

## **A Safe Home Environment: What's That I Smell?**

**Satellite Conference and Live Webcast  
Wednesday, March 11, 2009  
2:00-4:00 p.m. (Central Time)**

Produced by the Alabama Department of Public Health  
Video Communications and Distance Learning Division

## **Faculty**

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## **Objectives**

- Understand the need for solid waste control and how public health laws affect home care
- Recognize public health concerns
- Knowledge of harborages and infestations that can be found in patient homes
- List vector borne diseases

## **Objectives**

- Learn how to safely store food in patient's home
- Realize how patients can acquire a food borne illness
- Know how to check for lead in a patient's home
- Describe how mold and mildew can cause health problems

## **Alabama Department of Public Health**

**Bureau of Environmental Services  
Indoor Air Quality/Lead Branch  
The RSA Tower  
201 Monroe Street, Suite 1250  
Montgomery, AL 36104  
Phone: (334) 206-5373  
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## **Indoor Air/Lead Branch**

- Indoor air
- EPA lead
  - Certification
  - Enforcement
  - Compliance assistance
- Childhood lead prevention

### **Indoor Air Pollutants**

- **Biological contaminant**
- **Radon**
- **Combustion products**
- **Organic gases**
- **Lead**
- **Asbestos**

### **Where is Asbestos Found**

- **Pre-1980 homes**
  - **Steam pipes, boilers & furnace ducts**
  - **Residential floor tiles & sheet flooring**
  - **Cement sheets, millboard**

### **Where is Asbestos Found**

- **Pre-1980 homes**
  - **Sound proofing & decorative materials sprayed on walls & ceilings**
  - **Textured paints**
  - **Roofing & siding shingles**

### **Health Effects of Exposure to Asbestos**

- **Asbestos exposure can cause**
  - **Asbestosis**
  - **Mesothelioma**
  - **Lung cancer**
  - **Other illnesses/cancers**

### **Asbestos... What To Do**

- **If in good condition**
  - **Leave it alone**
- **Confirm or deny presence**
  - **Laboratory analysis**
- **Materials damaged or disintegrating**
  - **Seal or encapsulate**
  - **Cover or enclose**

### **Asbestos... What To Do**

- **Do not cut, tear, sand, saw, drill, scrape, etc.**
- **Use trained professionals to remove**

### Indoor Air Mold Health Concerns

- Short term exposure
  - Itchy, burning, teary eyes
  - Skin irritation
  - Nose, throat, lung irritation
  - Nausea, headache
  - Dizziness, lightheadedness
  - Allergic reaction

### Indoor Air Mold Health Concerns

- Long term or high level exposure
  - Permanent damage

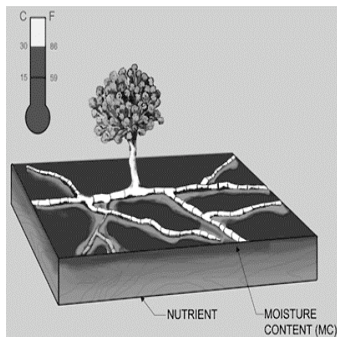
### Mold is A Known Trigger

- The public asks questions because
  - Scientific interest
  - Medical concerns
  - Media coverage
  - Legal opportunity
  - Internet sites
  - Facts and fear

### What We Know About Mold

- Mold is everywhere
- Spore + temperature + moisture + nutrient = growth = **PROBLEM**
- Allergic reactions
- Infections
- Asthma trigger
- Sometimes toxic effects

### What We Know About Mold



### Mold

- Molds are microscopic organisms found everywhere
- Some molds can cause adverse health effects

### **#1 Question “Is This Toxic?”**

- **Should we test? Why?**  
If you see mold, why test?
- **Stop water, remove mold anyway**
- **Testing may cost \$\$\$\$ , will not change actions**

### **What About “Toxic Mold?”**

- **Some molds make “toxins” which seem to have adverse health effects**
- **“Toxic mold” is MEDIA– not scientific**
  - **The celebrity toxic mold is Stachybotrys**
  - **ALL molds may have health effects**

### **What About “Toxic Mold?”**

- **Dose, time, susceptibility make the poison**
  - **Babies, elderly, immune-compromised**

### **How Is the Water Getting in?**

- **Flooding?**
- **Roof leak?**
- **Broken or slow drip water line?**
- **Standing water under house?**

### **How Is the Water Getting in?**

- **Broken slab?**
- **Condensation line overflow?**
- **Leaking plumbing fixture?**
- **Improper HVAC cycle or oversized unit?**

### **How to Recognize Mold**

- **Sight**
  - **Usually appears as colored woolly mats**
- **Smell**
  - **Often produces a foul, musty, earthy smell**

### **Cleanup of Mold**

- Disinfect hard, water resistant, non-porous surfaces
- Consider discarding water-damaged porous materials
- After working with mold-contaminated materials, wash thoroughly, including the hair, scalp, and nails

### **How To Protect Yourself**

- Avoid mold spores
- Use respiratory protection
- Protect your skin

### **How To Protect Yourself**

- Wear goggles
- Avoid getting mold or mold spores in your eyes

### **Regulation of Mold Cleanup**

- No exposure limits
- No federal rules
- State and local rules may apply
- State/local certification may apply
- Specific contractual obligations may apply

### **Formaldehyde**

- Pressed wood products
- Particleboard
- Wood paneling
- Fiberboard
- Urea-formaldehyde

### **Radon**

- Odorless
- Colorless
- Radioactive gas

### Basic Strategies

- Source control
- Ventilation improvements
- Air cleaners

### Sources of Indoor Pollutants

- Chemicals released from modern building & furnishing materials
- Combustion gasses from fireplaces & wood burning stoves
- Chemical fumes from paints & solvents
- Gases including radon seeping through foundation

### Sources of Indoor Pollutants

- Outdoor air pollutants
- Molds & bacteria
- Chemicals from cleaning products
- Cigarette smoke contains some 4,000 chemicals
- Carbon monoxide fumes from attached garages

### Lead

- Can you name some materials in a house that might contain lead?

### What is Lead?

- Chemical element
- Ph: Latin “Plumbum”
- Plumber, Plumb bob
- Heavy, soft (malleable) metal

### What is Lead?

49 In Indium 114.82	50 Sn Tin 118.69	51 Sb Antimony 121.75
81 Tl Thallium 204.37	82 Pb Lead 207.19	83 Bi Bismuth 208.980

### **What's The Matter With Lead**

- Highly toxic poison
- Accumulates in body tissues
- Harms many body systems
  - Blood
  - Nerves, brain
  - Reproductive

### **Toxicology of Lead**

### **Toxicology of Lead Why Lead is So Toxic**

- Exposure/absorption
  - Children absorb more of the lead they are exposed to than do adults (40-50% due to accelerated cell formation)
  - Pregnant women absorb more of the lead they are exposed to than do other adults

### **Toxicology of Lead Why Lead is So Toxic**

- Lead is readily absorbed
- Lead affects multiple organs
- Lead is excreted slowly

### **Toxicology of Lead Symptoms of Lead Poisoning**

- Tiredness
- Sleep problems
- Nervousness
- Hyperactivity
- Irritability
- Dizziness
- Weakness
- Clumsiness
- Stomach ache
- Constipation
- Appetite depression

### **Toxicology of Lead Symptoms of Lead Poisoning**

- Depression
- Numbness
- Concentration problems
- Vomiting
- Joint/muscle aches
- Metallic taste in mouth
- Wrist or foot drop

### **How Can I Be Exposed to Lead?**

- Deteriorated lead paint
- Burning or cutting metals containing or painted with lead
  - Plumbing lines
  - Solder joints
  - Corrosion resistant metal coatings

### **Mini Blinds**

- Vinyl mini-blinds with lead forms a lead dust as the sun breaks down the lead

### **What Can You Do About Lead-Based Paint?**

- Test the paint
  - If it's necessary to strip lead-based paint, remove items from the home
  - Cover over lead-based paint
  - Replace the painted item
  - Removal required by a professional

### **Lead Information Lines**

**Alabama Department of Public Health  
1-800-819-7644**

**National Lead Hotline  
1-800-532-3394**

### **Lead Information Lines**

**Disclosure of Lead-Based  
Paint in Housing  
1-202-554-1404**

**EPA Safe Drinking Water Hotline  
1-800-426-4791**

### **Other Information Lines**

**Consumer Products Safety Commission  
1-800-638-2772  
[www.cpsc.gov](http://www.cpsc.gov)**

**Indoor Air Quality Information (EPA)  
1-800-438-4318  
[www.epa.gov/iaq](http://www.epa.gov/iaq)**



## **Other Information Lines**

**Asbestos (EPA)**

**[www.epa.gov/iaq/pub/asbestos/html](http://www.epa.gov/iaq/pub/asbestos/html)**

**Alabama State Health Department**

**Radon Hotline 1-800-582-1866**

**Alabama Department of Environmental**

**Management (Asbestos)**

**1-334-271-7700**