


# Module 7

## Step 5: Identify Interventions to Address Hazards



Healthy Housing Solutions<sup>INC.</sup>

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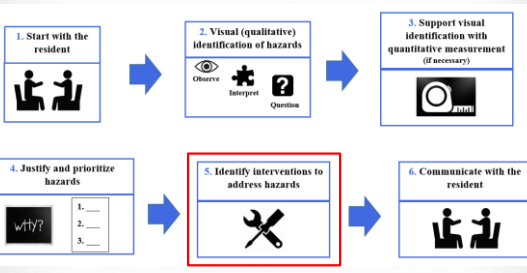
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### KEY STEPS



1. Start with the resident

2. Visual (qualitative) identification of hazards

3. Support visual identification with quantitative measurement (if necessary)

4. Justify and prioritize hazards

5. Identify interventions to address hazards

6. Communicate with the resident

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### KEY STEPS



- Intervention resources
- Review of interventions by Keep it principle
  - Focus on Integrated Pest Management

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### Health impacts of housing hazards in eight categories:

- 1. Moisture
- 2. Sanitation
- 3. Pests
- 4. Ventilation
- 5. Safety
- 6. Contaminants
- 7. Maintenance
- 8. Comfort

- 1. Dry
- 2. Clean
- 3. Pest-Free
- 4. Ventilated
- 5. Safe
- 6. Contaminant-Free
- 7. Maintained
- 8. Climate Controlled



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### SOURCE OF RESOURCES & REFERENCES

Promote evidence, not opinion



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### NATIONAL RESOURCES



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### INTERVENTIONS

Healthy Homes Issue:  
**Residential Assessment**  
July 2012

Environmental Hazard	Assessment Strategies				
	Visual	Interview	Sampling	Direct	Indirect
Lead-based paint	X	X	X	X	X
Radon	X	X	X	X	X
Asbestos	X	X	X	X	X
Mold	X	X	X	X	X
Carbon monoxide	X	X	X	X	X
Particulate Matter (e.g., PM <sub>2.5</sub> )	X	X	X	X	X
Other Hazards	X	X	X	X	X

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### HEALTHY HOUSING MANUALS / RESOURCES

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### HEALTHY HOUSING MANUALS / RESOURCES

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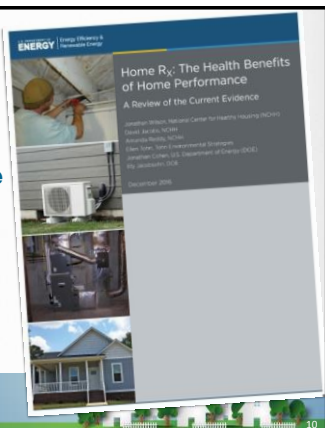
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## New EPA Home RX - The Health Benefits of Home Performance

- Research and justification
- Health & Energy
  - Health Outcomes
  - Case studies



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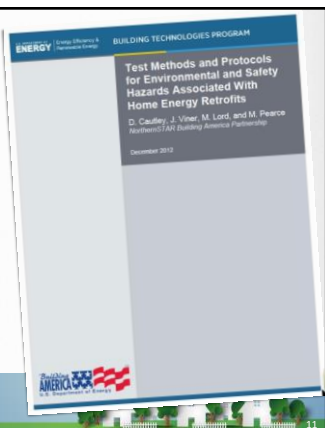
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## Test Methods and Protocols for Environmental and Safety Hazards Associated With Home Energy Retrofits

- Testing
- Qualitative
  - Quantitative
  - Familiar tests related to health risk



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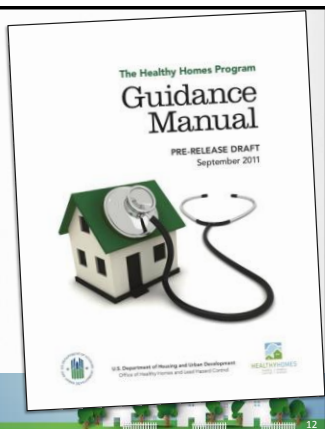
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## A GUIDE FOR HEALTHY HOME PROGRAM DEVELOPMENT AND OPERATIONS

- Fully comprehensive guide
- Program overview
  - Interview tools
  - Diagnostic guidance

<http://portal.hud.gov/hudportal/HUD?mode=dispage&id=HHGUIDANCEMANUAL>



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### HUD HEALTHY HOME INTERVENTION PRIORITIES

Table 4.1 Priority List of Better Homes for Asthma (adapted from Seattle/King County Health Department)

- High priority items are indicated with an [A]
- Lower-priority items with [B] or [C].

Repair plumbing leaks [A]
Correct mold problems [A]
Clean evaporator pan under refrigerator [A]
Install range hoods that vent to exterior [A for gas; B for electric]
Repair dry floor drain traps if sewer gases detected [A]
Assure that at least one window in each room can open [A]
Remove basement, bath and kitchen wall to wall carpet [A]
Install smoke and carbon monoxide alarms [A]
Repair deteriorated bath and tub caulk [B or C]
Install pleated filter in forced-air heating system. [A]
In the crawl space, seal /cover soil with poly. [A]
Seal crawl space from house air. [A]



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### The Healthy Homes Program Guidance Manual: Interventions Related to Keep it Dry and Ventilated

Figure 5.2 Key Structural Controls for Moisture

1. Limit water entry (e.g., maintain gutter systems).
2. Dehumidify damp spaces such as basements.
3. Repair leaks and assure that drains work properly.
4. Clean or properly remove wet or moldy building components.
5. Manage ventilation systems so that moisture is removed at the source.



Figure 5.7 Ventilation Interventions

- Remove airborne contaminants through proper exhaust ventilation.
- Supply fresh air through dilution ventilation.
- Test for and conduct radon remediation as needed.

See Handout



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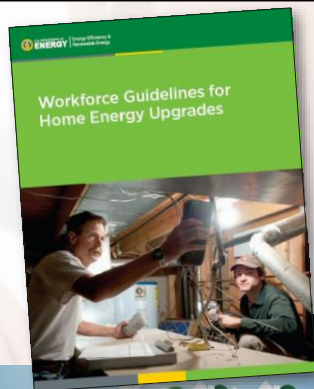
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### SWS- HELPFUL GUIDANCE FOR SOME IMPORTANT INTERVENTIONS



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## INTERVENTION RESOURCES

Health and Safety section <https://sws.nrel.gov/spec/2>

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### National Renewable Energy Laboratory: Standard Work Specifications Tool – Section 2 Health and Safety

**Section 2 Health and Safety**

**2.01 Safe Work Practices**

- 2.0100 Safe Work Practices
- 2.0104 Air Sealing
- 2.0104 Insulation
- 2.0106 Heating and Cooling Equipment
- 2.0106 Ventilation Equipment
- 2.0107 Baseload
- 2.0110 Material Safety
- 2.0111 Basements and Crawl Spaces

**2.02 Combustion Safety**

- 2.0201 Combustion Safety Testing-General
- 2.0202 Unvented Space Heaters
- 2.0203 Vented Gas Appliances
- 2.0204 Isolation
- 2.0205 Gas and Oil-Fired Equipment
- 2.0209 Additional Resources

**2.03 Safety Devices**

- 2.0301 Combustion Safety Devices
- 2.0303 Cooling Equipment

**2.04 Moisture**

- 2.0401 Air Sealing
- 2.0402 Drainage
- 2.0403 Vapor Barriers
- 2.0404 Space Conditioning

**2.05 Radon**

- 2.0501 Air Sealing
- 2.0502 Testing and Evaluation

**2.06 Electrical**

- 2.0601 Knob and Tube Wiring
- 2.0602 Electric Hazards

**2.07 Occupant Education and Access**

- 2.0701 Basements and Crawl Spaces
- 2.0702 Installed Equipment
- 2.0703 Insulation

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## INTERVENTION RESOURCES

### ICC International Property Maintenance Code

**SECTION 304  
EXTERIOR STRUCTURE**

**304.1 General.** The exterior of a structure shall be maintained in good repair, structurally sound and sanitary so as not to pose a threat to the public health, safety or welfare.

**304.1.1 Unsafe conditions.** The following conditions shall be determined as unsafe and shall be repaired or replaced to comply with the *International Building Code* or the *International Existing Building Code* as required for existing buildings:

1. The nominal strength of any structural member is exceeded by nominal loads, the load effects or the required strength;
2. The arrangement of the floor or roof to walls or columns, and of walls and columns to foundations is not capable of resisting all nominal loads or load effects;
3. Structures or components thereof that have reached their limit state;
4. Siding and masonry joints including joints between the building envelope and the perimeter of windows, doors and skylights are not maintained, weather resistant or water tight;

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**DOES THIS VIOLATE THE IPMC?**

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**KEY PROVISIONS OF CODES**

- Structural Integrity
- Weatherproof
- Maintenance
- Cracks & Holes
- Loose or Rotting Materials
- Dampness & Deterioration
- Peeling Paint
- Ventilation / Windows
- Infestation
- Sanitation & Trash
- Cleanability
- Clothes Dryer
- Space Heater

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**CODES RELATED TO HEALTHY HOMES**

- Health / Sanitation Codes
- Housing / Property Maintenance Codes
- Landlord-Tenant Laws
- Product Standards
- Hazard Management Laws

**Housing v. Building v. Zoning Codes**

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## LANDLORD-TENANT LAWS

**Rights and Responsibilities**

**Common Requirements**

- Certificate of Occupancy
- Duty to Pay Rent
- Withholding Rent to Make Repairs
- Retaliation

**Eviction and Enforcement**



**LEASE**  
**RISK-REVEAL AGREEMENT OR RESIDENTIAL LEASE**  
This document is not intended to be used as a legal document. It is provided for informational purposes only. It is not a substitute for legal advice. Consult your attorney for more information.




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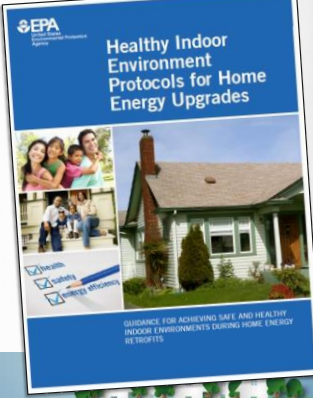
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## EPA Indoor Environmental Protocols for Energy Audits

Voluntary Guidelines Include:

- Protocols
- Minimum Actions
- Expanded Actions



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## WHAT TO LOOK FOR DURING THE HOME ENERGY AUDIT

ASSESSMENT PROTOCOL

HEALTHY  
Minimum Actions

**ASSESSMENT PROTOCOLS**



Measures to help home energy retrofit contractors identify common indoor air quality and safety concerns in homes. This document is not a guide to diagnosing occupant health problems or building-related illnesses.

**Minimum Actions**

Critical actions intended to ensure work does not potentially cause or worsen indoor air quality or safety problems for occupants or workers (i.e., "Do No Harm"). EPA recommends these protections for ALL retrofit projects.

**Expanded Actions**

Additional actions to promote healthy indoor environments that can be taken during energy-efficiency retrofit projects. EPA recommends considering these improvements when feasible.

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## WHAT TO LOOK FOR DURING THE HOME ENERGY AUDIT

ASSESSMENT PROTOCOL

HEA  
**Minimum Actions**

SOURCE VENTILATION

Determine whether the home complies with the local exhaust requirements for kitchens and baths of ASHRAE Standard 62.2-2010, Section 5 and Appendix A, as applicable. Determine whether kitchen and bath exhausts are present and vent to the outdoors.

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## HEALTHY INDOOR ENVIRONMENTS

Actions

Expanded Actions

Pre-Work Test Results/Preventive Measures	Post-Work Test Results	Minimum Actions	Expanded Actions
<b>&lt;2 pCi/L</b> Overall radon concentration below the maximum level of 4 pCi/L, regardless of season or testing procedure, except for homes that are not fully occupied and that are not used as a primary residence.	<2 pCi/L <2 and <4 pCi/L	No action. Complete foundation air sealing strategy.	For post-work radon levels between 1 and 2 pCi/L, refer client to EPA's Citizen's Guide to Radon and Contractor's Guide to Radon Reduction and/or mitigation in accordance with ASTM E2121.
<b>2 and &lt;4 pCi/L</b> Like maximum radon level. Foundation air sealing strategy or post-work mitigation.	24 pCi/L, but NOT higher than pre-work level.	No further minimum action.	For post-work radon levels between 2 and 4 pCi/L, refer client to EPA's Citizen's Guide to Radon and Contractor's Guide to Radon Reduction and/or mitigation in accordance with ASTM E2121.
<b>4 pCi/L AND higher</b> Like pre-work level.	14 pCi/L AND higher than pre-work level.	Mitigate in accordance with ASTM E2121.	For post-work radon levels between 1 and 2 pCi/L, refer client to EPA's Citizen's Guide to Radon and Contractor's Guide to Radon Reduction and/or mitigation in accordance with ASTM E2121.
<b>≥4 pCi/L</b> Complete all foundation air sealing strategy or post-work mitigation.	14 pCi/L, but NOT higher than pre-work level.	No further minimum action.	For post-work radon levels between 2 and 4 pCi/L, refer client to EPA's Citizen's Guide to Radon and Contractor's Guide to Radon Reduction and/or mitigation in accordance with ASTM E2121.
<b>≥4 pCi/L but NOT higher than pre-work level.</b>	Refer client to EPA's Citizen's Guide to Radon and recommend radon mitigation.		
<b>≥4 pCi/L AND higher than pre-work level.</b>	Mitigate in accordance with ASTM E2121.		

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## INTERVENTIONS

**Keep it:**

- Clean
- Pest-free
- Safe
- Contaminant-free
- Maintained

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### INTERVENTIONS START WITH EDUCATION



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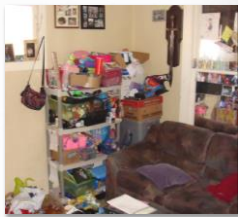
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### KEEP IT CLEAN INTERVENTIONS

- Surfaces must be not just clean, but **cleanable**
- Major benefits:
  - Reduced exposure to various contaminants
  - Reduced harborage for pests



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### KEEP IT CLEAN INTERVENTIONS

1. Dust mite control
2. Floor choices and vacuums
3. HVAC systems / duct cleaning
4. Clutter
5. Cleaning agents
6. Portable air cleaners

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### EXERCISE 7: KEEP IT CLEAN INTERVENTIONS

#### Group 1:

- A. Dust mite control
- B. HVAC systems/duct cleaning
- C. Cleaning agents



#### Group 2:

- A. Floor choices and vacuums
- B. Clutter
- C. Portable air cleaners




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### KEEP IT SAFE INTERVENTIONS




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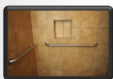
### TRIPS AND FALLS INTERVENTIONS



Make sure area rugs are secure.



Install railings on stairways.



Install grab bars in bathrooms.



Install window guards on upper level windows.



Use safety gates to prevent children from falling down stairs.

**What intervention does the picture show?**




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### TRIPS AND FALLS INTERVENTIONS

 Remove trip hazards (e.g. toys and other objects).  
 Repair broken stairs.  
 Increase lighting in stairwells, entryways and hallways.  
 Use nonskid surfaces in bathrooms.  
 Make sure toilets, showers and bath entries are an appropriate height.

What intervention does the picture show?





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### FIRE, HEAT AND RELATED INTERVENTIONS

Hint: I'm useful because, where there's \_\_\_\_\_, there may be fire.

Hint: Put that fire out!

Hint: this helps everybody in the house knows where to go if there is a fire.




Hint: Dryers have to breathe too.

Hint: Hot water should only get so hot.

Hint: Pew, somebody throw away the rotten eggs.

Hint: A shocking problem should be fixed.

Hint: I'll know if you burn blue or yellow.

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### CHILD SAFETY INTERVENTIONS

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**WHAT SAFETY INTERVENTIONS WOULD YOU OFFER?**



Photo courtesy of the Center for Environmental Health, Children's Mercy Hospital, © 2010.

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**WHAT DO YOU DO IF YOU SEE THESE SITUATIONS?**



Photo courtesy of the Center for Environmental Health, Children's Mercy Hospital, © 2010.

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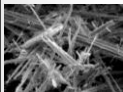
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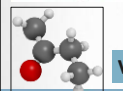
**KEEP IT CONTAMINANT-FREE INTERVENTIONS**



**Asbestos**



**Radon**



**Volatile organic compounds**

Common Household Contaminants: The Hazards and the Law	
Asbestos	Asbestos is a group of naturally occurring minerals that are found in many types of building materials. Asbestos fibers can become airborne and inhaled, leading to lung disease and cancer. Asbestos is also found in some types of vermiculite ore, which can be used in vermiculite ore processing facilities.
Radon	Radon is a naturally occurring radioactive gas that is produced by the decay of uranium and thorium in the soil and rocks. Radon can enter homes through cracks in the foundation and other openings. Radon exposure can lead to lung cancer.
Volatile organic compounds (VOCs)	VOCs are a group of chemicals that can evaporate into the air. VOCs are found in many household products, including paints, solvents, and cleaning products. VOCs can cause irritation of the eyes, nose, and throat, and can also contribute to the formation of smog.

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# ASBESTOS

Perhaps, the easiest intervention of all to remember . . . . .

**DON'T DISTURB –  
CALL IN A PROFESSIONAL  
TO TAKE A SAMPLE**

© V Magn | 10 µm  
10 kV 2000x Janice Haney Carr

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# ASBESTOS

### When to call a professional:

- You suspect asbestos, **and**
- The resident plans to remodel the home, **or**
- Building material with possible asbestos is damaged

### What kind of professional?

- Asbestos inspectors
- Asbestos contractor
- Check state and local laws for requirements.
- State agencies have lists of accredited professionals.
- <https://www.epa.gov/asbestos/state-asbestos-contacts>



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# FRIABLE ASBESTOS

Friable asbestos-containing material (friable ACM):

- any material with more than 1% asbestos by weight or area, depending on whether it is a bulk or sheet material **and,**
- can be crumbled, pulverized, or reduced to powder by the pressure of an ordinary human hand



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## VERMICULITE

**What is vermiculite insulation?**  
 Vermiculite is a naturally occurring mineral that has the unusual property of expanding into worm-like accordion-shaped sheets when heated. The accordion-like structure of vermiculite makes it a great insulator, absorbent, and adsorbent material. These properties allow vermiculite to be used to make numerous products, including attic insulation.

**Do I have vermiculite insulation?**  
 Vermiculite can be purchased in various forms for various uses. Some vermiculite products range from very fine particles to large "crumpled sheets" easily as thick as 1/2 inch. Vermiculite attic insulation is a particle-like, gray or brown and is usually lighter than a good quality fiberglass. The particles in the corner of the pamphlet and on the cover show several examples of vermiculite attic insulation.

**Is vermiculite insulation a problem?**  
 From its use in 1950, much of the world's supply of vermiculite came from a mine near Libby, Montana. This mine had a natural deposit of asbestos which resulted in the vermiculite being contaminated with asbestos. Also, vermiculite was used to produce vermiculite ore, a byproduct that originated from the Libby mine, may contain asbestos fibers. Today, vermiculite is mined at three U.S. facilities and in other countries which have low levels of contamination in the background environment.

**How does asbestos cause health problems?**  
 Asbestos can cause health problems when inhaled into the lungs. If products containing asbestos are disturbed, fine lightweight asbestos fibers are released into the air. Persons breathing the air may inhale or ingest asbestos fibers. Continued exposure over the period of 10 to 20 years may lead to lung cancer or mesothelioma. Smoking increases the risk of developing lung cancer from asbestos exposure.

**EPA Guide to Vermiculite**

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## How to "handle" suspected asbestos

Educate your client

**Asbestos**  
 The best defense is education. The Agency for Toxic Substances and Hazardous Waste (ATSDR) has developed a Homeowner's Guide to Removing Sheet Vinyl Flooring with Asbestos Backing. This guide provides homeowners with the information they need to make informed decisions about asbestos removal in their homes.

**Asbestos and Health: Frequently Asked Questions**

**A Homeowner's Guide to Removing Sheet Vinyl Flooring with Asbestos Backing**

**EPA Asbestos**  
 Learn About Asbestos | Protect Your Family | School Buildings | Building Owners/Managers | Cleanup Sites | Asbestos Professionals

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## RADON

**Fixes for Existing Housing:**

- ✓ Seal floor and cracks
- ✓ Vent from below slab
- ✓ Fan sucks air – active system
- ✓ Sump suction reduces entry

**EPA A Citizen's Guide To Radon**  
 The Guide To Protecting Yourself And Your Family From Radon

**EPA Consumer's Guide To Radon Reduction**  
 How to fix your home

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### FINDING A QUALIFIED RADON CONTRACTOR

- Contact EPA  
<https://www.epa.gov/radon/find-information-about-local-radon-zones-and-state-contact-information#radonmap>
- Contact a private national proficiency programs



<http://aarst-nrpp.com/wp/>      <http://www.nrsb.org/>

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### VOLATILE ORGANIC COMPOUNDS

Educate for these simple steps:

1. Don't use it if you don't have to.
2. Substitute a better product.
3. Store materials properly.
4. Ventilate.



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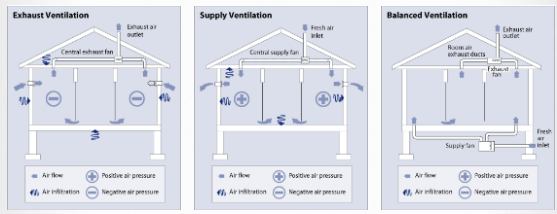
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### KEEP IT VENTILATION - STRATEGIES



**Exhaust Only**      **Supply Only**      **Balanced Exhaust and Supply**

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## KEEP IT MAINTAINED INTERVENTIONS

- General maintenance is essential
- Addressing lead-based paint is critical.




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## EPA RENOVATION REPAIR AND PAINTING RULE (RRP)

Firms performing renovation, repair or painting projects that disturb lead-based paint in homes, child care facilities and pre-schools built before 1978 must:

1. Have their firm certified by EPA (or an EPA authorized state),
2. Use certified renovators who are trained by EPA-approved training providers and
3. Follow lead-safe work practices.

Essentials Manual




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## FIRM CERTIFICATION

Firms that require certification:

- Anyone paid to perform work that disturbs paint in housing and child-occupied facilities built before 1978 must be certified.
- Examples:
  - Residential rental property owners / managers
  - General contractors
  - Special trade contractors




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## LEAD-SAFE WORK PRACTICES

**BEFORE** renovation, firms must distribute EPA's Renovate Right booklet

**DURING** renovation  
Examples of requirements:

- Work area must be contained to prevent dust and debris from leaving the work area
- There must be a thorough clean up followed by a procedure to verify that the work area is free of lead contamination.



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## WHAT IS YOUR RESPONSIBILITY AS AN HHE?

- Know if a house was built before 1978,
- Identify whether the property has deteriorated paint,
- Educate the resident about the RRP requirements



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## KEEP IT PEST-FREE INTERVENTIONS

### Integrated Pest Management (IPM)

- The best approach to managing pests
- HUD, CDC, EPA, the National Pest Management Association all consider it the best practice in managing pests
- Not new, unproven or radical
- HUD has implemented IPM since 1995



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## WHAT IS IPM?

**Integrated** – IPM uses multiple methods that work together, and have the least risk to people and the environment.

**Pest** – IPM is used for many pests. We'll cover cockroaches, mice, rats and bedbugs.

**Management** – you can't get rid of pests forever but you can successfully manage them.




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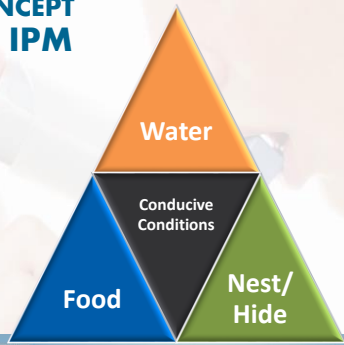
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## THE CONCEPT BEHIND IPM




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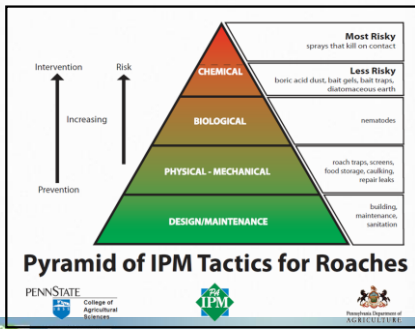
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## EXAMPLE: HANDLING ROACHES THE IPM WAY



**Pyramid of IPM Tactics for Roaches**




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## WHAT IS IPM?

The IPM approach includes multiple, integrated tools:



**Educational** tools – educating residents to change behaviors so no available food, water or hiding places for pests in their house.



**Physical** tools – preventing pests from getting into a house (e.g. sealing up cracks in a foundation and / or using snap traps)



**Chemical** tools – using low-toxicity pesticides with limited exposure to people when using (e.g. cockroach bait stations)




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## THE SIX STEPS OF IPM

Steps	Description
1. Inspection and Identification	Inspect the property and identify the pests.
2. Exclusion	Keep the pests out of the house.
3. Educate residents	Help residents understand their important role in managing pests.




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## THE SIX STEPS OF IPM

Steps	Description
4. Sanitation	Make sure food, water and hiding places are not available to pests.
5. Physical and Chemical Control	Use glue traps (cockroaches), snap traps (mice), and rat traps. Use bait stations for cockroaches and insecticide dusts.
6. Monitoring	Use glue traps and snap traps to control pests and monitor property to make sure they haven't returned.




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## PRIMARY BENEFITS OF IPM

### It's Safer

By their very nature, pesticides are toxic. IPM minimizes the use of pesticides so people, animals and the environment are much less likely to be harmed.

### It Works

For insects, conventional pest control primarily utilizes spraying, and sometimes fogging. The problem with these methods is that they only kill the insects they touch. What about those that are hidden?



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## 1. INSPECTION & IDENTIFICATION

- Thorough inspection
- Identification of pests found



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## IDENTIFICATION RESOURCES

- National Pest Management Association's (NPMA) Field Guide app for identifying pests. Go to Apple Store or Google Play Store to download (costs \$4.99).
- For cockroach identification, go to <https://ecommons.cornell.edu/handle/1813/43848>, click on "found-cockroach-bro-NYSIPM.pdf" under VIEW/OPEN.
- The University of Minnesota Cooperative Extension at: <http://www.extension.umn.edu/garden/insects/find/insects-by-category/#household>.
- The University of Kansas at: <http://entomology.k-state.edu/extension/insect-information/household-pests.html>



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### WHAT TO LOOK FOR AND WHERE TO LOOK

**What to look for:**

- The pest (*dead or alive*)
- Pest body parts (*yes, eww*)
- Droppings (*also eww*)
- Nests and burrows

**Where to look:**

- Near food and water sources
- Hidden places (e.g. behind an appliance)
- Near entry holes



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**Rat proofing did not work here...**

**Get down on the ground and look under the pipe...**

Rat burrow entrance



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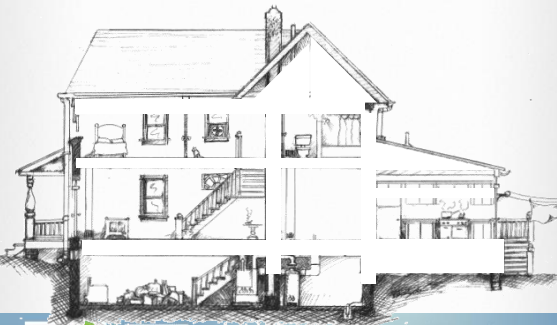
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### A PERSON'S VIEW



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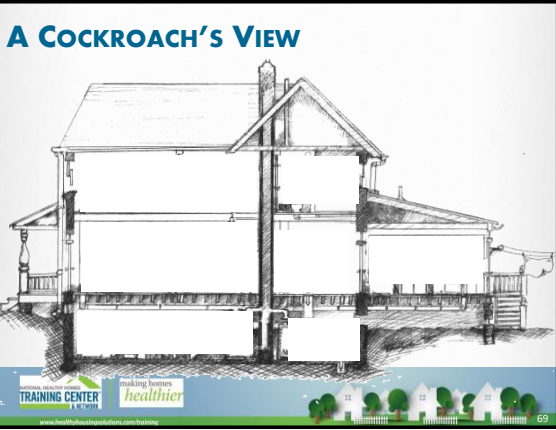
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### 2. EXCLUSION

Examples:

- Install door sweeps.
- Seal cracks and crevices with silicone caulk.
- Pack larger crevices with copper or stainless steel mesh.
- Use expanding spray foam for larger holes.

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### 3. EDUCATE RESIDENTS

- Residents can make or break an IPM effort
- Facilities staff and pest management professionals are important for multifamily buildings

**TRAINING CENTER** making homes healthier

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#### 4. SANITATION

Photo: City of Houston Bureau of Children's and Environmental Health



03/18/2008

- Food
- Water
- Harborage

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#### A NOTE ON WATER

- Essential for insects & rats, but not for mice or bedbugs
- Mosquitoes
- Structural damage



03/18/2008

Photo: City of Houston Bureau of Children's and Environmental Health

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#### 5. PHYSICAL CONTROL

- Traps
- Baits and gels
- Inert dusts
- Insect growth regulators



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### BE AWARE OF ILLEGAL AND RISKY PESTICIDES

- Pesticides that look like candy - mothballs
- “Miraculous” Chinese Insecticide chalk
- “Tres Pasitos”
- Many pesticide have been withdrawn



↑  
candy!



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### EPA SIGNAL WORDS FOR POISONS

**CAUTION** **CAUTION** means the pesticide product is slightly toxic if eaten, absorbed through the skin, inhaled, or it causes slight eye or skin irritation.

**WARNING** **WARNING** indicates the pesticide product is moderately toxic if eaten, absorbed through the skin, inhaled, or it causes moderate eye or skin irritation.

**DANGER** **DANGER** means that the pesticide product is highly toxic by at least one route of exposure. It may be corrosive, causing irreversible damage to the skin or eyes. Alternatively, it may be highly toxic if eaten, absorbed through the skin, or inhaled.

**POISON** If this is the case, then the word “**POISON**” must also be included in red letters on the front panel of the product label.



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### 6. MONITORING FOR COCKROACHES

- Keep looking to spot reinfestations
- Place glue traps in corners
  - Behind appliances
  - Under sink
  - Under cover!
- Date and mark
- Don't disturb





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### 6. MONITORING FOR RODENTS

- Use snap traps
- Place in corners, along runways and in tight dark spaces
- Check daily
- Increase trapping if monitors indicate activity
- Always have monitors for insects and rodents in place



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### THE PANIC OF BED BUGS

- Can be avoided and eliminated
- Every skin irritation or bite is not bed bugs
- You can see them.
- Do not cause or spread diseases.



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### BED BUG - TREATMENT

- Inspection
- Vacuum
- Heat or cold
- Pesticides by PCO only
- Re-inspection and retreatment
- Encasements and interceptors



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**REVIEW . . . WHAT DO YOU REMEMBER?**

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3. 



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**REVIEW . . . WHAT DO YOU REMEMBER?**

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**REVIEW . . . WHAT DO YOU REMEMBER?**

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**REVIEW . . . WHAT DO YOU REMEMBER?**

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**REVIEW . . . WHAT DO YOU REMEMBER?**

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