

Childhood Lead Poisoning Prevention New Reference Value

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TIP OF THE ICEBERG: VISIBLE EFFECTS OF LEAD

Clinically Poisoned Children
Seizures • Coma • Mental Retardation • Death

INVISIBLE EFFECTS OF LEAD

KNOWN COGNITIVE, NEUROLOGICAL, & HEALTH EFFECTS

Lower IQ	= Lower lifetime earnings
More ADHD	= Increased special education costs
Damage to critical part of brain affecting impulse control	= Behavior problems, drug abuse, violence, & criminal justice
Higher maternal blood pressure	= Revolving healthcare costs (more monitoring visits, danger preterm delivery or miscarriage)
Poorer birth outcomes (decreased birth weight, length, head circumference)	(NICU & early intervention costs; studies show that low birthweight & prenatal lead exposure may increase likelihood of adult diseases: obesity, hypertension, cardiovascular disease)

U.S. ECONOMIC PRODUCTIVITY



COST ESTIMATE PER BIRTH COHORT

\$190–\$268 billion

\$297–\$413 million

\$1.7 billion

Total health-related costs of elevated lead levels for all children born in a given year are estimated to be between \$10.8 and \$53.1 million

Source for cost estimates: Pew Center on the States Partnership for America's Economic Success • Issue Brief #14 • February 2010 "Cutting Lead Poisoning and Public Costs"

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KNOWN COGNITIVE, NEUROLOGICAL

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ESTIMATED U.S. ECONOMIC

COST OF LEAD EXPOSURE

PER BIRTH COHORT:

\$192 to \$270

BILLION

BIRTH COHORT

Costs of elevated

Children born in a

are expected to be

1 million

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ACCLPP Recommendations

- ❑ **Focus attention back into prevention of lead poisoning,**
- ❑ **Elimination, Reduction of lead hazards**
- ❑ **Develop Nationwide policies for Lead Primary Prevention**
- ❑ **Education federal states, local and community**
- ❑ **Data Sharing**
- ❑ **Research**

LUNCH BOXES & BACK PACKS



CULTURAL REMEDIES



SURMA MAKEUP

FURNITURE



FISHING WEIGHTS



Recommendation

Clinicians should be a reliable source of information on lead hazards and take the primary role in educating families about preventing lead exposures. This includes recommending environmental assessments PRIOR to blood lead screening of children at risk for lead exposure

“Lead screening questionnaires showed a wide range of sensitivity and specificity and performed little better than chance at predicting lead poisoning risk among children.”

The Journal of Public Health Management Practice, 2012, 00(00), 1–00, published **“A Systematic Review of Screening Questionnaires for Childhood Lead Poisoning”** by Dr. Eric M. Ossiander



Impact on the States Cities and other Organizations

Recommendation 13

Additional research priorities should include improving the use of data from screening programs, developing next generation point-of-care lead analyzers, and improving the understanding of epigenetic mechanisms of lead action.



BARRIERS

COLLABORATION

PARTNERS

DUPLICATION OF EFFORTS

RESOURCES

LEVEL OF AWARENESS

CULTURE

POLICIES

HEALTH DEPARTMENTS

LEAD POISONING

HOUSING

STATES

\$\$\$FUNDING \$\$\$

Sources of
Lead

Community-Based
Organizations

COMMUNICATION

PHYSICIANS

DATA COLLECTION

LEGISLATION

ADEQUATE SURVEILLANCE