

Healthy Homes for Community Health Workers



Make the Connections - See the Big Picture Exercise

Health Impacts	Housing Hazards	Corrective Action	Resources

Healthy Homes for Community Health Workers



Exercise: Identify the Healthy Homes Problems

Photo #	Potential Problems	Proposed Correction
#1		
#2		
#3		
#4		
#5		
#6		
#7		
#8		
#9		
#10		

Community Action for Healthy Housing

There are a lot of things that a resident can do to make their home healthy. They can wipe down shower stalls, get rid of clutter, keep food in sealed containers, use exhaust fans, make sure that smoke alarms work, and have their children tested for lead poisoning.

But what if a landlord refuses to fix a leak or clean up mold? What if a homeowner can't afford to seal up a crack or repair a window themselves? Here are some tools for action that may help with these problems.

If the resident is a renter, the first thing they should do is **check their lease!** Usually, their lease will say that the landlord has to keep the property in good condition.



Not sure what good condition means? **Contact** your local department of housing, a building code official, your local health department or NCHH to **find out how a landlord in your community is required to maintain their property.**



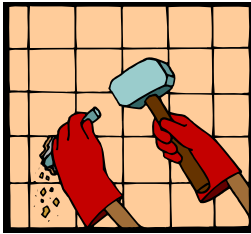
If the resident lives in Section 8 or other public housing, HUD requires that the property meet certain standards called the Housing Quality Standards.



Contact your landlord and/or local public housing authority to **find out the requirements the landlord must follow to maintain a property for Section 8 or other public housing residents.**



If you are working with a homeowner who needs money for repairs, you may be able to get the money (as a grant or loan) from a weatherization or minor repair program.



Many weatherization or minor repair programs are run by a local **Community Action Agency**. Look in the phone book for one in your community. If you can't find one, **contact** your local Department of Housing. If your community has a local **healthy homes program** or **lead hazard control program**, they might be able to help also.



Contact the **National Center for Healthy Housing** (NCHH) for advice on more resources.



National Center for Healthy Housing

NCHH contact information:

Susan Aceti
National Center for Healthy Housing
10320 Little Patuxent Parkway
Suite 500
Columbia, MD 21046

443-539-4153
saceti@nchh.org

[ADD ADDITIONAL LOCAL RESOURCES
HERE]

[ADD ADDITIONAL LOCAL
RESOURCES HERE]

Visual Survey Instructions

I. Talk with the resident before you begin:

- ☐ Explain that you will draw floor and site plans, take notes, take photographs, collect samples, and possibly leave roach traps, a carbon monoxide alarm, or radon detectors for more than one day.
- ☐ Explain what kinds of samples you plan to take after you finish the visual survey.
- ☐ If a tenant, ask whether the resident received lead hazard disclosure information from the landlord and note the response in the space provided at the bottom of the **Visual Survey Report**.

2. Survey the exterior and grounds and draw the Site Plan:

The Site Plan is a sketch of the area around the home where you will not any problems you identify and where you collect soil samples. See CEHRC's website for the Site Plan form and an example.

- ☐ Walk around outside the building to look at the overall layout of the property.
- ☐ On the **Site Plan**, draw the outline of the building and where it sits on the property.
- ☐ Label important features on the **Site Plan**:
 - The location of the street and other landmarks
 - Play areas
 - Trash areas (dumpster, trash collection area)
 - Outdoor parking areas
 - Garages or other buildings

3. Note hazards on Site Plan and Visual Survey Report:

- ☐ Note the following hazards, (1) on the Site Plan, AND (2) by making a check mark next to the name of the problem in the “exterior” column on the **Visual Survey Report**:

- **Bare soil (no grass, mulch, or wood shavings) in the yard around the home or in a common outdoor area:** in play areas (in sand boxes, under swing sets, in areas where kids play), along the “dripline” within three feet of the building, and in other areas of the yard.

- **Deteriorated Paint (peeling, flaking, chipping, cracking):**

- Deteriorated in any way
- Paint coming loose from the surface or substrate (wood, plaster, metal, drywall)
- On the home, fences, etc.

- **Holes in the walls of the building.** Look for openings around windows and doors.

- ☐ Indicate the extent of the problem for **deteriorated paint and water damage** by noting on the following on the Visual Survey Report:

- N = None

- L = Low (less than 2ft²)

- M = Moderate (2 - 10ft²)

- H = High (10ft² or more)

- E = Extreme (structural damage caused by this problem)

- ☐ Note the following hazards on the **Visual Survey Report** only:

- **Rodents or evidence:** Note if you see, or the resident reports seeing, rats or mice, or very small pellets that may be rodent droppings.



- **Other physical conditions that seem hazardous,** such as standing water, woodpiles near exterior walls, accumulated trash, obvious water damage or wood rot, and damaged gutters, downspouts and other

building components.

4. Draw one Floor Plan for each floor of the home:

The Floor Plan shows the layout of the rooms (as seen from above). The Floor Plan makes it easy for you to note where you identify problems. You will also use the Floor Plan to show where you collect samples, leave testing materials for collection, and take photographs.

The Floor Plan does not have to be drawn using exact measurements. It should show the general relationships between rooms in the home and exterior walls. See CEHRC's website for the Floor Plan for and an example.

- ☐ Walk through the home to get a good understanding of the overall layout of the rooms.
- ☐ Draw the overall outline of the entire home.
- ☐ If the home has more than one floor, note which floor each **Floor Plan** represents before you draw it. If the home has two floors, one copy of the floor plan will be marked "**1 of 2**" and the other will be "**2 of 2**". If you draw a plan for an unoccupied basement, mark it "**0**".
- ☐ Draw the walls between rooms, then the doors and windows:
 - a. Draw a rectangle for each door: 
 - b. Draw a circle through the line of the wall for each window. 
 - c. Mark the walls of closets to help you keep the walls in perspective and avoid confusion about the doors.
- ☐ Label each room using the same names and abbreviations as listed on the **Visual Survey Report**
- ☐ Draw an asterisk (*) in rooms where children sleep or play.
- ☐ Be sure to note entryway of the home.

5. Perform the Visual Survey: note hazards on both the Floor Plan and Visual Survey Report

- ☐ Fill in the top of the **Visual Survey Report** and cross out columns for rooms that are not present. Add names or areas if necessary. If you

do not have enough columns, use a second copy of the report and write “1 of 2” on the first sheet and “2 of 2” on the second.

- ☐ Draw a star/asterisk (*) next to the names of rooms where children sleep or play.
- ☐ In each room, look for the problems listed below. For each, (1) note the location of each problem on the floor plan using the abbreviation from the key below, AND (2) make a check mark (☒) next to the name of the problem in the column for that room on the **Visual Survey Report**.

a. Deteriorated paint (peeling, flaking, chipping, cracking paint):

- Deteriorated in any way
- Paint coming loose from the painted surface (wood, plaster, metal, drywall)
- Teeth marks on the painted surface.

b. Cockroaches or their remains: Note the location if you see any cockroaches, their shells or debris, or if the resident reports seeing them.

c. Holes in walls between the inside and outside of the building and between rooms. Look for openings around windows and exterior doors.

d. Unvented gas oven, clothes dryer, or heater: An appliance that burns natural gas, kerosene, wood, or other fuel is “unvented” if it does not have a pipe or ductwork that sends the exhaust outside.

e. Mold or fungus or similar stains on the wall, on the carpet, under sinks, outside of showers, or around windows. On the Visual Survey Report, check “obvious source of moisture” if the mold is near a source such as a dripping drain or moisture around a window. If there is no obvious moisture source for the mold, check the other box.

- ☐ Indicate the extent of the problem for **deteriorated paint and water damage** by noting on the following on the Visual Survey Report:

- N = None
- L = Low (less than 2ft²)
- M = Moderate (2 - 10ft²)
- H = High (10ft² or more)
- E = Extreme (structural damage caused by this problem)

- ☐ On the **Visual Survey Report** only, note the following potential problems:
 - a. Walls appear wet or newly stained, or the plaster or drywall is bulging.**
 - b. Rodents or evidence:** Note if you see, or the resident reports seeing, rats or mice, or very small pellets that may be rodent droppings.
 - c. Strong musty smell like mold or fungus.**
 - d. Natural gas or sewer gas smell.** If you think you smell natural gas, advise the resident to call the gas company immediately.
 - e. Old or worn-out carpeting if in poor condition or extremely dirty.**
 - f. Other:** write in additional physical conditions that seem problematic (such as other odors, water leaks, etc.)

6. Double-check the Visual Survey Report, Floor Plan, and Site Plan:

- ☐ The resident's name, address, and unit number, and your name should be filled in.
- ☐ Make sure the names of the rooms on the **Floor Plan(s)** match those on the **Visual Survey Report**.

7. Determine further testing needs and locations:

Plan to take samples if you have identified any of the following:

- ☐ Deteriorated paint (lead)
- ☐ Bare soil (lead)
- ☐ Water damage (lead, mold and moisture)
- ☐ Unvented appliances (carbon monoxide)
- ☐ Cockroaches or evidence

8. Provide follow-up instructions, schedule the next visit, and thank the resident:

- ☐ Explain approximately when and how the **Summary Results Report** will be presented.

Schedule a time when someone will be home if you need to return to collect tests for carbon monoxide, cockroaches or radon, and note this on the Visual Survey Report.

Visual Survey Report

Resident: _____

Alternate Contact: _____

Address: _____

Unit # _____ Unique ID _____

Resident Phone: _____

Visual Conducted by: _____

Date: _____

Make a checkmark (✓) if the problem appears in the room or area. For deteriorated paint and water damage, indicate the extent of the problem (see instructions) Use the extra rows to identify any other hazards you notice. Put an asterisk (*) above any room(s) where a child sleeps or plays. Circle (○) where you photograph a problem.

ROOM OR AREA

PROBLEM		Exterior	Porch	Entryway	Living Room	Dining Room	Kitchen	Bedroom 1	Bedroom 2	Bedroom 3	Bathroom 1	Bathroom 2	Basement		
Deteriorated paint	Walls														
	Windows, door, or trim														
	Paint chips on floor														
Soil with no grass or mulch															
Cockroaches															
Rodents															
Holes in wall															
Mold/ Mildew	Obvious source of moisture														
	No obvious source of moisture														
Water Damage: walls wet/newly stained															
Strong musty smell															
Natural gas/sewer gas smell															
Unvented gas oven/dryer/heater															
Worn-out carpeting															
Other:															
Other:															
Other:															
Other:															
Other:															

If renting, received lead hazard disclosure information from landlord? Yes No

Follow-up visit scheduled for: Date _____ Time: _____

Action Plan

Resident: _____

Address: _____

Phone: _____

Date: _____

Contact Person: _____

Phone: _____

PROBLEM	ROOM(S) OR AREA(S)	ACTION TO TAKE
Deteriorated paint		
Soil with no grass or mulch		
Cockroaches		
Rodents		
Holes in wall		
Mold/mildew		
Water damage		
Strong musty smell		
Natural gas/sewer gas smell		

Unvented gas oven/dryer/heater		
Worn-out carpeting		
Other		
Other		
Other		
Other		
Other		



The scenario is fictional. The photos are taken from a variety of homes to highlight key issues.

It is a warm summer day and you are going out on a home visit to see a family. The family has a six-year old child who is being treated for asthma. The mom has concerns about recent problems with her child's asthma and the need for more frequent use of “rescue” inhalers.

You note that the family lives in a multifamily building in an urban neighborhood. The building appears to have been built in the late 1950s. That is consistent with other buildings in the neighborhood. Given its urban location, you know that the home is connected to a public water system.

As you go along, you make notes and check off any relevant information on the [PEHA Survey form](#). Let's get started!

Welcome and Introductions

- [View photos of basement conditions.](#)
- [View photos of outside conditions.](#)

As you talk further, the mom reports that she is a Section 8 tenant. When she moved in, she says the landlord told her that the house was built in 1958 and that lead hazard control work was completed before she moved in 18 months ago. She could not remember getting any booklet or warnings about lead when she signed her lease.

You ask the mom about other general housing characteristics. She knows there is a basement but has not been in there. She says she has seen the oil truck connect up to the fittings on the side of the house. She shows you the unlocked door to the basement in the common area. You check out the basement.

The mom says that the oil heat can be hard to control in the winter. Some rooms are too hot and others are too cold. She sometimes has to open windows to make the rooms comfortable.

You observe, and the mom reports, that there are no pets in the home.

The mom is focused on the construction dust and mice. She says she has not seen any mold. You follow along on the [PEHA Survey Form](#) and ask about other pests. The mom reports no trouble with cockroaches, rats, or bedbugs.

You ask about asbestos and radon. The mom reports that she has no knowledge about whether the building has been tested or treated.

You do not observe any air fresheners or scented candles present, but you ask about their use. The mom confirms that she does not use those items because they aggravate her child's asthma.

Next you do a kitchen walkthrough with the mom.

Kitchen

- [View photos of other kitchen conditions.](#)

You review the [PEHA Survey Form](#) and ask to move on to the bedroom and bathroom.



Living Room Walkthrough and Neighborhood Review

- [View photos of living room conditions.](#)

You note the active construction outside and the dust that is accumulating in the window sill even though the window is closed. You also note that there are no window guards on the windows and that the blinds have looped cords.

You ask the mom about the last time the young children were tested for lead. Mom notes that it was within the last year and the results were less than 10.

You sit down again with the mom to review home safety questions. You provide her with a poison control hotline sticker to place on the phone. You ask about fire safety issues. She notes that there is no smoking allowed in the house and matches are stored in a high, safety-locked cabinet. The family does not have a formal fire escape plan.

The mom reports that the hallway lighting is good. She has no safety concerns about lighting. In the kitchen you note the coffee maker and tea kettle. You ask about the child's access to hot liquids. The mom notes that her son is older and is aware that he should not touch hot things. You ask the mom if she knows what the hot water temperature is set at. She does not know.

Bedroom and Bathroom

- [View photos of bedroom conditions.](#)
- [View photos of bathroom conditions.](#)

You ask the mom about the use of humidifiers in the bedroom. She notes that she sometimes uses them in the winter because the air gets too dry from the hard to control heat.

As you talk further, the mom confirms that the bathroom fan does function although it is a bit noisy. You observe a hair dryer on the edge of the sink. You ask the mom about adult supervision when her child is bathing. She notes that she is right there most of the time but may sometimes leave the room to grab a towel or item of clothing for the child.

Pediatric Environmental Home Assessment

Last updated 6/7/06

RESIDENT REPORTED INFORMATION

Bolded responses indicate areas of greater concern.

General Housing Characteristics

Type of ownership		<input type="checkbox"/> Own house	<input type="checkbox"/> Market rate rental hsg.	<input type="checkbox"/> Subsidized rental hsg.	<input type="checkbox"/> Shelter
Age of home		<input type="checkbox"/> Pre-1950	<input type="checkbox"/> 1950 - 1978	<input type="checkbox"/> Post-1978	<input type="checkbox"/> Don't know
Structural foundation		<input type="checkbox"/> Basement	<input type="checkbox"/> Slab on grade	<input type="checkbox"/> Crawlspace	<input type="checkbox"/> Don't know
Floors lived in (check all that apply)		<input type="checkbox"/> Basement	<input type="checkbox"/> 1 st	<input type="checkbox"/> 2 nd	<input type="checkbox"/> 3 rd or higher
Heating	Fuel used	<input type="checkbox"/> Natural gas	<input type="checkbox"/> Oil	<input type="checkbox"/> Electric	<input type="checkbox"/> Wood
	Sources in home	<input type="checkbox"/> Baseboards	<input type="checkbox"/> Radiators	<input type="checkbox"/> Forced hot air vents	<input type="checkbox"/> Other: _____
	Filters changed	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> HEPA air filter	<input type="checkbox"/> Don't know
	Control	<input type="checkbox"/> Easy to control heat	<input type="checkbox"/> Hard to control heat		
Cooling		<input type="checkbox"/> Windows	<input type="checkbox"/> Central/window AC	<input type="checkbox"/> Fans	<input type="checkbox"/> None
Ventilation (check all that apply)		<input type="checkbox"/> Open windows	<input type="checkbox"/> Kitchen & bathroom fans	<input type="checkbox"/> Central ventilation	

Indoor Pollutants

Mold and moisture		<input type="checkbox"/> Uses dehumidifier <input type="checkbox"/> No damage	<input type="checkbox"/> Uses vaporizer or humidifier	<input type="checkbox"/> Musty odor evident	<input type="checkbox"/> Visible water / mold damage
Pet	Presence	<input type="checkbox"/> No pets	<input type="checkbox"/> Cat # _____	<input type="checkbox"/> Dog # _____	<input type="checkbox"/> Other: _____
	Management	<input type="checkbox"/> Kept strictly outdoors	<input type="checkbox"/> Not allowed in bedroom	<input type="checkbox"/> Full access in home	<input type="checkbox"/> Sleeping location: _____
Pests	Cockroaches	<input type="checkbox"/> None	<input type="checkbox"/> Family reports	<input type="checkbox"/> Family shows evidence	Present in <input type="checkbox"/> kitchen <input type="checkbox"/> bedroom <input type="checkbox"/> other
	Mice	<input type="checkbox"/> None	<input type="checkbox"/> Family reports	<input type="checkbox"/> Family shows evidence	Present in <input type="checkbox"/> kitchen <input type="checkbox"/> bedroom <input type="checkbox"/> other
	Rats	<input type="checkbox"/> None	<input type="checkbox"/> Family reports	<input type="checkbox"/> Family shows evidence	Present in <input type="checkbox"/> kitchen <input type="checkbox"/> bedroom <input type="checkbox"/> other
	Bedbugs	<input type="checkbox"/> None	<input type="checkbox"/> Family reports	<input type="checkbox"/> Family shows evidence	Present in <input type="checkbox"/> bedroom <input type="checkbox"/> other
Lead paint hazards		<input type="checkbox"/> Tested and passed	<input type="checkbox"/> Tested, failed, and mitigated	<input type="checkbox"/> Not tested/Don't know	<input type="checkbox"/> Loose, peeling, or chipping, paint
Asbestos		<input type="checkbox"/> Tested – None present	<input type="checkbox"/> Tested, failed, and mitigated	<input type="checkbox"/> Not tested/Don't know	<input type="checkbox"/> Damaged material
Radon		<input type="checkbox"/> Tested and passed	<input type="checkbox"/> Tested, failed, and mitigated	<input type="checkbox"/> Not tested/Don't know	<input type="checkbox"/> Failed test but not mitigated
Health and Safety Alarms		<input type="checkbox"/> Smoke alarm working and well placed	<input type="checkbox"/> CO alarm working and one on each floor	<input type="checkbox"/> CO alarm does not log peak level	<input type="checkbox"/> No smoke alarm <input type="checkbox"/> No CO alarm
Tobacco smoke exposure		<input type="checkbox"/> No smoking allowed	<input type="checkbox"/> Smoking only allowed outdoors	<input type="checkbox"/> Smoking allowed indoors <input type="checkbox"/> bedroom <input type="checkbox"/> playroom	<input type="checkbox"/> Total # smokers in household: _____ <input type="checkbox"/> Mother smokes
Other irritants		<input type="checkbox"/> None	<input type="checkbox"/> Air fresheners	<input type="checkbox"/> Potpourri, incense, candles	<input type="checkbox"/> Other strong odors: _____
Type of cleaning		<input type="checkbox"/> Vacuum (non-HEPA)	<input type="checkbox"/> HEPA vacuum	<input type="checkbox"/> Damp mop and damp dusting	<input type="checkbox"/> Sweep or dry mop

NOTES:

OBSERVED INFORMATION

Bolded responses indicate areas of greater concern.

Home Environment

Drinking Water Source		<input type="checkbox"/> Public water system	<input type="checkbox"/> Household Well		
Kitchen	Cleanliness	<input type="checkbox"/> No soiling	<input type="checkbox"/> Trash or garbage sealed	<input type="checkbox"/> Trash or garbage not sealed	<input type="checkbox"/> Wall/ceiling/floor damage
	Ventilation	<input type="checkbox"/> Functioning stove exhaust fan/vent	<input type="checkbox"/> Mold growth present	<input type="checkbox"/> Broken stove exhaust fan/vent	<input type="checkbox"/> No stove exhaust fan/vent
Bathroom		<input type="checkbox"/> Functioning exhaust fan/vent/window	<input type="checkbox"/> Mold growth present	<input type="checkbox"/> Needs cleaning and maintenance	<input type="checkbox"/> Wall/ceiling/floor damage
Basement		<input type="checkbox"/> None/No Access	<input type="checkbox"/> Mold growth present	<input type="checkbox"/> Needs cleaning and maintenance	<input type="checkbox"/> Wall/ceiling/floor damage
Living Room		<input type="checkbox"/> No soiling	<input type="checkbox"/> Mold growth present	<input type="checkbox"/> Needs cleaning and maintenance	<input type="checkbox"/> Wall/ceiling/floor damage
Laundry area		<input type="checkbox"/> None	<input type="checkbox"/> Well maintained	<input type="checkbox"/> Dryer not vented	<input type="checkbox"/> Hang clothes to dry

Sleep Environment

Children's sleep area	<input type="checkbox"/> Own room	<input type="checkbox"/> Shared # in room _____	<input type="checkbox"/> Other	
# Beds	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> More than 2
Allergen impermeable encasings on beds	<input type="checkbox"/> On mattress and boxspring (zippered)	<input type="checkbox"/> On mattress only (zippered)	<input type="checkbox"/> On mattress (not zippered)	<input type="checkbox"/> No mattress covers
Pillows	<input type="checkbox"/> Allergen-proof	<input type="checkbox"/> Washable	<input type="checkbox"/> Feather/ down	
Bedding	<input type="checkbox"/> Washable	<input type="checkbox"/> Wool/not washable	<input type="checkbox"/> Feather/ down	
Flooring	<input type="checkbox"/> Hardwood/Tile/Linoleum	<input type="checkbox"/> Small area rug	<input type="checkbox"/> Large area rug	<input type="checkbox"/> Wall-to-wall carpet
Dust/mold catchers	<input type="checkbox"/> Stuffed animals/washable toys <input type="checkbox"/> No clutter	<input type="checkbox"/> Non-washable toys	<input type="checkbox"/> Plants	<input type="checkbox"/> Other _____
Window	<input type="checkbox"/> Washable shades/curtains	<input type="checkbox"/> Washable blinds	<input type="checkbox"/> Curtains/ drapes	<input type="checkbox"/> No window/ poor ventilation
Other irritants	<input type="checkbox"/> Abundant cosmetics and fragrances			

Home Safety

** can indicate housing code violations*

General				
Active renovation or remodeling	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
*Stairs, protective walls, railings, porches	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
*Hallway lighting	<input type="checkbox"/> Adequate	<input type="checkbox"/> Inadequate		
Poison control number	<input type="checkbox"/> Posted by phone	<input type="checkbox"/> Not posted by phone		
**Family fire escape plan	<input type="checkbox"/> Developed and have copy available	<input type="checkbox"/> None		
Electrical appliances (radio, hair dryer, space heater)	<input type="checkbox"/> Not used near water	<input type="checkbox"/> Used near water		
Matches and lighters stored	<input type="checkbox"/> Out of child's reach	<input type="checkbox"/> Within child's reach		
Exterior environment	<input type="checkbox"/> Well maintained	<input type="checkbox"/> Abundant trash and debris	<input type="checkbox"/> Chipping, peeling paint	<input type="checkbox"/> Broken window(s)

OBSERVED INFORMATION (continued)


Home Safety


* can indicate housing code violations

Young Children Present	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Coffee, hot liquids, and foods	<input type="checkbox"/> Out of child's reach	<input type="checkbox"/> Within child's reach	
Cleaning supplies stored	<input type="checkbox"/> Out of child's reach	<input type="checkbox"/> Within child's reach	
Medicine and vitamins stored	<input type="checkbox"/> Out of child's reach	<input type="checkbox"/> Within child's reach	
Child (less than six years old) been tested for lead poisoning	<input type="checkbox"/> Within past 6 months Result: _____	<input type="checkbox"/> Within past year or more. When? _____ Result: _____	<input type="checkbox"/> No
Child watched by an adult while in the tub	<input type="checkbox"/> Always	<input type="checkbox"/> Most of the time	<input type="checkbox"/> No
*Home's hot water temperature	<input type="checkbox"/> <120 F	<input type="checkbox"/> >120 F	<input type="checkbox"/> Don't know
Non-accordion toddler gates used	<input type="checkbox"/> At top of stairs	<input type="checkbox"/> At bottom of stairs	<input type="checkbox"/> No
Crib mattress	<input type="checkbox"/> Fits well	<input type="checkbox"/> Loose	<input type="checkbox"/> NA
Window guards	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Window blind cords	<input type="checkbox"/> Split cord	<input type="checkbox"/> Looped cord	

NOTES:

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 and developed by


National Center for Healthy Housing

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The National Environmental Education & Training Foundation

We credit its *Environmental Management of Pediatric Asthma: Guidelines for Health Care Providers*
 and model Pediatric Environmental History Form

and



The Center for Healthy Homes and Neighborhoods at Boston University

We credit its model Pediatric Asthma-Allergy Home Assessment form

Pediatric Environmental Home Assessment Form

ACTION PLAN

After completing the assessment, use this as a guide for education and recommending corrective action.

General Housing Characteristics		
CONCERN	TO DO	FAMILY TO DO
Age of home	<input type="checkbox"/> If built before 1978, educate as follows: <ul style="list-style-type: none"> ○ Home is likely to have lead paint. ○ Lead hazards can be harmful to young children's health and development. ○ If family has a child less than six years old then it is important to test for lead hazards. <input type="checkbox"/> Get more information about lead testing at www.epa.gov/lead/ and provide to family. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> If your child is less than six years old, contact the childhood lead poisoning prevention program (CLPPP) at your state and local departments of health. <input type="checkbox"/> Consider getting a lead paint inspection or risk assessment to determine whether there are lead hazards in your home. <input type="checkbox"/> If there are hazards, repair them based on state and local regulations and requirements. Consult with state CLPPP.
Heating source - Other: Kerosene heaters, space heaters, fireplaces, wood stoves	<input type="checkbox"/> Counsel family about the dangers of such heating sources in terms of fire safety and indoor air quality. <input type="checkbox"/> Get more information about indoor air quality and combustion sources in the home at http://www.epa.gov/iaq/combust.html and provide to family. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Make sure kerosene heaters are vented to the outdoors or not used. <input type="checkbox"/> Make sure space heaters are at least 3 feet from anything flammable. <input type="checkbox"/> When necessary, use only 12 or 14 gauge extension cords (the lower the better). <input type="checkbox"/> Ensure that there is a good seal on fireplace screen or woodstove doors.
Filters	<input type="checkbox"/> Counsel family to do proper filter maintenance. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Change filters quarterly. <input type="checkbox"/> Use filters which are rated MERV 10.
Indoor Pollutants		
CONCERN	TO DO	FAMILY TO DO
Vaporizers/Humidifiers	<input type="checkbox"/> Counsel the family about the importance of proper vaporizer/humidifier maintenance and impact of mold growth on health. <input type="checkbox"/> Get more information about humidifier maintenance at http://www.epa.gov/iaq/pubs/humidif.html and provide to family. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Change the water daily with clean cold water. <input type="checkbox"/> Use distilled or demineralized water. <input type="checkbox"/> Clean humidifier every 3 days. Follow manufacturer's instructions. <input type="checkbox"/> Change filter regularly. Follow manufacturer's instructions. Change more often if dirty. <input type="checkbox"/> Keep surrounding area dry. <input type="checkbox"/> Drain and clean humidifier before storing. <input type="checkbox"/> Only run humidifier a few hours a day to avoid mold growth.
Mold/Musty odor	<input type="checkbox"/> Educate family about the importance of keeping things dry and the impact of mold on family health. <input type="checkbox"/> Get more information at http://www.epa.gov/mold/moldguide.html and provide to family. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Any mold or musty odor must be investigated for a source of water. Examine plumbing, roofing, or other possible leaks. <input type="checkbox"/> If homeowner, then make necessary repairs. <input type="checkbox"/> If renter, then talk with your landlord about needed repairs. Consider calling the local board of health for possible code violations.

Indoor Pollutants (continued)		
CONCERN	TO DO	FAMILY TO DO
Pets	<input type="checkbox"/> If anyone is allergic to pets, educate as follows: <ul style="list-style-type: none"> ○ Pets should not be allowed in bedrooms. ○ If possible, pets should be given away. ○ If pets cannot be given away, wash and groom pet to reduce allergens. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> If symptomatic, get allergen testing to determine if you are allergic to pets.
Infestations (mice, rats, cockroaches)	<input type="checkbox"/> Educate family about pest management and behavior change. <input type="checkbox"/> Get more information and order print materials at www.epa.gov/pesticides/catalogue and provide to family. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Eliminate water and food sources. Seal garbage and all foodstuffs. Look for water leaks. <input type="checkbox"/> Call local board of health for inspection <input type="checkbox"/> AVOID "bombs" of pesticides. <input type="checkbox"/> Hire, or talk to your landlord about hiring, an exterminator for "Integrated Pest Management" which does NOT include spraying pesticides.
Lead paint hazards	<input type="checkbox"/> See "Age of Home" above. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> See "Age of Home" above.
Radon	<input type="checkbox"/> Educate family about impact of radon on health. <input type="checkbox"/> Get more information about radon and radon testing at www.epa.gov/radon/ and provide to family. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Consider purchasing a radon home test kit. <input type="checkbox"/> Consult with your state and local departments of health about radon.
Asbestos	<input type="checkbox"/> Educate family about impact of asbestos on health. <input type="checkbox"/> Get more information about asbestos testing at www.epa.gov/asbestos/ and provide to family. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Do not disturb any surfaces which might contain asbestos. <input type="checkbox"/> Consult with your state and local departments of health about asbestos.
Smoke alarm/CO alarm	<input type="checkbox"/> If no smoke alarms, educate about risks and local laws regarding the presence of smoke alarms. <input type="checkbox"/> Counsel family to : <ul style="list-style-type: none"> ○ Install smoke alarms in home on every level and in every sleeping area. ○ Test them once a month. ○ Replace the batteries at least twice a year. ○ Replace alarms every 10 years. <input type="checkbox"/> If combustion appliances but no CO alarms, educate about risks and local laws regarding the presence of CO alarms. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> If no smoke alarms, then: <ul style="list-style-type: none"> ○ Purchase smoke alarms. Ensure that there is an operational smoke alarm on every floor of the home and in every sleeping area. ○ Call local board of health for local smoke alarm requirements. Some states have laws regarding presence of smoke alarms. <input type="checkbox"/> If combustion appliances but no CO alarms, then: <ul style="list-style-type: none"> ○ Make sure to purchase CO alarms which log peak levels. Ensure that there is an operational CO alarm on every floor of the home. ○ Call local board of health for local CO alarm requirements. Some states now have laws regarding presence of CO alarms.
Tobacco Smoke Exposure	<input type="checkbox"/> Educate about risks of environmental tobacco smoke (ETS) to children. <input type="checkbox"/> Get more information about ETS at http://www.epa.gov/smokefree/index.html and provide to family. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Choose not to smoke in your home and car and do not allow family and visitors to do so. Infants and toddlers are especially vulnerable to the health risks from secondhand smoke. <input type="checkbox"/> Do not allow childcare providers or others who work in your home to smoke. <input type="checkbox"/> Until you can quit, choose to smoke outside. Moving to another room or opening a window is not enough to protect your children. <input type="checkbox"/> Get help to stop smoking. Refer to EPA Smokefree Home pledge website www.epa.gov/smokefree and contact local smoking cessation services.

Home Environment		
CONCERN	TO DO	FAMILY TO DO
Other Irritants (scents, potpourri)	<input type="checkbox"/> If air fresheners present, educate as follows: <ul style="list-style-type: none"> Many air fresheners have volatile organic compounds (VOC) which trigger asthma. Avoid these products whenever possible. <input type="checkbox"/> Get more information about VOCs at http://www.epa.gov/iaq/voc.html and provide to family. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Remove air fresheners from home.
Cleaning	<input type="checkbox"/> Educate about benefits of wet mopping. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Avoid dry mopping or sweeping which makes dust airborne and may trigger an asthma exacerbation. Use wet mopping instead
Drinking Water Source – Public water supply	<input type="checkbox"/> Get more information about water testing at www.epa.gov/safewater/labs <input type="checkbox"/> Check to make sure septic system is not close to well. <input type="checkbox"/> Review items in "Family To Do" column with family	<input type="checkbox"/> Test water for lead. Contact local or state department of health for water testing information. <input type="checkbox"/> Find out if the public water supplier has notified consumers of any violations of health-based standards in the last year.

Home Environment (continued)

CONCERN	TO DO	FAMILY TO DO
Drinking Water Source – Household well water	<input type="checkbox"/> Ask these additional questions: <ul style="list-style-type: none"> ○ Is the wellhead protected and well constructed according to state or other requirements/specification? ○ Is water tested annually for bacteria and, if pregnant woman or infants in household, nitrates, and okay? ○ Is water tested annually, contaminants detected and alternate source used (appropriate filter or bottled water)? ○ Is water tested annually, contaminants detected, but alternate source not used? ○ Has the water been tested within the last year? ○ Are there noticeable changes in water taste, odor, color or clarity? (In this case, especially if pregnant woman or infant is in the household, recommend testing more than once a year). ○ Has there been a chemical or fuel spill leak near water supply? (If yes, recommend testing for chemical contaminants, such as volatile organic compounds). <input type="checkbox"/> Get more information about water testing at www.epa.gov/safewater/labs <input type="checkbox"/> Review items in “Family To Do” column with family.	<input type="checkbox"/> Test water for lead. Contact local or state department of health for water testing information.
Mold	<input type="checkbox"/> See “Mold and Musty Odor” recommendations above. <input type="checkbox"/> Make sure fans in bathroom and kitchen vent to the outside, not just in to walls. The goal is to take moisture out of home. <input type="checkbox"/> Review items in “Family To Do” column with family.	<input type="checkbox"/> See “Mold and Musty Odor” recommendations above.
Damage	<input type="checkbox"/> Educate about mold risks as they relate to damage. <input type="checkbox"/> If family owns home, then counsel to change behaviors. <input type="checkbox"/> If family rents home, then counsel them to talk with their landlord. <input type="checkbox"/> Review items in “Family To Do” column with family.	<input type="checkbox"/> If homeowner, then make necessary repairs. <input type="checkbox"/> If renter, then talk with your landlord about needed repairs. Consider calling the local board of health for possible code violations.

Sleeping Area		
CONCERN	TO DO	FAMILY TO DO
Mattress covers	<input type="checkbox"/> If anyone is allergic to dust mites, educate as follows: <ul style="list-style-type: none"> ○ Use allergen impermeable mattress covers with zippers on beds and pillows. <input type="checkbox"/> Review items in “Family To Do” column with family.	<input type="checkbox"/> If symptomatic, get allergen testing to determine if you are allergic to dust mites.
Carpet	<input type="checkbox"/> Review items in “Family To Do” column with family.	<input type="checkbox"/> Clean wall to wall carpet with vacuum weekly. <input type="checkbox"/> Shake area rugs outside weekly. <input type="checkbox"/> If carpet is more than 8 years old, consider replacing it with smooth wipeable flooring to reduce dust exposure. (8 year number came from Megan Sandel. Need to determine if that is number used by others too.)
Dust catchers	<input type="checkbox"/> Review items in “Family To Do” column with family.	<input type="checkbox"/> Reduce dust with less clutter. <input type="checkbox"/> Seal clutter in bags or boxes.
Windows	<input type="checkbox"/> If anyone is allergic to dust mites, review items in “Family To Do” column with family.	<input type="checkbox"/> If symptomatic, get allergen testing to determine if you are allergic to dust. <input type="checkbox"/> Use window treatments that are wipeable. <input type="checkbox"/> Avoid curtains and drapes to reduce excessive dust exposure.
Home Safety		
General Safety		
CONCERN	TO DO	FAMILY TO DO
Renovation/remodeling	<input type="checkbox"/> See “Age of Home” above. <input type="checkbox"/> Review items in “Family To Do” column with family.	<input type="checkbox"/> See “Age of Home” above. <input type="checkbox"/> If the home was built pre-1978 and there is a child less than six years old: <ul style="list-style-type: none"> ○ get a lead paint inspection or risk assessment. ○ repair any lead hazards based on state and local regulations and requirements. Consult with state CLPPP. <input type="checkbox"/> If the home was built pre-1978 and there is no child less than six years old: <ul style="list-style-type: none"> ○ consult with the CLPPP at your state and local departments of health about lead-safe renovation. ○ Change behaviors, such as modifying dust generating techniques and containing the work area.
Stairs, walls, railings, porches, lighting	<input type="checkbox"/> If family owns home, then counsel to change behaviors, such as making minor repairs to fix loose railings. <input type="checkbox"/> If family rents home, then counsel them to talk with their landlord. <input type="checkbox"/> Review items in “Family To Do” column with family.	<input type="checkbox"/> If homeowner, then make necessary repairs. <input type="checkbox"/> If renter, then talk with your landlord about needed repairs. Consider calling the local board of health for possible code violations.
Poison control	<input type="checkbox"/> Provide national poison control number 1-800-222-1222 to family. <input type="checkbox"/> Review items in “Family To Do” column with family.	<input type="checkbox"/> Post the national poison control number 1-800-222-1222 near telephone.

General Safety (continued)		
CONCERN	TO DO	FAMILY TO DO
Family fire escape plan	<input type="checkbox"/> Counsel to change behaviors, such as develop a family safety plan. <input type="checkbox"/> Get more fire safety information at http://www.usa.safekids.org/content_documents/fire_checklist.pdf <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Develop a family safety plan. <input type="checkbox"/> Need to know two ways out of the house. <input type="checkbox"/> Need to have a place to meet after you are outside the house. <input type="checkbox"/> Teach children the family safety plan for escaping your home in a fire and practice it
Electrical appliance	<input type="checkbox"/> Counsel to change behavior. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Do not use electrical appliances near water.
Matches and lighters	<input type="checkbox"/> Counsel to change behavior. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Do not store matches and lighters where children can reach them.
Exterior environment	<input type="checkbox"/> If abundant trash and debris, counsel family about waste management. <input type="checkbox"/> If waste containment is the problem, counsel family to talk with landlord. <input type="checkbox"/> See "Infestations" above. <input type="checkbox"/> If the home was built pre-1978, contact the childhood lead poisoning prevention program (CLPPP) at your state and local departments of health for information about chipping, peeling paint. See "Age of Home" above. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> See "Infestations" above. <input type="checkbox"/> See "Age of Home" above.
Young Children		
CONCERN	TO DO	FAMILY TO DO
Hot liquids/cleaning supplies/medicines	<input type="checkbox"/> Counsel to change behaviors. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Do not have hot liquids, cleaning supplies, or medicines within a child's reach.
Lead testing for children less than 6 years old	<input type="checkbox"/> If the home was built pre-1978, counsel the family to have the child's blood tested for lead. <input type="checkbox"/> See "Age of Home" above. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Contact the childhood lead poisoning prevention program (CLPPP) at your state and local departments of health about lead testing resources. <input type="checkbox"/> See "Age of Home" above.
Child watched by an adult while in tub	<input type="checkbox"/> Counsel to change behavior. <input type="checkbox"/> Educate family about importance of not leaving children unattended in the tub. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Do not leave children unattended in the tub.
Hot water temperature	<input type="checkbox"/> Educate family about dangers of scalding. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Set hot water temperature to <120 F
Toddler gates	<input type="checkbox"/> Counsel family to install non-accordion toddler gates at the top and bottom of stairways. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Contact local injury prevention program to determine whether there are toddler gate resources available. <input type="checkbox"/> Install non-accordion toddler gates at the top and bottom of stairways.

Young Children		
CONCERN	TO DO	FAMILY TO DO
Crib mattress	<input type="checkbox"/> Counsel family that crib mattress should fit snugly next to the crib so that there is no gap. <input type="checkbox"/> If two adult fingers can be placed between the mattress and the crib, then counsel the family to immediately replace the mattress. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Put your baby to sleep in a crib with a firm, flat mattress and no soft bedding underneath. <input type="checkbox"/> Ensure that your crib mattress fits snugly next to the crib so that there is no gap.
Window guards	<input type="checkbox"/> Counsel family about window safety. <input type="checkbox"/> Contact local injury prevention program to determine whether there are window guard resources available. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Contact local injury prevention program to determine whether there are window guard resources available. <input type="checkbox"/> Install window guards.
Window blind cords	<input type="checkbox"/> Counsel family to keep window blind cords out of children's reach and to purchase childproofing items for cord safety. <input type="checkbox"/> Review items in "Family To Do" column with family.	<input type="checkbox"/> Keep window blind cords out of children's reach <input type="checkbox"/> Purchase childproofing items for cord safety.



National Center for Healthy Housing

National Healthy Homes Training Center and Network

Healthy Homes Maintenance Checklist

The following checklist was developed for the Healthy Homes Training Center and Network as a tool for healthy home maintenance. A healthy home is one that is constructed, maintained, and rehabilitated in a manner that is conducive to good occupant health.

To maintain a healthy home, occupants should keep it dry, clean, well-ventilated, free from contaminants, pest-free, safe and well-maintained. Good home maintenance can act to

reduce allergens, prevent illness, and reduce injury from accidents. This checklist provides basic guidelines; items may need to be checked more often depending on local conditions and manufacturer suggestions.

Developed for the National Healthy Homes Training Center by Terry Brennan and Ellen Tohn, technical advisors to the National Center for Healthy Housing.

	Spring	Fall	Annual	As Needed	Pro Needed?
Yard & Exterior					
Water drains away from house	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No trip, fall, choking, sharp edge hazards	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fence around pool intact	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check for signs of rodents, bats, roaches, termites	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drain outdoor faucets and hoses	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clean window wells and check drainage	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clean gutters and downspouts	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Spring	Fall	Annual	As Needed	Pro Needed?
Basement & Crawlpace					
No wet surfaces, puddles	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sump pump and check valve working	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Floor drain working	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vacuum basement surfaces	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check for signs of rodents, bats, roaches, termites	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Spring	Fall	Annual	As Needed	Pro Needed?
Exterior Roof, Walls, Windows					
Shingles in good condition	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check chimney, valley, plumbing vent, skylight flashing	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Make sure gutters discharge water away from building	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check attic vents	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check attic for signs of roof leaks	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check for icicles and ice dams	<input type="radio"/>	<input type="radio"/>	winter	<input type="radio"/>	<input type="radio"/>
Look for peeling paint	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Look for signs of leaks where deck attaches to house	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check below window & door that flashing intact	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Repair broken, cracked glass	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Look for signs of leaks at window and door sills	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clean dryer vent	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check exhaust ducts are clear	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Maintenance Checklist continued on next page



Maintenance Checklist (continued)

	Spring	Fall	Annual	As Needed	Pro Needed?
Interior Walls, Ceilings, Windows, Doors					
Check for signs of water damage			●		
Check operation of windows and doors	●				
Lubricate and repair windows and doors				●	

	Spring	Fall	Annual	As Needed	Pro Needed?
Plumbing, Fixtures and Appliances					
Check washer hoses-connections			●		
Check dishwasher hoses for leaks			●		
Check toilet supply/shut-off valve			●		
Clean & check refrigerator drip pan-icemaker connections			●		
Check shower-tub surrounds for signs of damage			●		
Check traps and drains under sinks, tubs, showers for leaks			●		
Check hot water heater for leaks		●			
Check boiler for leaks		●			
Check water main/meter or well pump for leaks or sweating		●			
Check water main/meter or well pump for leaks or sweating		●			
Clean septic tank			2 yrs		
Check drain and supply time for leaks	●	●			
Check bath and kitchen fans operation	●	●			

	Spring	Fall	Annual	As Needed	Pro Needed?
HVAC Equipment - Replace filters					
Warm air furnace (merv 8)		●			
Air conditioner (central air merv 8)	●				
Dehumidifier	●				
Outdoor air to return to heat recovery ventilation		●			

	Spring	Fall	Annual	As Needed	Pro Needed?
Appliances					
Clean kitchen range hood screens				●	
Clean dryer vents and screens	●				
Clean exhaust fan outlets and screens	●				
Clean outdoor air intakes and screens		●			
Clean air conditioning coils, drain pans	●				●
Clean dehumidifier coils, check operation	●				
Clean and tune furnaces, boilers, hot water heaters		●			●
Clean and tune ovens and ranges		●			●

	Spring	Fall	Annual	As Needed	Pro Needed?
Electrical Equipment					
Check for damaged cords	●	●			
Test ground fault interrupters	●				
Test outlets for proper hot, neutral and ground			once		
Check smoke and CO alarms	●	●			

	Spring	Fall	Annual	As Needed	Pro Needed?
Garage					
Ensure storage of fuel cans	●	●			
Proper operation of garage door safety shut-off	●	●			
Check for signs of water damage	●				
Check for signs of rodents, bats, roaches, termites	●	●			

	Spring	Fall	Annual	As Needed	Pro Needed?
Attic					
Check for signs of rodents, bats, roaches, termites		●			
Check for water damage		●			
Ensure insulation in place		●			
Check that fans still exhaust to outdoors (check ductwork connections)			●		

See www.healthyhomestraining.org/Clearinghouse/Assessment.htm

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Healthy Homes for Community Health Workers



Student Manual
August 2014



Healthy Homes for Community Health Workers



The National Healthy Homes Training Center and Network has created a course for Community Health Workers (CHWs) to teach them how to provide healthy homes information to community members. The Healthy Homes for Community Health Workers course is targeted to individuals who work as health advocates in their communities.

This course will train CHWs to provide one-on-one and large group education on healthy homes, provide advice about specific healthy homes problems, and be able to recommend healthy homes actions to be taken by families, landlords, and other community members.

Learning Objectives

- Describe at least one housing condition and the health problems associated with them
- Identify one population that may be at higher risk for housing related disease and injury
- Describe two steps to reduce household hazards
- Name one health hazard in the home that's related to excessive moisture
- Identify two sources of moisture in the home
- Describe two strategies for controlling moisture in the home
- List one contaminant or allergen that is frequently found in house dust and its health effect
- Describe one way allergens or contaminants get into house dust
- Identify at least two strategies to reduce allergens or contaminants in house dust
- Name one illness or injury associated with pest infestation
- Identify one clue of pest infestation
- Identify the two strategies associated with an IPM approach
- Name two unhealthful conditions associated with poor ventilation
- List two things in a household that need ventilation
- List at least two household contaminants that can be removed by ventilation
- Describe two ways ventilation reduces air contaminant levels
- Name the three most common home injury related causes of death
- Identify the age group at most risk for injuries and falls
- Name at least two locations to look for safety hazards in the home
- Name at least two ways to prevent home injury
- Describe at least two ways that contaminants get into the home
- Identify at least two health effects and their associated contaminant
- Name at least one system that requires ongoing maintenance
- Demonstrate delivery of at least one of the 7 Healthy Homes Principles to community members
- Develop a toolkit for delivering training on a one-on-one basis or a group setting

Healthy Homes for Community Health Workers



Requirement for contact hour award:

- Attend entire training
- Complete post-course evaluation and the four nursing objective questions in the learning management system.

The Ohio Nurses Association is an accredited approver of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation. (OBN-001-91)

Approval valid through 9/14/2019. Assigned ONA #20981.

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Healthy Homes for Community Health Workers



Agenda

Introductions and Review of Agenda	30 min
Making the Connection Between Health and Housing	45 min
Exercise: Making the Connection	
Seven Principles for a Healthy Home	
1. Keep it Dry	30 min
Break	15 min
2. Keep it Clean	1.5 hrs
3. Keep it Pest-Free	
4. Keep it Ventilated	
Exercise: Identify healthy housing problems	
5. Keep it Safe	
Lunch	1 hr
6. Keep it Contaminant-Free	30 min
7. Keep it Maintained	
Community Action for Healthy Housing	
Seven Principles Presentation Practice: small group practice and full group discussion	2 hrs
Break	15 min
Creating a Healthy Homes Toolkit	30 min
Using a Visual Assessment Tool to Identify Hazards	
Wrap-up	30 min



The National Healthy Homes Training Center and Network (Training Center) offers cutting edge training and professional development in the field of healthy housing. The Training Center has trained almost 28,000 people since its inception in 2003, and is creating a workforce that understands how to find and resolve hazards in the home environment. Visit the website at healthyhousingsolutions.com/hhtc/.

The Training Center:

- **Brings together public health and housing practitioners** to promote practical and cost-effective methods for making homes healthier.
- **Serves as a forum** for exchanging information on new research and best practices.
- **Promotes cross-training** of public health and housing practitioners.
- **Identifies and optimizes opportunities** for networking, collaboration, and partnerships.
- **Provides continuing education units (CEUs)** for most courses.

Training with a higher purpose

Our trainees are dedicated professionals committed to making a difference in their communities through safe and healthy housing. In 2009, the U.S. Surgeon General's *Call to Action to Promote Healthy Homes* underscored the public health importance of healthy housing and endorsed the "seven principles of healthy housing," which serve as the cornerstone of the Training Center's curricula.

Trainees learn critical skills and increase their knowledge of the principles, while also becoming inspired to serve as resources, thought leaders, conveners, and advocates in their communities.

The Training Center operates across the country and provides training through a network of experienced partners. To see a list of partners and their contact information, go to healthyhousingsolutions.com/hhtc/training-partners/.

The Training Center offers three types of courses to meet the needs of all students: (1) face-to-face, (2) online self-paced, and (3) online instructor-led.

Essentials for Healthy Homes Practitioners

This is the Training Center's flagship course. Over 14,000 students have taken the course, and nearly 97% of participants say they would recommend it to a colleague. Eighty-five percent say they could immediately incorporate the concepts they learned into their daily work.

This is what a few of our trainees have said about the Essentials course:

"The breadth of the course and practical application to in-home assessments (how to clean up mold, green cleaning supplies) was terrific. Plus the instructor's range of knowledge and experience was a great added value to the training materials."

"Information presented in practical, real world examples by presenter with solid experience with weatherization and healthy homes practices."

"The training was comprehensive and could relate to all types of homes."



Classroom courses:

Code Inspection for Healthier Homes – This is a one-day course for code inspectors and others interested in learning more about how effective housing enforcement and programs can improve the health of occupants. The course provides information on the health-related provisions of state and local housing codes and the International Property Maintenance Code (IPMC).

Eco-Healthy Child Care Course® – The five-hour Eco-Healthy Child Care® Train-the-Trainer curriculum offers information on 11 core content areas: pesticides, poor indoor air quality, household chemicals, lead, mercury, furniture and carpets, art supplies, plastics, arsenic, radon and recycling. The course prepares individuals to become a resource for their localized communities.

Essentials for Healthy Homes Practitioners – If you visit homes to provide health or inspection services of any type, you will benefit from this course. The training will help you understand the connection between health and housing and how to take a holistic approach to identify and resolve problems that threaten the health and well-being of residents.

Green and Healthy Management Strategies for Multifamily Properties – This course provides property owners/managers with tools to implement green and healthy practices that can reduce energy, water, contaminants, and improve resident health conditions.

Healthy Home Evaluator Study Course – This course is designed to prepare students for the Healthy Home Evaluator certification offered through the Building Performance Institute (BPI). Students identify and evaluate health related hazards in a client's home. Students learn how to apply good practices to work with residents, identify housing-related health hazards, use tools to measure hazardous conditions, prioritize hazards, and identify and communicate solutions to residents. The course includes a site visit to a home and a number of case studies. Students will also learn how to protect themselves as they conduct home visits.

Healthy Homes Assessment and Interventions – This course enables students to learn about the importance of the resident interview, develop strategies for assessing the health-related hazards in a home, conduct an on-site inspection, and develop a comprehensive action plan.

Healthy Homes Assessment for Community Health Workers – This course enables is designed specifically for community health workers (CHWs), and other home visitors who provide health education to residents. The course provides these individuals with the knowledge and skills needed to perform a basic healthy home assessment.

Healthy Homes Assessment: Principles and Practice – This course provides knowledge and skills that individuals need to perform healthy home assessments. It is intended for those professionals who have completed either the Essentials for Healthy Homes Practitioners or the Healthy Homes Essentials for Environmental Professionals course and who plan to perform home assessments as part of their professional activities.



Healthy Homes for Community Health Workers – This course teaches Community Health Workers (CHWs) how to provide healthy homes information to members of their communities. The course trains CHWs to provide one-on-one and large group education on healthy homes, provide general advice about specific healthy homes problems, and to recommend healthy homes approaches to be taken by families, landlords, and other community members.

Healthy Homes Essentials for Environmental Professionals – This course is an accelerated version of the Essentials for Healthy Homes Practitioners course for those individuals who already have certification as a professional in a healthy home field of expertise.

Health Opportunities in Energy Audits and Upgrades – This course provides an opportunity for energy auditors to learn about healthy homes and understand that energy efficiency is only one part of a safe and healthy home. Students become aware of a wider array of housing problems they will encounter and may be able to address once they are working in a home.

Integrated Pest Management in Multifamily Housing – This course is designed to help property managers implement a comprehensive integrated pest management (IPM) program by bringing stakeholders, especially resident leaders, together to develop the skills and practices needed to effectively eliminate pests such as cockroaches and rodents from multifamily housing. This course is available both in the classroom and online.

Launching a Healthy Homes Initiative – This course brings together health and housing professionals from state and local agencies as well as other health and housing organizations. The goal is to identify policies and practices to establish robust programs to make homes healthier. The course provides elements of a strategic planning process to initiate a healthy homes program in your community.

Online Self-Paced Courses:

Basic Principles of Healthy Housing – This course is engaging and interactive. Whether you're a community health worker, home assessor, home inspector, program manager, or anyone concerned about healthy housing, you will learn about the well-documented link between health and housing and become familiar with the eight principles of keeping your home healthy.

Eco-Healthy Child Care – This interactive course is designed for early care and learning professionals and those who offer technical assistance and/or training to child care providers. Parents will find it useful for the home environment as well. Learn why children are uniquely vulnerable to common environmental health hazards (e.g., lead, pesticides, household chemicals, unsafe plastics), and receive practical and low-cost to no-cost strategies for preventing children's exposures to toxic substances.

Integrated Pest Management in Multifamily Housing – This course is designed to help a property manager, including a public housing authority, to implement a comprehensive integrated pest management (IPM) program by bringing stakeholders, especially resident leaders, together to develop the skills and practices needed to effectively eliminate pests such as cockroaches and rodents from multifamily housing. This course is available both in the classroom and online.



Pediatric Environmental Home Assessment – This course is designed to prepare nurses to recognize potential environmental hazards as part of a primary prevention approach, and recommend preventative action or make appropriate referrals for conditions that may be caused by a housing-related hazard.

Online instructor-led courses:

Bed Bug Management for Affordable Housing Providers – During this four-hour webinar, you will learn how to take an active role in solving common challenges, identifying problems, learning what strategies work to kill bed bugs, and how to find a good pest management professional.

Making Homes Healthier for Residents Who Hoard – This one-hour webinar discusses how hoarding impacts healthy homes. Participants learn about using a tool that helps a healthy home practitioner measure the level at which the resident's hoarding could have an impact on his or her health. They also learn about what does and does not work in addressing health-related hazards in a hoarder's house.

Making Homes Healthier for Residents With Limited Finances – This one-hour webinar will help participants identify alternative sources of funding for healthy home fixes. Instead of focusing solely on what their programs can pay for, participants will learn how to take a broader view on finding potential funds. Participants will also learn about the importance of starting locally when looking for resources, including programs that address housing repairs. Additionally, the webinar will provide a brief overview of federal and state programs.

To locate Training Center classes that are currently being offered, visit our Schedule of Classes at <http://healthyhousingsolutions.com/register>.

If you have any questions about the Training Center, contact Laura Titus at ltitus@healthyhousingsolutions.com.







LEARNING OBJECTIVES

DESCRIBE at least one housing condition and the associated health problems.

IDENTIFY one population at higher risk for housing related disease and injury.

DESCRIBE two steps to reduce household hazards.

www.healthyhomes.org

LINK BETWEEN HOUSING & HEALTH

"The connection between health and the dwelling of the population is one of the most important that exists".

Florence Nightingale



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WHY DO WE CARE?

- **Housing impact on health:**
 - Physical, chemical, biological exposures
 - Psychological
- **Young children spend about 70% of the time in their home.**

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5

Home is where the heart is.
Pliny

There's no place like home.

Dorothy, Wizard of Oz

One of our deepest needs is to be at home.
Timothy Radcliffe

The strength of a nation derives from the integrity of the home.
Confucius

It may be frail; its roof may shake; the wind may blow through it; the storms may enter; the rain may enter – but the King of England cannot enter; all his forces dare not cross the threshold of the ruined tenement.

William Pitt

Home is the place where, when you have to go there, They have to take you in.
Robert Frost

Where thou art, that is home.
Emily Dickinson

He is happiest, be he king or peasant, who finds peace in his home.
Johann Wolfgang von Goethe

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HAZARDS IN THE HOME

ASTHMA TRIGGERS

	House dust mites		Mice
	Cats		Tobacco smoke
	Dogs		Mold
	Cockroaches		





www.hazardsinthehome.org

HAZARDS IN THE HOME

Mold in damp indoor environments is associated with:



- Nose and throat irritation
- Coughing
- Wheezing
- Asthma
- Pneumonia

www.hazardsinthehome.org

HAZARDS IN THE HOME

Tobacco smoke can trigger asthma attacks and cause cancer and death.

www.hazardsinthehome.org

HAZARDS IN THE HOME



Lead in paint, dust and soil can cause lead poisoning which can result in lowered IQ, behavior and learning problems and death

Radon is a naturally occurring gas that comes from the ground into a house. Radon can cause lung cancer



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HAZARDS IN THE HOME

CARBON MONOXIDE

- Can build up in a house if a furnace is not working right or an un-ventilated gas heater is used
- High levels can lead to confusion and/or death



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HAZARDS IN THE HOME

Falls

Poisonings

Fires

Burns

Choking

Suffocation

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MOST VULNERABLE POPULATION

Children

- Spend most time indoors
- Eat and drink more than adults
- Still developing
- Behave differently

Seniors

- Spend most time indoors
- Breathing problems are easily triggered
- Falls are more common
- Overheat



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HEALTHY HOMES PRINCIPLES

Keep It:

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



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WHAT IS HEALTHY HOUSING?

Healthy
Housing is:

- Designed,
- Constructed,
- Maintained, and
- Rehabilitated

in a manner that is conducive to
good occupant health.



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WHY START WITH PEOPLE?

What good are they?

What's difficult about people?

How can you deal with people?

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NO PLACE LIKE HOME!

Resident Overall Opinion of Structure, American Housing Survey – National 2015

Type of resident	Worst			Best		
	1	2-4	5-7	8	9	10
All	0.7%	2.0%	24.1%	25.8%	14.6%	32.7%
Renters	1.3%	4.0%	35.8%	26.6%	11.7%	20.5%
Below Poverty	1.7%	4.2%	29.2%	21.2%	10.0%	29.4%

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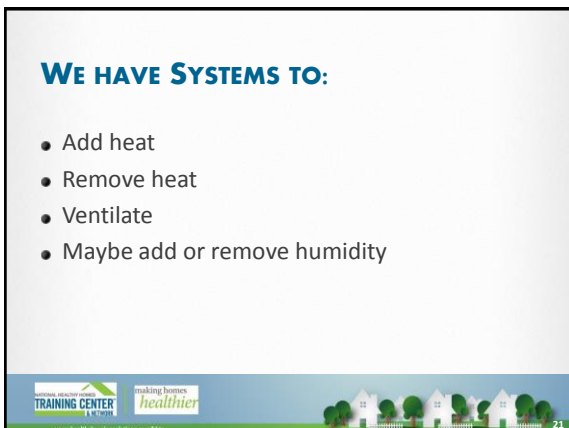
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SEVEN PRINCIPLES TO MAKE A HOME HEALTHY

Key reference:
Help Yourself to a Healthy Home



Steps to Healthier Homes

KEEP IT DRY

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

Making it Work




LEARNING OBJECTIVES

Name one health hazard in the home that is related to excessive moisture.

Identify two sources of moisture in the home.

Describe two strategies for controlling moisture in the home.



MOLD & MOISTURE HEALTH EFFECTS

- Upper respiratory tract symptoms
- Coughing
- Wheezing
- Asthma symptoms
- Hypersensitivity pneumonitis



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MOISTURE SOURCES

- Poorly managed rainwater/groundwater
- Plumbing leaks
- Condensation on surface
- Construction moisture

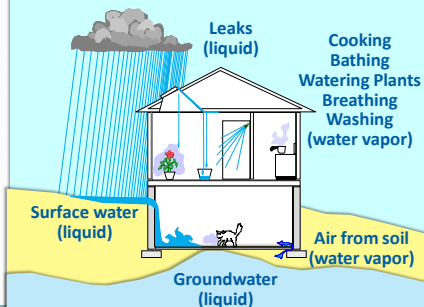
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How Water Enters a Building



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RAIN FROM THE OUTSIDE



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RAIN FROM THE OUTSIDE



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Plumbing Leaks



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CONDENSATION WHEN COLD OUTSIDE



Mold around window where there is no insulation.



Mold due to poor insulation or wind blowing through insulation.



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KEEP IT DRY – WHAT YOU CAN DO

Renter/Owner

- Use ventilation fans
- Wipe down shower walls after use
- Turn on air conditioning
- Use a dehumidifier
- Clean up mold
- Throw wet items away

Landlord

- Clean up mold
- Make sure downspouts direct water away from foundations
- Repair leaking roofs, walls, doors, or windows



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CLIENT RECOURSE HELP YOURSELF TO A HEALTHY HOME

Information for clients (page 20):

Cleaning up mold and using a HEPA vacuum



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CLIENT RECOURSE

HELP YOURSELF TO A HEALTHY HOME

Information for clients (page 21):

Specific instructions and cautions for using bleach to clean up mold

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Steps to Healthier Homes

KEEP IT CLEAN

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

Making it Work

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LEARNING OBJECTIVES

- List one contaminant or allergen that is frequently found in house dust and its health effects.
- Describe one way allergens or contaminants get into house dust.
- Identify at least two strategies to reduce allergens or contaminants in house dust.

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WHY IS CLEAN AND EASILY CLEANABLE IMPORTANT?

- Reduce exposure to:
 - Chemical contaminants
 - Allergens
 - Pest droppings and urine
 - Pesticides
 - Heavy metals such as lead and arsenic
- Reduced harborage for pests



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Dust mites in humid and dry buildings



38

Dust mite control

- Keep humidity at or below 50%
- Wash bedding
- Use mattress and pillow encasements
- Freeze soft toys and small items
- If possible, replace carpets with hard surfaces, and remove draperies and upholstery



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WHERE DOES HOUSE DUST COME FROM?

Brought-In

Home-Grown

- Lead Dust
- Dust Mites

Resident-Made

- Garbage
- Clutter



40

BROUGHT IN DUST

- Four Steps to Reduce
 - Hard Surface Walkways
 - Outside Grate-Like Mat
 - Inside Carpet Pad
 - Hard Surface Floor



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SHOES OFF – LESS DUST ENTERS



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Healthy Cleaning

Don't dry dust or dry sweep

Vacuuming:

- Low-emission vacuum with beater bar
- Very slowly (or use vacuum with dirt finder)

Wet cleaning:

- Use "elbow grease"
- Frequently change water

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PROBLEMATIC CLEANING MEASURES

Carpet
cleaning

Overuse
of anti-
microbials

Sanitizers

Air
fresheners

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CLUTTER

- What's the problem?
- What do we do to help?
 - Organize home, shelves, and storage bins.
- Hoarding?
 - What's the psychological aspect of this?



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KEEP IT CLEAN WHAT YOU CAN DO

Renter/Owner

- Vacuum or wet clean floors
- Use a damp cloth for dusting
- Wash bed linens every 1-2 weeks in hot water
- Use a walk-off mat

Landlord

- Seal cracks and holes
- Consider hard surface floors that show dust more clearly



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KEEP IT CLEAN WHAT YOU CAN DO

Renter/Owner

- Take shoes off at the door
- Invest in a good HEPA vacuum that has a beater bar on the bottom and can be emptied quickly and thoroughly
- Use plastic boxes to store clutter
- Use allergen-free mattress and pillow covers for children with asthma or allergies



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Steps to Healthier Homes

KEEP IT PEST-FREE

Keep It:

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

Making it Work

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LEARNING OBJECTIVES

Name one illness or injury associated with pest infestation.

Identify one clue of pest infestation.

Identify the two strategies associated with an IPM approach.

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HEALTH EFFECTS OF PESTS

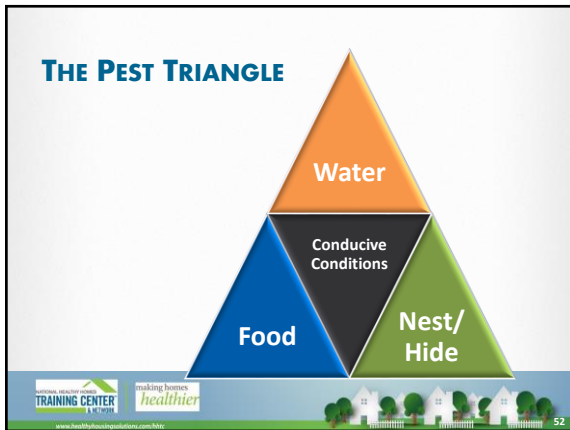
Asthma

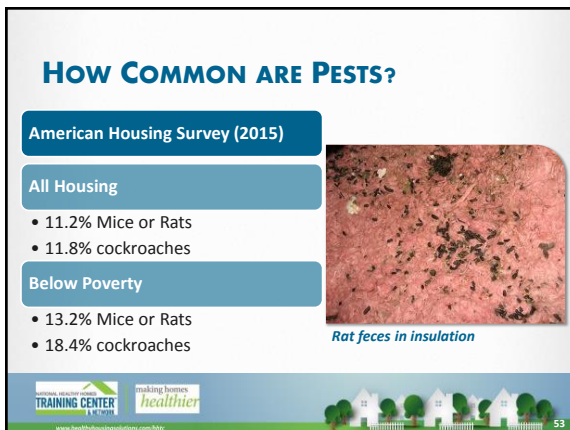
Infectious diseases

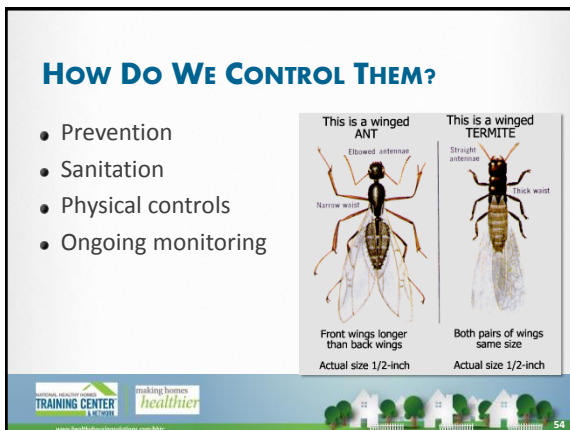
Health effects greater on children

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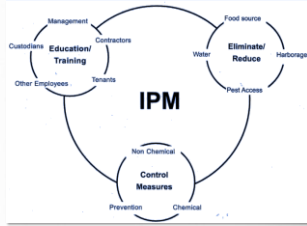






INTEGRATED PEST MANAGEMENT

- Best practice
- Multiple tactics
- Effective control
- Least risk to the environment
- Least exposure of non-target organisms
- Economic sustainability



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REDUCE PESTICIDE USE

Pest pressure can drive people to unsafe use of pesticides.

- Too much
- Too many
- Wrong kind – unsafe & illegal



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IPM: STEP-BY-STEP

- Inspection & Identification
- Exclusion & Denial
- Education
- Sanitation
- Physical control
- Monitoring



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1. INSPECTION & IDENTIFICATION

- Thorough inspection
- Identification of pests found



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2. EXCLUSION AND DENIAL

- Stoppage
- Inspection
- Holes filled
- Stuff-It
- Silicone Caulk
- Spackle, etc



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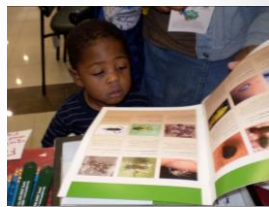
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3. EDUCATION

- Understand pests
- Control – what, how, and when
- Safe vs. unsafe practices
- Educating residents
- Choosing PCO's
- Training PCO's



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4. SANITATION

- Food
- Water
- Harborage



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



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5. PHYSICAL CONTROL

- Identify & assess problem
- Same strategy
- Different tactics – pest specific



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



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REDUCE EXPOSURE

Choose safer products

Roach baits

Gels

Dust

Snap trap



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6. MONITORING

- Keep looking for pests
- Spot reinfestations
- Place in corners
 - Behind appliances
 - Under sink
 - Under cover!
- Do date & mark
- Don't disturb



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COCKROACH CONTROL

- Habitat modification
- Monitors
- Dust and caulk
- Baits and gels
- Insect growth regulators
- Sticky traps



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RODENT CONTROL

- Rodents are mammals like us
- Think like a rodent
- Not all rodents are the same
 - Mice – curious & persistent
 - Rats – cautious & smart
 - Squirrels - outdoors



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BED BUGS - DON'T PANIC

- Can be avoided and eliminated
- Every skin irritation or bite is not bed bugs
- You can see them.
- Do not cause or spread diseases.
- Heat and/or steam can kill them.
- Protocols and communication key to control



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BEDBUGS - CONTROL

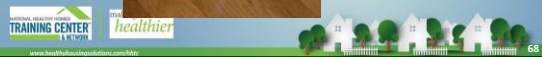
- Exclusion
- Preparation
- Traps – interceptors

Center
Well

Outer
Pitfall



www.PestProtec.com © 2006



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BED BUG - TREATMENT

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



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KEEP IT PEST-FREE WHAT YOU CAN DO

Renter/Owner

- Inform landlord about pest problems
- Clean up food or crumbs
- Wrap food and put in the refrigerator, or in a cabinet if tightly sealed

Landlord

- Seal holes in walls, floors and ceilings to prevent pests from coming in
- Use baits, traps, or gels to kill pests



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KEEP IT PEST-FREE WHAT YOU CAN DO

Renter/Owner

- Do not leave dirty dishes out overnight
- Sweep, mop, and vacuum regularly
- Take garbage to the trash area at least once a week (everyday if you have pests)

Landlord

- Use baits, traps, or gels to kill pests
- Repair water leaks or damage



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KEEP IT PEST-FREE WHAT YOU CAN DO

Renter/Owner

- Clean up clutter that provides hiding places for pests
- Minimize pesticide use
 - Follow directions on the label if you use pesticides
- Don't use sprays or foggers



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Steps to Healthier Homes

KEEP IT VENTILATED

Keep It:

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

Making it Work

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LEARNING OBJECTIVES

Name two unhealthy conditions associated with poor ventilation.

List two things (e.g. a room, appliance, mechanical system) in a household that need ventilation.

List two household contaminants that can be removed by ventilation.

Describe two ways ventilation reduces air contaminant levels.

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WHAT DOES VENTILATION MEAN?

Ventilation means

- Fresh air is circulating in the house
- The house has openings for pollution to escape from inside
- If any portion of air leaves a house the same amount must enter
- Air can be hot, cold, wet, dry, or polluted when it enters or exists a house

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WHY WELL VENTILATED?

Pollutants found in concentrations 2-5 times higher indoors than outdoors.



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WHY WELL VENTILATED?

Proper ventilation can reduce hazards of:

- Volatile organic compounds
- Moisture
- Environmental tobacco smoke
- Particulate matter
- Allergens
- Mold
- Carbon monoxide
- Formaldehyde



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WHY VENTILATE

Health effects

- Higher rates of respiratory irritation and illness in housing with poor ventilation
 - Common colds
 - Influenza
 - Pneumonia
 - Bronchitis

...and increased rates of absence from school or work



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THINGS THAT NEED EXHAUST VENTILATION

- Bathrooms
- Clothes dryers
- Kitchen ranges
- Boilers, furnaces, hot water heaters
- Fireplaces, wood burning stoves



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TESTING EXHAUST FAN: THE CHARMIN METHOD



80

LOCAL VENTILATION: KITCHEN

Remove moisture, odors, grease

If gas oven or range, remove products of combustion:

- moisture, CO, NO₂

Must be vented to the outside

If it is not reasonably quiet, many people will not use it.



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SOURCES OF COMBUSTION CONTAMINANTS

- Oven as heater
- Spillage from furnace, water heater, fireplace
- Ventless heater or fireplace
- Car exhaust from attached garage



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COMBUSTION CONTAMINANTS? HEALTH EFFECTS

- **Carbon Monoxide**
 - Fatigue, headaches, dizziness, confusion
 - The "Silent Killer"
- **Nitrogen Dioxide**
 - Eye, nose, and throat irritation
 - Shortness of breath



63

CARBON MONOXIDE ALARMS

Consumer Product Safety Commission (CPSC) recommends:

- Place near sleeping area
- Put on every level of a home to provide extra protection
- Do not install directly above or beside fuel-burning appliances



Combination smoke and CO alarm



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CO ALARM INSTALLATION

Should be installed:

- According to the manufacturer's instructions
- Higher placement is preferred
- One CO alarm should be installed in the hallway outside the bedrooms of each separate sleeping area of the home



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KEEP IT VENTILATED – WHAT YOU CAN DO

Renter/Owner

- Use exhaust fan when cooking or bathing
- Install a carbon monoxide alarm
- Check and make sure alarms work properly

Landlord

- Have bathroom and kitchen exhaust fans that vent outside
- Install smoke and carbon monoxide alarms

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KEEP IT VENTILATED – WHAT YOU CAN DO

Renter/Owner

- Never use charcoal grills inside
- Open a window if you use unvented kerosene or gas heaters

Landlord

- Maintain furnaces
- Have dryers vent outside and keep vents unclogged

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Steps to a Healthier Home

KEEP IT SAFE

Keep It:

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

Making it Work

www.healthyschoolsolutions.com/4000

LEARNING OBJECTIVES

Identify the age group at most risk for injuries and falls.

Name the 3 most common home injury related causes of death.

Name at least two locations to look for safety hazards in the home.

Name at least two ways to prevent home injuries.

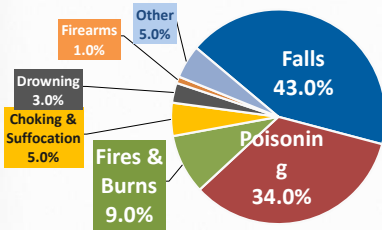
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KEEP IT SAFE

There are many ways to be injured in the home

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WHAT ARE THE MOST COMMON CAUSES OF HOME INJURY DEATHS?



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WHICH AGE GROUPS ARE MOST SUSCEPTIBLE?

Age Group	Susceptibility
Infants	Choking/suffocation is the highest rate of injury death
Birth – age 14	Nonfatal falls at home
1-14 years old	Highest rate of home injury death is fires and burns
Older adults	Nonfatal falls at home
Adults 80+ years	20 times higher risk for death from injury than younger individuals

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Window Safety Guard



Safety Glass?



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POISONING

- **82%** of households keep medicines in unlocked drawers or cabinets.
- **69%** of homes with young children store household chemicals in unlocked areas.



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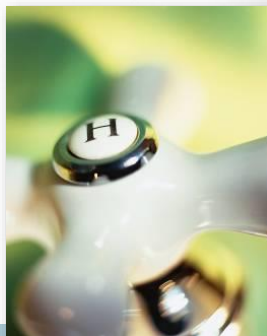


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FIRES AND BURNS

House fires

Water heater
temperature



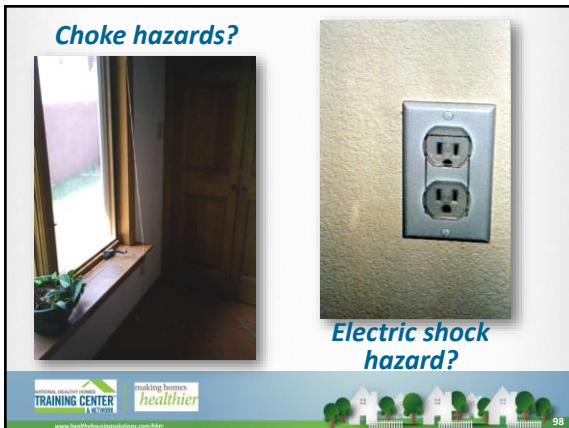
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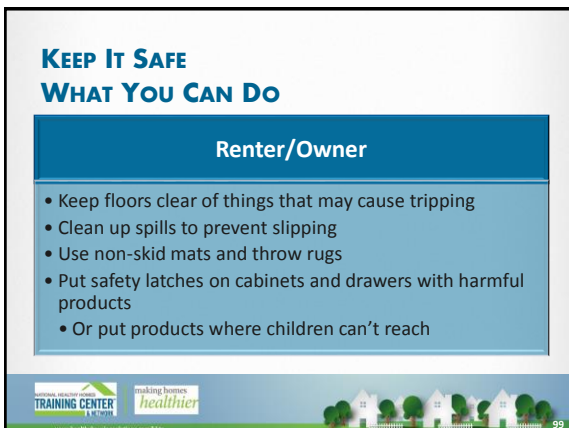
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KEEP IT SAFE WHAT YOU CAN DO

Renter/Owner

- Put a working smoke alarm near every sleeping area
- Put a working fire extinguisher near the kitchen stove
- Keep space heaters out of busy areas and away from things that could catch fire
- Put outlet covers over unused outlets
- Keep young children away from curtains, window-blind cords and extension cords



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KEEP IT SAFE WHAT YOU CAN DO

Landlord

- Install smoke alarms near sleeping areas
- Install a carbon monoxide alarm



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Steps to a Healthier Home

KEEP IT CONTAMINANT-FREE

Keep It:

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



Making it Work



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LEARNING OBJECTIVES

Describe at least two ways that contaminants get into the home.

Identify at least two health effects and their associated contaminant.



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CONTAMINANT BUYING DECISIONS

INTENTIONALLY BRING IN:

- Tobacco Smoke
- Pesticides
- Volatile Organic Comp.
- Mercury
- Asbestos
- Meth Labs

ALONG FOR THE RIDE:

- Bedbugs and Mice
- Cockroaches
- Mice
- Formaldehyde
- Lead



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SECONDHAND SMOKE



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WHY AVOID SECOND-HAND SMOKE:

- Children's Health Effects
- Adult Health Effects
- 60% of US population has biological evidence of exposure



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TOBACCO SMOKE IN HOMES AND CARS – WHAT CAN YOU DO

- Quit. If you're ready, there's help
- Don't smoke around children
- Smoke outside
- Exhaust vent the places where people smoke



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VOLATILE ORGANIC COMPOUNDS

- Air Fresheners
- Cleaning Products
- Sprays & Coatings
- Formaldehyde
- Carpets
- Vinyl Floors
- Drywall
- Hobbies
- Home Maintenance



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VOLATILE ORGANIC COMPOUNDS

Concentration of VOC's can be **2-5 times greater in the home.**

During or immediately after paint stripping activities, VOC levels can be **1,000 times higher than outdoors.**



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WHY AVOID VOCs?

Potential health effects of VOCs:

- Eye, nose, throat irritation
- Headaches, nausea, coordination
- Liver, kidney, and brain damage
- Some can cause cancers
- Child development



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REDUCE POTENTIAL SOURCES

- Don't use it if you don't have to.
- Substitute a better product



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KEEP IT CONTAMINANT-FREE – WHAT YOU CAN DO

Renter/Owner

- Do not smoke in the house
- Do not smoke around children
- Avoid using products of high levels of VOCs
- Have fresh air circulating, if you use a VOC product

Landlord

- Use low VOC paints, carpets, adhesive and other products when renovating
- Make sure that no smoking rules are followed



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Steps to a Healthier Home

KEEP IT MAINTAINED

Keep It:



1. Dry



2. Clean



3. Pest-Free



4. Ventilated



5. Safe



6. Contaminant-Free



7. Maintained



Making it Work



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LEARNING OBJECTIVE

Name at least one system that requires ongoing maintenance



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CONTAMINANT & MAINTENANCE

LEGACY TOXICS:

- Lead-Based Paint
- Asbestos
- Chromated Copper Arsenate Wood
- Mercury
- Pesticide Residues

CREATED OR GROWN:

- Cockroaches
- Mice and Rats
- Mold
- Carbon Monoxide
- Sewer Gas
- And Then There is Radon



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MAINTENANCE

- Solid waste
- Water supply
- Sewer system
- Heating/cooling/dehumidification/humidification
- Cooking
- Ventilation
- Rainwater control/drainage
- Structural integrity
- Storage / Organization



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MAINTENANCE ACTIONS

- Inspect
- Clean
- Lubricate
- Replace
- Repair
- Organize



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LEAD AND LEAD-BASED PAINT

- Peeling, Chipping Paint / Deteriorated Paint
- Dust
- Soil
- Drinking water
- Consumer Products such Pottery, Cribs, Jewelry, Candle Wicks
- Cultural Items
- Contaminated Sites

The bottom of the slide features a logo for 'TRAINING CENTER' and 'making homes healthier', along with a small house icon and the number 120.



WHY AVOID LEAD?

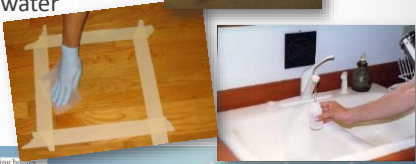
- Reduced IQ
- Learning disabilities
- Impaired hearing
- Reduced attention spans, behavior problems
- Anemia
- Kidney damage
- Damage to central nervous system
- Coma, convulsions, death

LEAD: AGE OF HOUSING MATTERS

Year House Was Built	Percent of Houses with Lead-Based Paint
Before 1940	87 percent
1940-1959	69 percent
1960-1978	24 percent
All US Housing Stock	40 percent

AVAILABLE TESTING

- Paint
- Dust - Clearance testing
- Bare soil
- Drinking water



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ASBESTOS



WHY AVOID ASBESTOS?

- **Health effects:**
 - Lung Cancer
 - Mesothelioma
 - Asbestosis
- **Smokers are at greater risk!**

Acc. V Magn | 30.0 kV 1200x Janice Haney Carr

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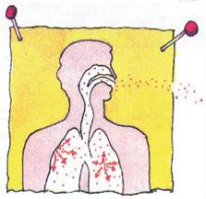
HOW TO HANDLE ASBESTOS

- LEAVE IT ALONE (if in good condition).
- Look for signs of wear or damage - avoid touching.
- If damaged or renovation might disturb it, repair or remove by licensed professional.



RADON

A Serious Health Concern



Naturally occurring gas

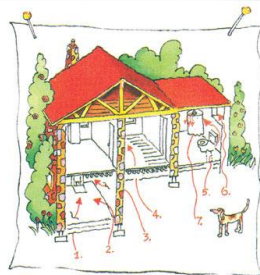
2nd leading cause of lung cancer after smoking

Leading cause of lung cancer in nonsmokers and people who have never smoked.




HOW RADON GETS INTO A HOME

- ✓ Cracks in solid floors
- ✓ Construction joints
- ✓ Cracks in walls
- ✓ Gaps in suspended floors
- ✓ Gaps around service pipes
- ✓ Cavities inside walls
- ✓ Other openings
- ✓ Water supply



TESTING FOR RADON



Short Term

Long Term

If result is 4 pCi/L or higher
take a follow-up test OR fix the home



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TESTING FOR RADON

Testing Options:

- Kits
- Hire a professional

Radon Data Card
 In order to analyze test, all information must be filled out completely.
 Please Print. Please Print Name Last First Middle Initial. Do Not Print
 Name: John Doe Phone: 555-123-4567 PO: 20000
 Address: 12345 Main St City: Anytown State: CA Zip: 90001
 Date: 01/01/11 Time: 10:00 By: John Doe
 Room Used For Testing: Living Room (Kitchen, Bedroom, Bathroom, etc.)
 Radon Level: 4.0 pCi/L (Range: 0.1 to 10.0)
 Highest Gas Measured: 4.0 pCi/L (Range: 0.1 to 10.0)
 Radon Test Method: Alpha Track (Range: 0.1 to 10.0)
 If testing address differs from mailing address please enter below:
 Test Address: 12345 Main St City: Anytown State: CA Zip: 90001
 DATE: 01/01/11 BY: John Doe

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INTERPRETING RADON RESULTS

Short term test > 4 pCi/L

- Take second short term test or long term test

Short term average or long term test > 4 pCi/L




- Fix home for radon

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RESOURCES

State Radon Contacts	• www.epa.gov/iaq/whereyoulive.html
Coupons for Test Kits	• 800-SOS-RADON (767-7236)
Radon Mitigation	• 800-644-6999
Other Questions	• 800-55RADON (557-2366)
IAQ Questions	• 800-438-4318

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KEEP IT MAINTAINED WHAT YOU CAN DO

Renter/Owner

- Call landlord as soon as you notice moisture, pests, or holes
- Inform your landlord immediately if your toilet overflows
- If you own, replace furnace filters on a regular basis
- Clean your grease filter on your stove's range hood
- In the spring and fall, check gutters and downspouts for clogs caused by leaves








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KEEP IT MAINTAINED WHAT YOU CAN DO

Renter/Owner

- Watch for freezing pipes that crack and leak. Fix if you own. Contact landlord if you rent.
- Test children under age 6 for lead exposure
- If your home was built before 1978 and paint is peeling or flaking, have it tested for lead
- Before remodeling work, check for lead-based paint

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KEEP IT MAINTAINED WHAT YOU CAN DO

Landlord

- Fix leaks or water damaged areas
- Fix all cracks and holes
- Help get rid of pests
- Maintain furnaces in good condition and replace filters on a regular schedule
- Check gutters and downspouts for clogs caused by leaves
- Fix pipes that have frozen, cracked and leaked



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LEARNING OBJECTIVES

DESCRIBE at least one housing condition and the associated health problems.

IDENTIFY one population at higher risk for housing related disease and injury.

DESCRIBE two steps to reduce household hazards.



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Healthy Homes for Community Health Workers



Presentation Evaluation Form

PRACTICE: The Seven Steps to a Healthy Home - Use this form to take notes while another member of your group is presenting.

Questions to Consider	Presentation #1	Presentation #2	Presentation #3
What were the best parts of the presentation?			
What parts of the presentation need the most improvement?			
Did the presenter clearly describe the healthy housing step and talk about action steps? If no, what could they do better?			
Were there any important points the presenter missed? If yes, what are they?			

Supplies Checklist for Healthy Homes Training

ITEM	CHECK OFF
Visual Survey Forms and Action Plans	
CEHRC Visual Survey form and Action Plan	
Pediatric Environmental Home Assessment Survey and Action Plan	
Booklets/Written Information to Leave With Resident	
Help Yourself to a Healthy Home booklet	
Renovate Right and Protect Your Family from Lead	
Demonstration Materials (or to leave with resident)	
Smoke detector	
Carbon Monoxide Alarm w/ Battery Backup & Display	
Child safety tools (cabinet locks, door locks, etc.)	
Cockroach glue traps and baits	
Other	
Coloring books for kids on allergies and asthma	
[]	
[]	
[]	
[]	
[]	

Healthy Homes Lesson Plan for One-on-One Training

QUESTIONS TO CONSIDER	TIPS FOR ANSWERING THE QUESTIONS	NOTES
Who am I going to teach?	Are there kids in the household? What are their ages? Do they have any health problems, such as asthma, allergies or lead poisoning?	
What kinds of questions can I ask to find out what healthy homes issues this person may be most concerned about?	What is the likely condition of the house this resident lives in? Are there likely to be cockroaches, mice or other pests? Have there been any floods lately or hot, humid weather?	
What information about community resources might the person need?	Is this person a renter or homeowner? If they rent, is there any information about the landlord available? If they own, might they need a grant or loan for repairs?	
What will likely be the format for working with the person? (discussion, visual survey of unit, demonstration)	Will the children be at home? (If so, a long discussion might be difficult if the children are young.) Might this person feel comfortable if I do a visual survey of their home? Are they likely to be interested if I show them a carbon monoxide detector or child safety equipment?	
What might I be doing to follow up with this person after the visit?	Does this person have a phone so I can call them with follow up information? Will they respond to a letter?	