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### Lead Poison: A Preventable Cause of Mental Retardation

Even though the use of lead paint was prohibited as early as 1960 (Kozol, 1996, p. 155), children still become poisoned by lead. Lead poisoning most often occurs among children between the ages of 6 months and 6 years old, who live in homes built before the 1960's and who tend to chew on things or put things in their mouths. Additionally, children are often poisoned by drinking water carrying lead particles leached from the solder in older plumbing systems. Lovejoy & Estridge (1987) point out that young children living in industrialized and urban areas are also at risk from the unintentional swallowing of contaminated dust and soil particles. As a result of the danger caused by airborne lead particles, the federal government now requires automobile manufacturers to build cars that use only lead-free gasoline (Hallahan & Kauffman, 1994, p. 133) and more recently the hazard posed by lead dust on inexpensive brands of venetian blinds has been exposed (P. Schwartzkopf, personal communication, July 13, 1997).

Lead poisoning interferes with the activity of the brain and other organ cells. Even mild exposure to lead during early childhood may permanently impair growth and development of the brain, leading to learning disabilities and more permanent problems such as seizures, mental retardation, behavioral disorders, and cerebral palsy (Lovejoy & Estridge, 1987; Schwartzkopf, 1997). In severe cases the brain becomes inflamed and swells, a condition known as lead encephalopathy (Lovejoy & Estridge). The effect of lead poisoning is especially pronounced among children who are malnourished. Lovejoy and Estridge (1987) have found that while approximately 10 percent of lead taken into the body by a healthy child is absorbed, as much as 50 percent is absorbed by children with iron deficiencies. Even with chelation therapy to remove lead from the body, researchers (Kozol, 1995, p. 156; Lovejoy & Estridge, 1987, p. 520; Schwartzkopf, 1997) state that the damage that is done to the brain cells of lead poisoned children is not reversible. Even more tragically, many children who have undergone chelation therapy are found to have repeated episodes of lead poisoning requiring more rounds of therapy and hospitalization. Physicians also find that they frequently need to treat whole families (Schwartzkopf, 1997).

Kozol (1995) found that although New York officially banned the use of lead paint in 1960, the city continued to apply industrial grade lead paint in public schools until 1980 and never energetically enforced its prohibition in city owned public housing. Schwartzkopf (1997) concurred that this illegal practice is not just limited to the ghettos of New York City, but occurs in smaller towns and more rural areas like York, Pennsylvania where he practices pediatric medicine. John Rosen, a lead poison specialist at Montefiore Medical Center in the Bronx, has repeatedly warned city officials that schools in the area were "dangerously loaded with lead" to no avail (Kozol, 1995). Something is terribly wrong when children who are already living in poverty and malnourished, those at greatest

risk of the most severe forms of lead poisoning, are also being harmed by fiscal policies that completely negate the purpose of bans against the use of lead paint in areas where children live and play.

This is an especially crucial issue for everyone in the education field. Physicians and researchers (Lovejoy & Estridge; Schwartzkopf) state that all children in high risk areas should be screened for lead levels at least once a year and that those who have suffered lead poisoning should have a complete neuropsychological assessment at about 5 years of age and be monitored carefully throughout childhood and adolescence. They also call for appropriate educational interventions to begin as soon as possible after diagnosis. Under IDEA the cost of these interventions must be borne by the school department. Unfortunately, school districts in which these children reside in lead filled homes, attending lead filled schools are also struggling with the lowest levels of funding. Advocates for children in the South Bronx in New York (Kozol, 1995, p. 65, 155) find that the waiting list for children referred for services is so long, and staffing so low, that many children are not evaluated for services for over a year. In addition, children in these overcrowded schools seldom see a certified teacher, but are instructed instead by provisionals and substitutes, with classes often taking place in settings like stair landings, bathrooms, and closets.

Thousands of children with mental retardation as a result of lead poisoning, only one of several environmental causes of brain damage, are being taught in schools that are mandated to meet their educational needs but are completely unable to do so for lack of funding, space, and adequately trained personnel. In light of all these socially created injuries to intellect, most of which could be corrected by a fair-minded society, it may seem surprising that scarce research funds are diverted to investigations of genetic links between the IQ deficits of certain children and their racial origins (Kozol, 1995). Something is wrong in a society where money is available to do this type of research but not to remove lead from the homes and schools of these children.

#### References:

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