

OSC | 11
Ohio Safety Congress & Expo



**#331 Lead renovator requirements:
Blood lead testing and OSHA**

Pam Blais, RS

Thursday, March 31, 2011
8:15 to 9:15 a.m.

Ohio Bureau of Workers' Compensation



Ohio Safety Congress & Expo
March 31, 2011

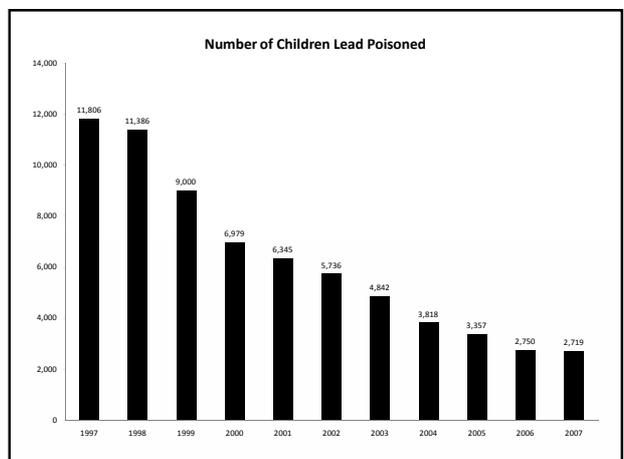
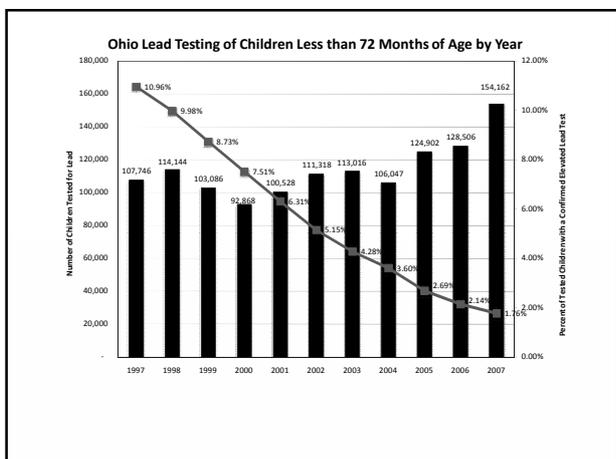
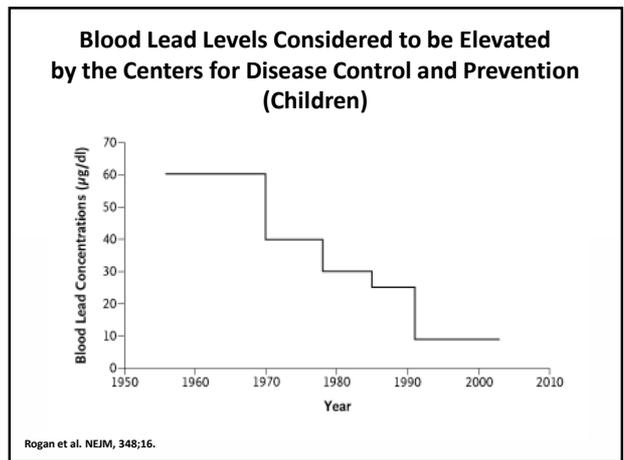
**Lead Renovator Requirements:
Blood Lead Testing and OSHA**

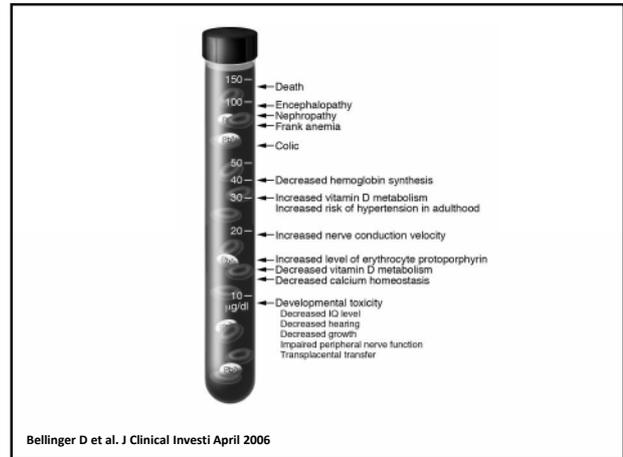
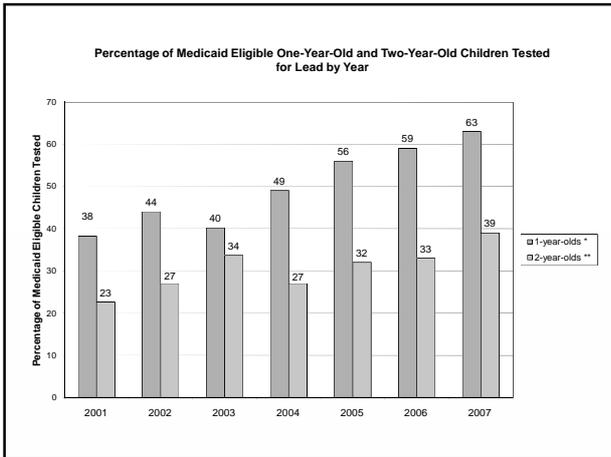
Ohio Department of Health
Pam Blais, RS
Environmental Supervisor

Lead poisoning in Ohio

Facts about lead poisoning in Ohio:

- Over 2,700 young children were lead poisoned in 2008
- Children spending time in older housing are poisoned more frequently
- The condition of housing plays a large role -- deteriorated paint allows lead to be accessible to children
- Over 5% of Ohio's children are poisoned from parent's occupational exposure



Blood Lead Screening

- Medicaid - Mandatory
- High Risk Screening Zip Codes
- Low Risk Screening Zip Codes

Mandatory Medical Screening

- ALL 12 and 24 month old Medicaid enrolled children must have a blood lead test.
- Every child 36-72 months of age must have a blood lead test, unless previously tested.

Screening in High Risk Zip Codes

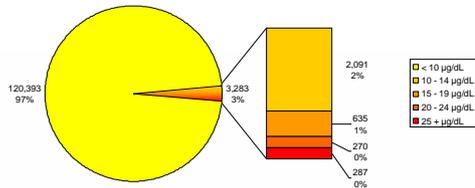
- Screen all children, 0-6 years of age at least twice
 - Under 36 months of age = test twice
 - Over 36 months of age, if previously untested = test at least once

Screening in Low Risk Zip Codes

- Use the Risk Assessment Questionnaire (RAQ) to determine if a blood test needs to be conducted.
 - Under 36 months =Administer RAQ twice
 - Over 36 months, if previously not assessed =Administer RAQ twice

Blood Lead Testing Results

Blood Lead Testing Results of Children less than 72 Months of Age in 2005



Primary health care providers

- Letter sent to physicians regarding HB 248 requirements 2/05
- PLANET training continues
- Decreased testing rates statewide
- Still relatively low (around 40%)

Surveillance and Follow-up

- Lab sends blood lead test results to ODH
- ODH exports results to 10 local jurisdictions (Akron, Canton, Clark Co., Columbus, Cuyahoga Co., Cleveland, Cincinnati, Mahoning Co., Lucas Co., and Montgomery Co)
- Case Management
- Environmental Investigation

Measuring Lead in Blood

- Micrograms per Deciliter
- ug/dL
- Venipuncture
- Capillary



Venipuncture vs. Capillary

- Ohio Department of Health (ODH) strongly recommends a venipuncture method to conduct lead testing.
- Capillary test is better than no test at all
- For an effective capillary test:
Elevated Blood Lead (EBL) test must be confirmed by second test using another capillary or venous method.

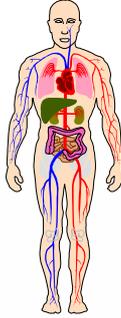
Levels of Lead Poisoning

<10	Observation	
10-14	Low	PHLI
15-19	Mild	PHLI
20-44	Moderate	Medical Management
45-69	High	Chelation
>70	Severe	Emergency!



Symptoms of Lead Poisoning

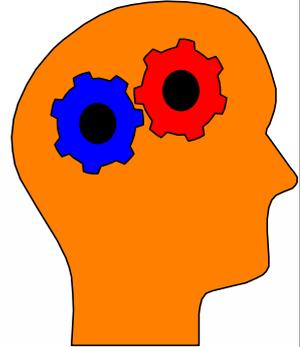
- Usually, there are no symptoms
- May mimic the "flu"
- Hearing problems
- Behavior problems
- Learning problems



Lead Exposure and IQ

- 1 ug/dL increase in blood lead level yields .25 decrease in IQ.

• Needleman and Galsonis (1990)



Low Blood Lead Levels

- There is no safe lead blood level
- IQ declines by 7.4 points with increases in the lifetime average blood lead concentrations of up to 10 $\mu\text{g}/\text{dL}$. Beyond these lower concentrations, there are further, more gradual declines (an additional 2.5-point decrease for concentrations of 10 $\mu\text{g}/\text{dL}$ to 30 $\mu\text{g}/\text{dL}$). These results were unchanged whether lead exposure was categorized as peak, concurrent with testing, or average in infancy.



February 22, 2006 "MN Child Dies Of Lead Poisoning: Bracelet Blamed"

A 4-year-old from Minneapolis died last month after he swallowed a charm on a bracelet that contained dangerous amounts of lead.

Reebok is now recalling more than 300,000 pieces of jewelry. The silver-colored bracelets, bearing heart-shaped charms engraved with the "Reebok" name, were given away from May 2004 through March with the purchase of children's shoes in major shoe stores across the country. The bracelets contain high levels of lead, the Consumer Product Safety Commission said.



Major Sources of Lead

- Dust
- Paint
- Soil
- Water



How much lead does it take to get lead poisoning?

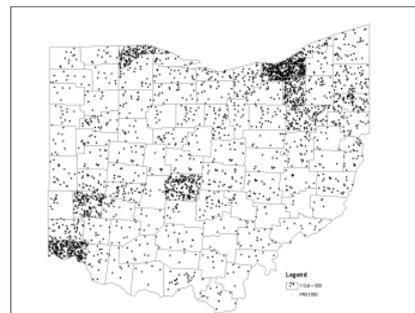


Children's Risk Factors

- Normal hand-to-mouth activity
- Play at the windows and in the dirt.
- Absorb more lead than adults
- Can cross placenta



Ohio 2003 Pre-1950 Housing Units = 1,502,331



Referral Process

- Child is tested
- Lab reports to ODH
- Sent to delegated authority
- Assigned to Public Health Lead Investigator
- Categories:

10 – 14ug/dL
≥ 15ug/dL



Public Health Lead Investigation

- Purpose: to identify possible sources of lead exposure for a child with an elevated blood lead level (EBL).
- Conducted by a licensed lead risk assessor from ODH or an authorized board of health.
 - 17 local health departments authorized to perform lead investigations
 - ODH coverage: ~120 local health jurisdictions (~80 counties) by three program sanitarians from OCLPPP

The Role and Responsibilities of ODH

- Conducts and performs public health lead investigations in over 80 counties
- Delegates authority to local boards of health in 17 counties
- Provides technical assistance to local boards of health- implementation of House Bill 248
- Ensures consistency and uniformity among ODH and all delegates
- Negotiates reimbursement for investigations performed on behalf of Medicaid eligible participants

Delegation of Authority

17 boards of health accepted delegation of authority

What does “delegation” mean to the local boards of health?

Responsibilities of Delegated Boards of Health

- Conduct public health lead investigations and public health lead risk assessments
- Issue and enforce lead hazard control orders within appointed jurisdiction
- Maintain records and submit quarterly reports to ODH
- Submit invoices for Medicaid billing – copies of reports

Delegated Boards of Health

Akron City	Lorain City
Canton City	Mahoning County
Cincinnati City	Mansfield City/Richland Co.
Clark County	Montgomery County
Cleveland Department of Public Health	Newark City
Columbus City	Sandusky County
Cuyahoga County	Stark County
Erie County	Summit County
Franklin County	Toledo City/Lucas County
Hamilton County	Zanesville-Muskingum Co.

Environmental Referrals

- Initiated at a confirmed blood lead level of 10 $\mu\text{g}/\text{dl}$ or greater.
 - Parents are contacted and arrangements are made for an environmental investigation
 - If ODH conducts the investigation, the local health department will be contacted
 - For Medicaid eligible clients, the county's Healthchek Coordinator (DJFS) will be contacted before conducting the investigation

Lead-Based Paint

- 1.0 mg/cm^2
or
- 0.5% by weight



Lead in imported candy/wrappers

- Candy tested at 0.5 ppm lead
- Wrappers at 0.7 ppm lead
- U.S. Food and Drug Administration, allowable lead content is 0.1ppm



Cosmetics and folk remedies

- Imported eye cosmetics, such as Kohl, Al-Kahl, and Surma, can contain up to 50% lead by volume.



Adult Blood Lead Epidemiology and Surveillance (ABLES)

ABLES is a state-based surveillance program of laboratory-reported adult blood lead levels.

ABLES state interventions to prevent lead over-exposures include

- Conducting follow-up interviews with physicians, employers, and workers
- Investigating work sites
- Providing technical assistance
- Providing referrals for consultation and/or enforcement
- Developing and disseminating educational materials and outreach programs

Major Elements of OSHA's Lead Standard

- A permissible exposure limit (PEL) of 50 micrograms of lead per cubic meter of air, as averaged over an 8-hour period.
- Engineering controls and work practices, where feasible, to reduce worker exposure.
- Personal hygiene practices, such as washing hands before eating and taking a shower before leaving the worksite
- Protective clothing and, where necessary, with respiratory protection accordance with 29 CFR 1910.134.
- Medical surveillance program



Blood Lead Testing

In Ohio, laboratories and physicians are legally obligated to report the results of all blood lead tests conducted on persons who reside or work in the state to the Ohio Department of Health.

These reports are required to include

- blood lead levels;
- patient demographic information (sex, age, job title, contact information etc.);
- health care provider, and
- employer information.

Referrals to OSHA

The ABLES program is NOT an enforcement program. We target residents with lead poisoning by providing education and outreach.

Research



A growing body of research is finding higher than anticipated risks associated with lower levels of lead exposure in adults.

The following health impacts are associated with lead exposure in the adult population:

- anemia
- kidney disease
- hypertension
- other cardiovascular impacts (including mortality)
- peripheral neuropathy
- cognitive impairments

Lead Exposure in Pregnant Women

- Various means of exposure
 - Do-it-yourself work
 - Occupational
 - Previous exposure
- ODH is targeting occupational exposure of pregnant women and women of childbearing age
 - Use ABLES data
 - Provide education and outreach to these women
 - Education OB/GYN's

What is “Take Home” Lead?

➤ “Take home” lead is lead particles or dust brought into the home and family vehicle on work clothes and equipment.

➤ Lead poisoning in children is especially dangerous because it can cause learning problems and serious illness. If **young children** live in the home and a parent **works with lead**, they should be tested.

➤ A recent ODH investigation revealed lead levels 3 times the state and federal standard in the father's truck driver's seat; 2 times the state and federal standards on the child's car seat; and 2 times the state and federal standards on the father's work boots.

➤ The home and vehicle were contaminated as a result of the father's occupational exposure; and the child was lead poisoned.

The Renovation, Repair, and Painting Rule (RRP)

❖ On March 31, 2008, EPA issued a final rule under the authority of §402(c)(3) of the Toxic Substances Control Act (TSCA) to address lead-based paint hazards created by renovation, repair, and painting activities that disturb lead-based paint.

❖ Effective April 22, 2010

❖ Delegable program

❖ Lawsuit settlement

Where does it apply?

❖ Applies to renovations of: Target housing, Child occupied facilities

❖ Excludes: Renovations that affect only components determined to be free of lead-based paint.

❖ Activities that disturb under 6 ft² interior or, 20 ft² exterior (this excludes window replacement, demolition, and projects involving prohibited practices)

❖ Work done by individuals in housing they own and occupy.

What does it require?

- ❖ Accreditation of training providers.
- ❖ Certification of firms, renovators, and dust sampling technicians.
- ❖ Work practice standards.
- ❖ Changes to 1999 pre-renovation education requirements.



Pre-Renovation Education Changes

- ❖ Informational signs must:
 - Be posted where they will be seen.
 - Describe nature, locations, and dates of renovation.
 - Be accompanied by "Renovate Right" or info on how to get a free copy.
- ❖ New brochure "Renovate Right." "Protect Your Family" brochure is not being retired. It will still be used for real estate disclosure, and general outreach.



Pre-Renovation Education Changes

- ❖ Before renovating a firm must:
 - Provide "Renovate Right" to building owner and adult representative.
 - Provide information about the renovation to parents & guardians of children under age 6 using facility by mail, hand-delivery or informational signs.
- ❖ Change to requirements in common areas of target housing. Firms may post informational signs in lieu of delivering information directly to each dwelling.

Work Practice Standards

Firm Responsibilities

- ❖ Ensure all individuals performing renovation activities are appropriately trained.
- ❖ A certified renovator is assigned to each renovation.
- ❖ All renovations are performed in accordance with the lead-safe work practice standards
- ❖ Comply with pre-renovation education requirements prior to starting the work
- ❖ Ensure the recordkeeping requirements are met.

Work Practice Standards

Renovator Responsibilities

- ❖ Perform or direct work to ensuring the work practices are followed.
- ❖ Be physically present at the work site: When warning signs are posted, while containment is established, and during final work area cleaning.
- ❖ Be available, either on-site or by telephone, at all other times.
- ❖ Provide on the job training to uncertified workers.
- ❖ When requested, use a test kit to determine if lead based paint is not present.
- ❖ Perform cleaning verification.
- ❖ Prepare required records.



Work Practice Standards

General

- ❖ Post signs defining the work area.
- ❖ Certain practices are prohibited:
 - open-flame burning or torching.
 - operating a heat gun above 1100°F.
 - machines that remove lead-based paint through high speed operation such as sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting, unless used with HEPA exhaust control.
- ❖ Ensure that all personnel, tools, and other items including waste are free of dust and debris when leaving the work area.
- ❖ Waste must be sealed in bags or plastic sheeting. Dispose of waste in accordance with Federal, State, and Local requirements.



Work Practice Standards

Interiors

- ❖ Remove or cover all objects from the work area.
- ❖ Close and cover all ducts in the work area.
- ❖ Close all windows, and cover all doors in the work area.
- ❖ Cover the floor surface of the work area



Work Practice Standards

Exteriors

- ❖ Close all doors and windows within 20 feet of the renovation.
- ❖ Cover the ground with plastic sheeting extending out from the edge of the structure a sufficient distance to collect falling paint debris.

Work Practice Standards

Cleaning

- ❖ Pick up paint chips and debris.
- ❖ Remove all protective sheeting.
- ❖ Clean all objects and surfaces in and around the work area.
- ❖ Clean walls with a high efficiency particulate air (HEPA)-equipped vacuum or with a damp cloth.
- ❖ HEPA vacuum all other surfaces and objects in the work area.
- ❖ Mop uncarpeted floors.
- ❖ Wipe all remaining surfaces in the work area with a damp cloth.



State/Tribal Program Authorization

- ❖ RRP is a delegable program.
- ❖ Programs must be at least "as protective as" EPA requirements, and have "adequate enforcement."
- ❖ Reciprocity will be encouraged.
- ❖ To date 9 states are authorized to administer and enforce an RRP program (Wisconsin, Iowa, North Carolina, Mississippi, Kansas, Rhode Island, Utah, Oregon and Massachusetts).

RRP Lawsuit Settlement

- ❖ EPA recently settled a lawsuit with several public interest groups. In the settlement the Agency agreed to propose: By October 2009 (final rule by April 2010) Elimination of the opt out.
- ❖ The renovator provide post renovation information to the homeowner.
- ❖ These changes were effective on July 6, 2010.
- ❖ By April 2010 (final rule by July 2011) Work area testing, and the elimination of lead hazards when certain tasks are undertaken.
- ❖ NPRM signed April 23, 2010 (published May 6, 2010).
- ❖ Expand the scope of the rule to include public and commercial buildings within the next 6 years.

Information Resources Lead Website

Websites regarding lead and lead hazards.

❖ www.epa.gov/getleadsafe - Information specific to the RRP program.

❖ www.epa.gov/lead/pubs/lscp-renov-materials.htm - RRP brochures and materials.

❖ <http://toxics.supportportal.com/ics/support/default.asp?deptID=23019> - Searchable frequent questions page (currently 271 questions and answers). You can also submit your own questions here.

Information Resources Compliance Guide

- ❖ Handbook for contractors, property managers, and maintenance personnel working in homes, child care facilities, and schools built before 1978.
- ❖ Contains detailed information and flow charts outlining the RRP requirements



Information Resources Steps Brochure

- ❖ A guide to lead-safe renovation, repair and painting.
- ❖ Covers basic lead-safe practices.
- ❖ Can be used as a training guide for on-the-job training.



Questions?

Contact Information:

Pam Blais, RS
614-728-3105
Pam.blais@odh.ohio.gov
1-877-LEAD-SAFE

Contact Information- ABLES

Christopher Alexander
614-728-0880
Christopher.alexander@odh.ohio.gov
1-877-LEAD-SAFE

Contact Information- RRP

Dave Holston, RS
614-644-8649
Dave.Holston@odh.ohio.gov
1-877-NOT-LEAD

Points of view, ideas, products, demonstrations or devices presented or displayed at the Ohio Safety Congress & Expo do not constitute endorsements by BWC. BWC is not liable for any errors or omissions in event materials.

OSC | 11
Ohio Safety Congress & Expo