Healthy Homes Section

Lead-Based Paint 101:
In the Beginning

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Lead Safe Home Program

Lead 101:
Five segments

- Health Effects/Background
- Working Lead-Safe
- Containment
- Cleaning
- Laws
Segment 1: Health Effects

- What is lead?
- Routes of exposure
- Who is vulnerable
- What bodily systems are affected
- Symptoms

Uses of Lead, a Heavy Metal

- Paint (until 1978)
- Gasoline (until 1986)
- Lead pipes
- Decorative fire-glazed pottery
- Imported toys, cosmetics, jewelry
- Imported foods, candy, folk remedies
- Hobby items such as stained glass, casting fishing weights, target shooting
The #1 cause of childhood lead poisoning is dust from paint!

Definition of LBP

**Lead Based Paint (LBP)**
- 1.0 mg/cm² lead in surface coatings
- 0.5% lead by weight (5,000 ppm)

**Lead-Based Paint Hazard**
- Any condition that causes exposure to lead that would result in adverse human health effects from:
  - Dust, soil or paint that is deteriorated OR
  - Chewable, friction or impact surfaces
How do I know if it’s Lead?

By a Professional:
Inspection: Surface-by-Surface Investigation to determine the presence of lead-based paint

Risk Assessment: Investigation to determine the existence, nature, severity and location of LBP Hazards

On your own:
Lead Check Swabs: Not an approved method, cheap, colormetric, okay for testing surface coat
**Routes of Exposure**

Lead gets into your body two ways:

- **Ingestion**
  - You eat lead paint or dust particles

- **Inhalation**
  - You breathe in lead dust or fumes

**Abdominal x-ray of a 3-year-old child shows lead embedded particles**
Who is vulnerable?

All persons are susceptible to lead poisoning however,

- Children six years of age and younger
- Pregnant women

are the most susceptible!

What Systems are Affected?

- All bodily systems are affected except for the respiratory tract. This includes:
  - Blood cells and their production
  - Central nervous system
  - Kidneys
  - Liver
  - Blood pressure
  - Skeletal and muscular systems
Symptoms

- Flu-like symptoms
- ADD/ADHD
- Headache
- Hearing Loss
- Central Nervous System dysfunction
- Coma
- Death

<table>
<thead>
<tr>
<th>CHILDREN</th>
<th>ADULTS</th>
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<tbody>
<tr>
<td>Death</td>
<td>Coma/Seizures</td>
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<tr>
<td>Coma/Seizures</td>
<td>micrograms per deciliter</td>
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<tr>
<td>Kidney Damage</td>
<td>100</td>
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<tr>
<td>Anemia</td>
<td>Decreased lifespan</td>
</tr>
<tr>
<td>Decreased ability to make red blood cells</td>
<td>Decreased ability to make red blood cells</td>
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<tr>
<td>Nerve Problems</td>
<td>Nerve problems</td>
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<tr>
<td>Interference with Brain Development (IQ/hearing/growth)</td>
<td>Hypertension</td>
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Segment 2: Working Lead-Safe

How do I?

- Use safe work practices
  - Minimize the creation of lead dust
  - Work wet
  - Protect occupants and their belongings
  - Clean as you work
  - Personal hygiene

Minimize the creation of lead dust

- If the tool spins, don’t use it.
- Slow down
- Dampen work surfaces with water
**Work wet**

- Use trigger sprayers to dampen surfaces prior to:
  - Saw cutting
  - Knife cutting
  - Planing
  - Sanding
  - Scraping
  - Drilling

**Protect Occupants and their Belongings**

- Move personal property out of work areas
- Cover all areas that dust or debris may fall upon
- Contain work areas to as small an area as possible
- Keep occupants out of the work areas
Clean as you Work

- Place plastic sheeting on floor and other surfaces to ease the cleaning process
- Wrap all debris and removed materials in 6 mill polly and dispose of it
- Vacuum with HEPA filtered vacuum as you work
- Do not track dust and debris

Personal Hygiene

- Never eat, drink or smoke in a work area
- Always wash hands and face prior to:
  - Eating
  - Drinking
  - Smoking
  - Entering a personal vehicle or other non-work area
  - Leaving for the day
Segment 3: Containment

- A physical barrier that keeps dust and debris in the work areas
- Keeps occupants and others out of work areas

Containment

- Typically 6 mill polly
- Hung from spring loaded poles
- Taped to walls and ceilings
- Laid on floors and over furniture
- Never reuse
Containment

- Defines work area
  - Keeps non-workers out
  - Keeps contractors in compliance with the many laws that regulate the work.
Segment 4: Cleaning

- While you work
- At the end of each day
- After project is completed
Cleaning

- While you work
  - HEPA-Vacuum and mop up dust and debris as they are created-do not track around work site
  - Dispose of old materials as they are removed
  - Vacuum (HEPA) often
  - Wet wipe as you go
  - Makes end of day cleanup easier

- At the end of the work day
  - Required by law
  - Makes work area less hazardous if it is entered by non-workers
  - Helps make final clean up easier
Cleaning

- After project is completed
  - To ensure that no lead dust hazards are left behind:
    - Protect occupants
    - Provides liability protection
    - Helps pass clearance testing
  - Is required by law

Segment 5: Laws

- EPA
- HUD
- OSHA
- Michigan
Laws

- **EPA**
  - Abatement 20 CFR 742
    - Applies to all lead abatement activities
    - Enforced by the Federal Government

- **RRP**
  - Applies to all renovation projects
  - Enforced by Federal Government

- **406 B**
  - Notification of lead activities prior to all renovations where lead may be present
  - Enforced by MDCH HHS

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Laws

- **HUD**
  - 24 CFR part 35
    - Applies to renovations where Federal Dollars are involved
  - 1995 Guidelines with 1997 revisions
    - Methodologies for doing lead work
  - 1018
    - Disclosure law for real-estate transactions and rental properties
Laws

- OSHA
  - 1926.62
    - Governs employers who have workers with a lead exposure
    - Exposure based

- Michigan
  - Lead abatement Act
    - Provides for certification of lead abatement professionals
    - Governs lead abatement activities within the State
    - Provisions for enforcing those rules
Questions?

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