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