The Surgeon General on the Continuing Tragedy of Childhood Lead Poisoning

BY DAVID S. SATCHER, M.D., Ph.D
U.S. SURGEON GENERAL

Lead poisoning poses one of the greatest environmental threats to children in America. It can affect a child in myriad ways, including increased dental caries, delayed growth and development, impaired hearing, and altered cognition and behavior. The most recent data show that in the United States, nearly one million children under the age of 6—one in 20—have elevated levels of lead in their bodies, using the standard of 10 micrograms of lead per deciliter of blood as the standard. Elevated blood lead levels can produce significant nervous system effects, such as reduction in intelligence and attention span, reading and learning disabilities, and behavior problems. Now it appears that levels even below 10 micrograms of lead per deciliter of blood in infants, children, and pregnant women may impair children's cognitive functioning and growth and contribute to behavioral problems.

What makes this situation even more tragic is the fact that it is preventable. Great strides have been made in reducing lead exposure during the past two decades. Lead is no longer present in gasoline, new supplies of house paint, or food and beverage cans. Lead also has been reduced in industrial emissions, drinking water, hazardous waste, and consumer goods. As a result, there has been a decline of more than 80% in children's blood lead levels since the mid-1970s, when approximately 14.8 million children in the United States suffered from lead poisoning.

But we can and must do more. Today many children remain at risk for lead poisoning due primarily to deteriorated lead paint in older housing, as well as house dust, drinking water, and soil contaminated by lead paint. Although a 1978 ban prohibits the use of lead in new paint, children who live in older housing are still at risk, with low-income and minority children experiencing the greatest risk. For example, the Centers for Disease Control and Prevention (CDC) estimates that 16% of children living in older housing are poisoned, compared to 4.4% of all children.

It is now within our power to protect every child in America from the hazards posed by lead paint. With that in mind, the President's Task Force on Environmental Health Risks and Safety Risks to Children last year released a comprehensive, government-wide strategy that outlined efforts to achieve a virtual end to childhood lead poisoning in America by the end of this decade. To achieve the goals of the report, the Task Force will work with local communities, the private sector, and housing and public health officials.

The strategy, Eliminating Childhood Lead Poisoning: A Federal Strategy Targeting Lead Paint Hazard, called for making 2.3 million homes where children younger than age 6 live lead-safe by controlling lead paint hazards. It also calls for promoting public education programs, strictly enforcing lead-paint regulations, and encouraging early interventions for at-risk children.

The strategy coordinates the activities of the Department of Health and Human Services (DHHS), the Department of Housing and Urban Development (HUD), the Environmental Protection Agency (EPA), and the Department of Justice (DOJ) aimed at preventing lead poisoning in America's children by:

- **Acting before children are poisoned** by eliminating and preventing residential lead paint hazards through targeted grants and leveraged private funds for hazard control, public education, and enforcement of lead paint laws;
- **Identifying and caring for children already poisoned** through increased early intervention for children with elevated blood lead levels, and expanded blood lead screening and follow-up services for at-risk children, especially Medicaid-eligible children;
- **Conducting research** to drive down costs and promote innovation; and
- **Continuing surveillance and monitoring** programs to measure progress and refine lead poisoning prevention strategies.

In addition, the Task Force will work with housing, community, and medical groups to effectively implement the strategy and plans to bring together these groups to share their ideas.

The federal government already has taken a number of significant steps to reduce children's exposure to residential lead, including: blood testing programs for high-risk children, funding to remove lead hazards now in place in some 200 cities nationwide, and full disclosure of lead hazards for renters and prospective home buyers so that parents have the information they need to protect their children from lead. Total federal discretionary spending to prevent lead poisoning was $122.3 million in fiscal year 2000.

DHHS agencies are actively involved in the government-wide efforts to combat childhood lead poisoning. Here are examples, by agency:

Centers for Disease Control and Prevention (CDC): For fiscal year 2001, CDC received $42 million to fund various programs to prevent lead poisoning in children. CDC administers the Childhood Lead Poisoning Prevention Grant Program, which provides grants to state and local health departments to support childhood lead poisoning prevention programs designed to identify and screen at-risk children. CDC also works with other federal agencies in the effort to screen all high-risk children, especially Medicaid-enrolled children. In addition to encouraging screening and follow-up of affected children, the grants support education and outreach efforts.

CDC is researching ways to improve the quality of blood lead measurements and to develop new technology to provide faster, lower-cost blood analyzers. Under the Blood Lead Laboratory Reference System, CDC sends blood lead specimens for quarterly analysis to more than 275 laboratories worldwide. CDC also administers the National Health and Nutrition Examination Survey, the only source of periodic, nationally representative data on blood lead levels in the United States. Data from this survey are used to track trends in blood lead levels and to support regulatory and policy decisions aimed at protecting at-risk populations.

Health Care Financing Administration (HCFA): Children from low-income families are at higher risk for becoming lead poisoned than other children. Through the federal-state Medicaid program, HCFA is working with other DHHS agencies and the state Medicaid agencies to increase lead screening of children enrolled in the Medicaid program and other vulnerable children. Through the Early and Periodic Screening, Diagnostic and Treatment program, all Medicaid-eligible children should receive a blood lead screening test at ages 1 and 2 as well as lead poisoning treatment and follow-up services.

Health Resources and Services Administration (HRSA): HRSA plays an integral role in conducting childhood lead poisoning prevention outreach and education efforts for at-risk populations. In fiscal year 2001, HRSA is providing more than $14 million in grants directly to poison control centers. HRSA supports the National Lead Training and Resource Center in Louisville, Kentucky, which provides education and training to health care professionals who work in the field of childhood lead poisoning prevention. HRSA also funds the Nationwide EP Screening and Blood Lead Proficiency Program, which certifies laboratories that perform blood lead screening as meeting national standards. And HRSA works to ensure appropriate screening of children at federally supported community health centers.

Food and Drug Administration (FDA): The FDA monitors the levels of lead in food products. The agency's most recent Total Diet Studies in 1999 showed that, since 1982, the daily intakes of lead from food dropped dramatically for the entire population. FDA also has established maximum levels for leachable lead in ceramicware, has banned lead solder in food and lead capsules in wine bottles. In addition, the FDA continues to identify controllable sources of dietary lead in food additives and in imported food.

National Institutes of Health (NIH): The National Institute of Environmental Health Sciences (NIEHS) at NIH has been studying the health effects of lead for more than 20 years. Information from these studies supported the move to get lead out of gasoline. Today, NIEHS scientists and grantees are researching how low levels of lead affect people, such as whether treating lead-poisoned children with the drug succimer prevents lead-induced deficits in IQ, and if calcium supplements given to pregnant women reduce the transfer of lead from their bones into their fetuses.

Reducing lead exposure not only benefits children's health and development, but also yields economic benefits from avoiding health care and special education costs; from preventing reductions in children's intelligence, academic achievement and future productivity; and from improvements to housing associated with controlling lead hazards. The President's Task Force report estimates that the economic benefits of preventing adverse effects of lead on children's health and development will exceed the cost of the strategy by $8.9 billion.

Copies of the strategy are available from the National Lead Information Center at 1-800-424-LEAD. The strategy is also available on the Web at **http://www.hud.gov/lea** or **http://www.epa.gov/children/whatwe/tf-proj.htm**.