CDC Childhood Lead Poisoning Prevention Program

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Health Effects of Lead

Prevent Childhood Lead Poisoning

Exposure to lead can seriously harm a child’s health.

- Damage to the brain and nervous system
- Slowed growth and development
- Learning and behavior problems
- Hearing and speech problems

This can cause:
- Lower IQ
- Decreased ability to pay attention
- Underperformance at school

Effects of inorganic lead on children and adults - lowest observable adverse health effects
Source: ATSDR, 1992
Impact of Lead Poisoning Prevention on Reducing Children’s Blood Lead Levels

- **Lead-based Paint Poisoning Prevention Act 1971**
- **Clean Water Act 1972**
- **Lead gasoline phase-out 1973**
- **Residential lead paint ban 1978**
- **Lead Contamination Control Act virtual elimination of lead in gasoline 1988**
- **Lead in plumbing banned 1986**
- **Lead Title X 1992**
- **Ban on lead solder in food cans 1995**
- **Housing units w/lead based paint hazards reduced by 40% since 1990**
- **Lead in children’s products ↓ to 100 ppm 2011**
- **Renovation & Repair Rule 2010**
- **Lead in children’s products ↓ to 600 ppm 2009**

Blood Lead Levels (µg/dL)

Year

- 1972
- 1974
- 1976
- 1978
- 1980
- 1982
- 1984
- 1986
- 1988
- 1990
- 1992
- 1994
- 1996
- 1998
- 2000
- 2002
- 2004
- 2006
- 2008
- 2010
- 2012

- 0.8% ≥10 µg/dL
- 1.2% ≥10 µg/dL
- 2.7% ≥10 µg/dL
Prevent Childhood Lead Poisoning

The Impact

535,000
U.S. children ages 1 to 5 years have blood lead levels high enough to damage their health.

24 million
Homes in the U.S. contain deteriorated lead-based paint and elevated levels of lead-contaminated house dust. 4 million of these are home to young children.

It can cost
$5,600
Sources of Lead

- **Children are exposed to lead from different sources**
  - Such as paint, gasoline, solder, and consumer products

- **Children are exposed through different pathways**
  - Such as air, food, water, dust, and soil.

- **Traditionally, lead-based paint is the most widespread source of lead exposure for young children.**

- **Water could be an issue.**

- **We want to eliminate lead from all sources.**
Childhood Lead Poisoning Prevention: CDC’s Comprehensive Program

- To develop programs and policies to prevent childhood lead poisoning and other housing-related health hazards
- To educate the public and health care providers about childhood lead poisoning and other housing-related health hazards
- To provide funding to state and local health departments to determine the extent of childhood lead poisoning by
  - Screening children for elevated blood lead levels
  - Helping ensure lead-poisoned infants and children receive medical and environmental follow-up
  - Developing neighborhood-based efforts to prevent childhood lead poisoning
CDC Childhood Lead Poisoning Prevention Milestones

1980s–2010: Full funding
• Comprehensive program
• Universal screening
• Case management

2010: Level funding
• Targeted screening

2012: Decreased funding
• Loss of extramural program
• Advisory committee

2014: Some funding restored
• Surveillance only
• Community-based strategies to target high-risk children
• Partnerships
Where We Are Now: Some Funding Restored for Childhood Lead Poisoning Prevention Surveillance

- 29 states, 5 cities, and D.C. funded (2014–2016)
  - Build and strengthen lead surveillance systems to identify neighborhoods and populations of children disproportionately affected by high blood lead levels
  - Educate parents and clinical providers in target areas about importance of blood lead testing for children under 6 years of age
  - Collaborate with institutional and community-based partners to initiate, promote, and evaluate childhood lead poisoning prevention activities

- Each funded jurisdiction works to eliminate childhood lead poisoning by creatively targeting resources and implementing effective program initiatives
Strategic Partnerships

- Local health
- Local housing
- Advocates/foundations
- HUD
- EPA
- CDC
- DOE
- Health plans
- Legislators
- Academics
- Researchers
- Pediatricians
Cross-Sector Collaboration

- **Partners**
  - Department of Housing and Urban Development
  - Environmental Protection Agency
  - American Water Works Association
  - State and local water utilities
  - State and local departments of environmental quality (or other appropriate department)

- **Issues**
  - Housing
  - Health-based changes to Lead and Copper Rule
  - Health department notifications
  - Changes in water source or water chemistry
  - Exceedances of 15-ppb standard
Secondary and Tertiary Prevention

- Identify and help implement policies, systems, and environmental changes to soften lasting effects of lead exposure in children
  - Case management
  - Social services
  - Education intervention
The last part is the hardest part...