

High lead levels epidemic in inner cities

A new study indicates that high lead levels-strongly linked to school failure and delinquency-are epidemic among inner-city children.

Shoshana Melman and colleagues recently analyzed blood samples from 817 inner-city children tested during routine checkups. The researchers excluded any children with previously identified high blood lead levels. Of their preschool and toddler-aged subjects, Melman et al. report, more than 70 percent had excess blood levels of lead-"the highest reported prevalence in a U.S. general pediatric clinical population."

Melman's findings support a 1995 study by J.F. Wiley II and colleagues, who tested 254 children seen at two inner-city emergency departments. Wiley et al. found that 71% of the children seen at one hospital, and 50% of children seen at the second hospital, exhibited high lead levels.

Second-generation effects?

Children with even mildly elevated lead levels are at high risk for psychopathology-and new research suggests that the *offspring* of lead-exposed women, too, may be at risk for serious problems. A study by researchers in Mexico indicates that the children of mothers with a history of lead exposure are at risk for low birth weight, a powerful predictor of childhood behavioral problems and learning disabilities.

T. Gonzalez-Cossio and colleagues recently tested 272 mother-infant pairs, and found that the mothers' tibia lead levels correlated inversely with their infants' birth weight. "Because lead remains in bone for years to decades," they say, "mobilization of bone lead during pregnancy may pose a significant fetal exposure with health consequences, long after maternal external lead exposure has declined."

Mothers with a history of lead exposure can also pass on lead to their children through breast milk, according to another study. Brian Gulson et al., studying Australian mothers and infants, found that breast milk accounted for 36% to 80% of the lead in their infants' bodies during the first two to three months after birth. The researchers note that during breastfeeding, bone minerals (including lead deposited years earlier) are released into the mother's blood stream, from which they can be transported into breast milk.

"New lead record is no honor," J. Raloff, *Science News*, Vol. 154, September 12, 1998.

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"Lead poisoning: low rates of screening and high prevalence among children seen in inner-city emergency departments," J. F. Wiley II, L. M. Bell, L. S. Rosenblum, J. Nussbaum, R. Tobin, and F. M. Henretig, *Journal of Pediatrics*, Vol. 126, No. 3, March 1995, pp. 392-395. Address: J. F. Wiley II, Section of Emergency Medicine, St. Christopher's Hospital for Children, Philadelphia, PA 19134.

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"Decrease in birth weight in relation to maternal bone-lead burden," T. Gonzalez-Cossio, K. E. Peterson, L. H. Sanin, E. Fishbein, E. Palazuelos, A. Aro, M. Hernandez-Avila, and H. Hu, *Pediatrics*, Vol. 100, No. 5, November 1997, pp. 856-862. Address: T. Gonzalez-Cossio, Centro de Investigaciones en Salud Poblacional, Instituto Nacional de Salud Publica, Cuernavaca, Morelos, Mexico.

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"Lead passed in breast milk," Reuters, September 10, 1998; summary of research by Brian Gulson et al., *Environmental Health Perspectives*, Vol. 106, 1998, pp. 667-674.