LEAD IN CHILDREN: OLD STORY, NEW DATA

In 1998, the federal Centers for Disease Control and Prevention (CDCP) in Atlanta issued a report saying that only 4.4% of American children between the ages of 1 and 5 have the toxic metal lead in their blood at "levels of health concern," which CDCP defines as concentrations of 10 micrograms of lead per deciliter of blood (10 ug/dL) or higher. [2] A microgram is a millionth of a gram and there are 28 grams in an ounce; a deciliter is a tenth of a liter and a liter is about a quart. The reporting period was 1991-1994.

Although 4.4% sounds like a small percentage, it represents 890,000 individual children whose intellectual capacity is being permanently diminished by exposure to excessive amounts of lead.

CDCP established 10 ug/dL as the "unsafe" level of lead in blood in 1991. [3] The limit was set at 10 ug/dL not because 10 is a magic number that protects children but because it was the lowest level that could be detected with an inexpensive test, and because, CDCP said, setting the standard lower would burden the country's health-care system.

When it set the official safety level at 10, CDCP acknowledged that something besides pure concern for public health went into the decision. "The recommendations [of 10 ug/dL...are based mainly on the scientific data showing adverse effects of lead in young children at increasingly lower blood lead levels. They are tempered, however, by practical considerations, for example, of the number of children who would require followup and the resources required to prevent this disease," wrote Vernon Houck on behalf of CDCP. [3, pg. iii] In other words, when it set 10 as the "safe" standard, CDCP acknowledged that it was reluctant to set the standard lower because too many children would then qualify for medical help, and too much money would have to be spent removing lead from the environment.

Numerous studies have now shown that there is no "safe" dose of lead in children's blood. Five years ago the National Research Council (NRC) said, "There is growing evidence that even very small exposures to lead can produce subtle effects in humans. Therefore, there is the possibility that future [safety] guidelines may drop below 10 ug/dL as the mechanisms of lead toxicity become better understood." [4, pg. 3] The NRC offered evidence that lead at 5 ug/dL (half the official "safe" level) can cause attention deficit in children and in monkeys; reduced birthweight in children; and hearing loss in children. [4, pg. 254-256]

In 1993 the NRC summarized a series of recent studies, then said, "Those studies support the general conclusion that there is growing evidence that there is no effective threshold for some of the adverse effects of lead." [4, pg. 67] In other words, in 1993 there was good evidence that there is no safe level of lead.

According to careful measurements of human bones, pre-Columbian inhabitants of North America had average blood lead levels of 0.016 ug/dL -- 625 times as low as the 10 ug/dL now established as "safe" for children. On the face of it, it seems unlikely that levels of a potent nerve poison 625 times as high as natural background --or even 300 times as high as natural background-- can be "safe" for children. [5]

The CDCP's 1998 study reported that the average (geometric mean) concentration of lead in all 20 million American children between the ages of 1 and 5 was 2.7 ug/dL, or 43 times as high as natural background. The CDCP's 1998 study showed that the average (geometric mean) concentration of lead in all 20 million American children between the ages of 1 and 5 was 2.7 ug/dL, or 43 times as high as natural background.

The main effect of lead in blood is to reduce a child's IQ. Five years ago, the American Academy of Pediatrics reviewed 18 scientific studies showing that lead diminishes a child's mental abilities. "The relationship between lead levels and IQ deficits was found to be remarkably consistent," the Academy said. "A number of studies have found that for every 10 ug/dL increase in blood lead levels, there was a lowering of mean [average] IQ in children by 4 to 7 points." This may not sound like a major loss, but an average IQ loss of 5 points puts 50% more children into the IQ 80 category, which is borderline for normal intelligence. It also reduces the number of high IQs; for example, one small group that should have contained 5 children with IQs of 125, contained none. [6]
diminishes intellectual capacity, but it also causes loss of hearing, reduces hand-eye coordination, impairs the ability to pay attention, and creates a propensity toward violence. Children who have been poisoned by lead are less able to handle stress and are more prone to violent outbursts. (See REHW #529, #551.)

The source of the lead poisoning today is chiefly paint containing lead. In the U.S., approximately 83% of privately owned housing units and 86% of public housing units built before 1980 contain some lead-based paints.

Public health authorities have acknowledged openly since 1952 that black children are being preferentially poisoned by lead in paint. (See REHW #294.) The City of Baltimore began a lead-toxicity screening program in 1931. With 20 years of data in hand, the head of the Baltimore health department wrote in 1952, that the rate of poisoning among children was 7.5 times as high among the Negro population as it was among the white population. The high rates among Negro children are a problem of considerable public health significance since 30 percent of Baltimore's pre-school population is Negro. The racial difference in incidence is believed to be due to environmental factors probably resulting chiefly from economic disadvantage."[7]

Today, 47 years later, the situation has changed little. According to CDCP's 1998 study, today the highest concentrations of lead are occurring in non-Hispanic black children. Among non-Hispanic black children ages 1 to 5 living in housing built before 1946, 21.9% have blood lead levels at or above 10 ug/dL, and among those living in housing built between 1946 and 1973, 13.7% had blood lead levels at or above 10 ug/dL, CDCP's 1998 study says.

A recent study of children visiting a pediatric clinic in Philadelphia's inner-city reported that 68% of the children there have lead levels that exceed the "safe" 10 ug/dL.[8]

In sum, roughly a million black children who live in the inner cities are being continuously poisoned by exposure to lead.

In 1991, the Centers for Disease Control published a study showing that the nation's taxpayers would save $60 billion in health-care and special-education costs by spending $32 billion to eradicate lead from inner city homes.[9] Congress has never been willing to adopt this cost-effective prevention strategy, evidently preferring to produce generation after generation of black inner city children with diminished intellectual capacity and a propensity toward violence.

Children, can you spell R-A-C-I-S-M?

--Peter Montague (National Writers Union, UAW Local 1981/AFL-CIO)


[9] This study was described in Marianne C. Fahs, "White House Should Stay With Lead Cleanup [letter to the editor]," NEW YORK TIMES September 18, 1991, pg. A18.

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