

Leaded gas exposure linked to later violence: study

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Rise in assault rates traced back to contaminated city air.

(HealthDay) -- Urban areas contaminated decades ago by airborne lead dust now face an increased incidence of aggravated assault, according to a new study.

The surge in violence is linked to exposure to the lead dust emitted from older vehicles that ran on leaded gasoline, according to the researchers, who say improper handling of lead-based paint could have played a role as well.

"Children are extremely sensitive to lead dust, and lead exposure has latent neuroanatomical effects that severely impact future societal behavior and welfare," said study co-author Howard Mielke, a research professor in the pharmacology department at the Tulane University School of Medicine, in a Tulane news release.

The researchers compared the amount of lead released from 1950 to 1985 in Atlanta, Chicago, Indianapolis, Minneapolis, New Orleans and San Diego.

Exposure to lead dust in the air surged during that time period because of the use of [leaded gasoline](#), the study found. Two decades later, rates of aggravated assault in those cities increased as well. [Exposure](#) to lead dust had negative effects on children's behavior as adults, according to the researchers, who said the association held true even after they took other factors into consideration, such as [household income](#) and education.

The current rate of aggravated assault rose by almost one-half of a percentage point for every 1 percent increase in tonnages of environmental lead that was released more than two decades earlier, the study found.

"Up to 90 percent of the variation in aggravated assault across the cities is explained by the amount of lead dust released 22 years earlier," Mielke said in the release.

The study is published online, ahead of print publication in the August issue of the journal *Environment International*.

While the study found an association between [lead contamination](#) and future violence, it did not prove a cause-and-effect relationship.

More information: The U.S. Environmental Protection Agency provides more information on [lead in dust](#).

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