

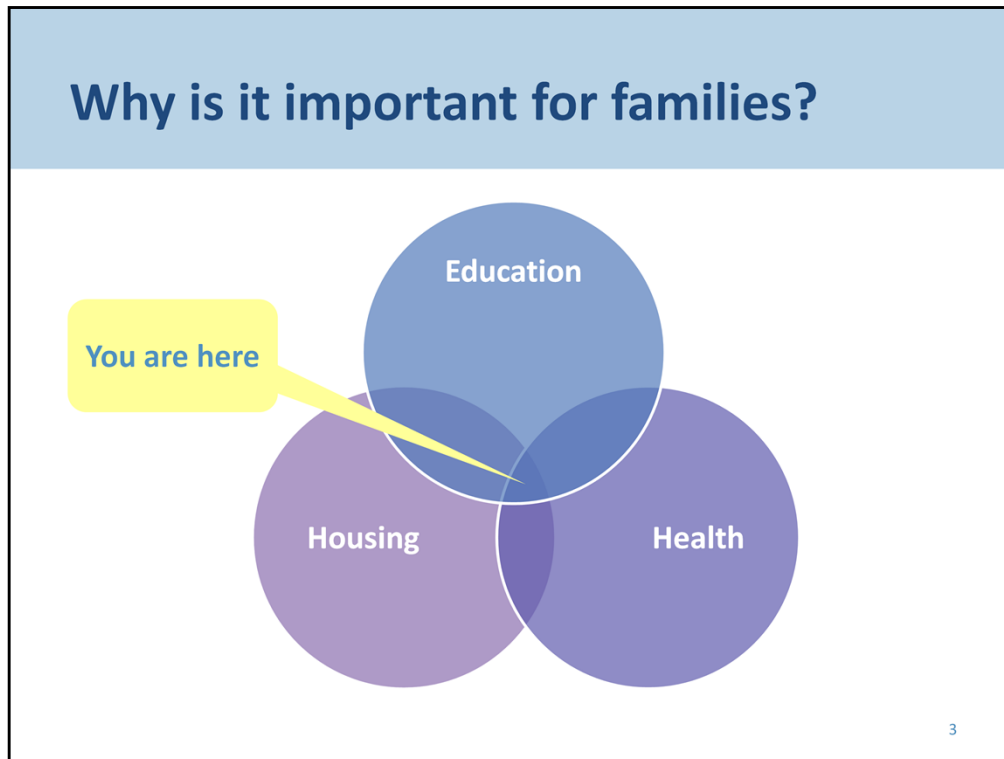


Note: This curriculum was developed with the financial support of the State of Connecticut, Department of Social Services, Connecticut Children’s Medical Center, LAMPP (Lead Action for Medicaid Primary Prevention) Project, and the U.S. Department of Housing and Urban Development. This publication does not express the views of the State of Connecticut, its Department of Social Services, or the Connecticut Children’s Medical Center. The views and opinions expressed are those of the authors.

For more information about healthy homes, call the Connecticut Department of Public Health’s Healthy Homes Initiative at 860-509-7299, see www.ct.gov/dph/healthyhomes, or call Infoline at 2-1-1.

What are the goals of this training?

- To help families understand the relationship between housing and health
- To provide practical tools and simple steps to make and keep homes healthy



Explain

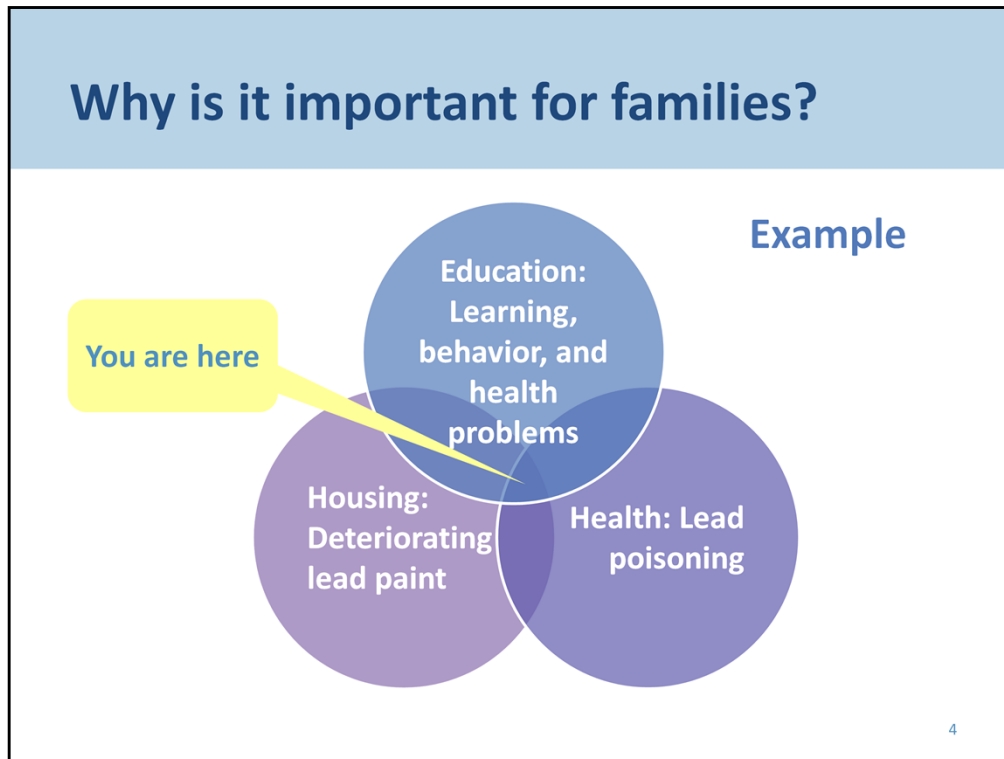
This program considers three areas that deeply affect children: housing, health, and education.

A great deal of research has shown that housing issues and children’s health are clearly interrelated. For example,

- In older homes, deteriorating lead paint or unsafe renovations that disturb lead paint can cause lead poisoning.
- Mold, pests, or tobacco smoke in the home can trigger asthma attacks.
- Smoking in the home can cause fires.
- Clutter in the home can cause falls.
- Improperly stored cleaning supplies, pesticides, and other chemicals can cause poisoning.

The problems related to health and housing often disproportionately affect poor families, as they face the challenges of finding housing that is both affordable and safe. Housing that is affordable may contain unsafe lead paint, asthma triggers, and other health and safety problems.

Children’s health and educational success are also clearly interrelated. According to Ginny Ehrlich, executive director of the Alliance for a Healthier Generation, “Healthy children learn better—few statements in education are as unequivocal. We know this on a common-sense level, and the data backs it up. Research suggests that students’ health and learning are inextricably linked.” (American School Board Journal, 2010).

**Explain**

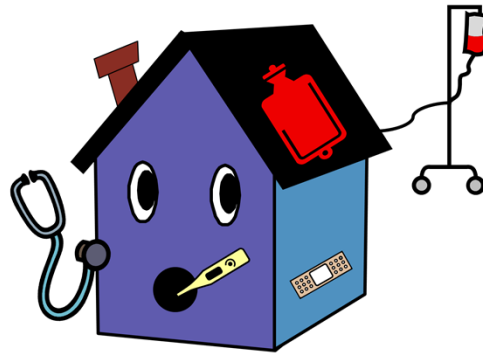
This slide shows an example of how housing, health, and education are interrelated.

Lead poisoning significantly impairs children's ability to learn and behave appropriately in school. It is associated with reduced IQ and achievement test scores, increased risk of aggression and violence, increased risk of dropping out of school, and problems with attention and concentration.

Today's agenda

- What is a healthy home?
- What features make a home healthy?
- How can you advocate for a healthy home?

What is a healthy home?



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Ask participants to try to define a “healthy home.”

What is a healthy home?

One that supports the health and safety of the people who live there




Explain

Here is a working definition of a healthy home.

Ask participants to consider whether their definition was similar to this one. Were there any significant differences? Discuss if necessary.

What features make a home healthy?



Activity
List seven words or phrases to describe a healthy home

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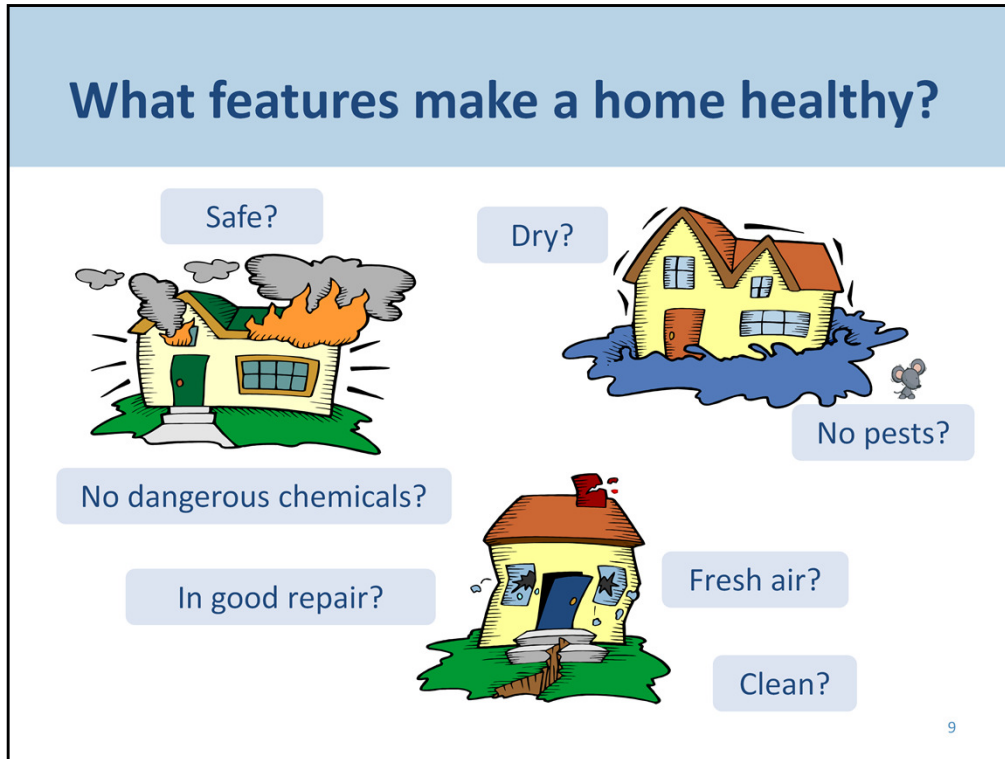
Ask participants to work in pairs or small groups.

Ask them to discuss what they think are the features of a healthy home. Ask each group to develop a list of seven words or phrases to describe a healthy home. Give the groups a few minutes to develop their lists.

Then address the whole group. If the training room has a whiteboard, or if you have several large flipcharts, ask someone from each small group to write that group's list so that everyone can see it. If it's not possible to write the lists, ask one person from each group to speak them aloud.

Ask the learners

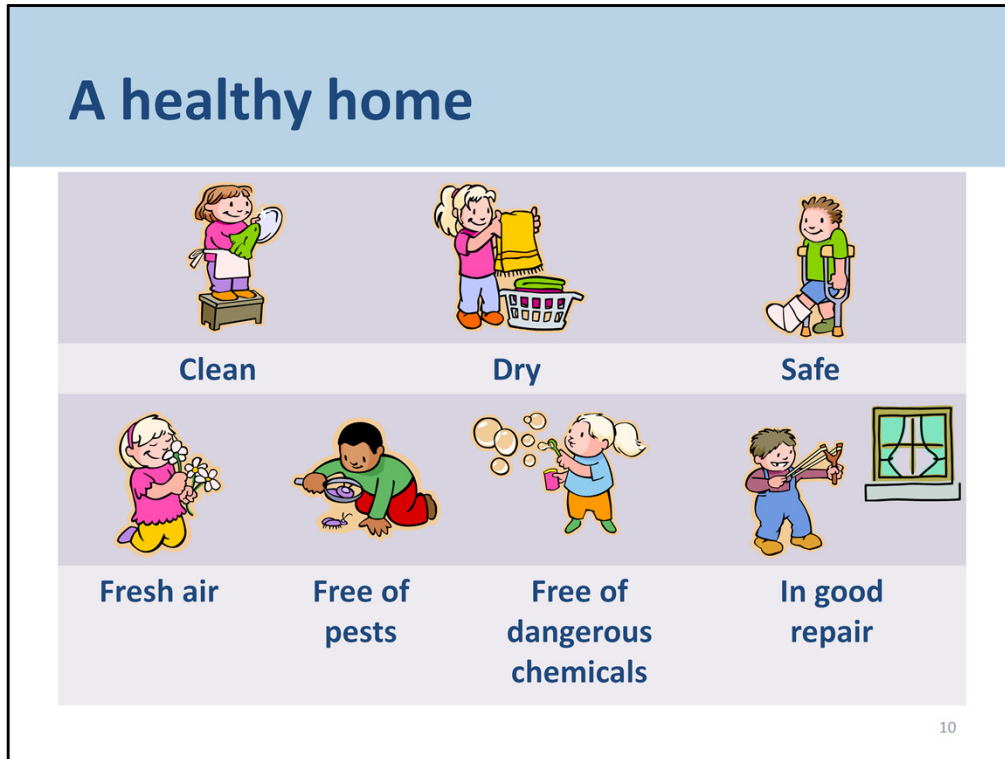
- Which features appeared most often? Do some features appear in all lists?
- Would any group like to revise its list after hearing what the other groups have said?



Explain the features of a healthy home that are generally identified by the federal government and national organizations.

Ask the learners

- Are these features the same as the ones you identified?
- Do you think anything important is missing?
- Do you think any of these features is not important?



Explain

This slide summarizes the features of a healthy home.

Keep it clean

Main idea

Reduce pests, dangerous chemicals, and asthma triggers

- Some dirt—like pollen and soil—can come from outdoors
- Other dirt—like dust, garbage, cigarette butts, and pest droppings—can come from inside home
- Dirty or cluttered home encourages pests and mold
- Dirt may also contain dangerous chemicals, such as lead from old paint and other chemicals from many household products

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Keep it clean

Health effects

A dirty home may

- Increase exposure to dangerous chemicals
- Provide food, water, and shelter for pests
- Trigger asthma attacks and set off allergy symptoms
- Increase risk for other breathing problems, like coughing and shortness of breath

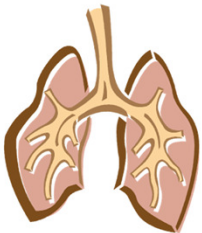
Keep it clean

Health effects

Asthma

Serious lung disease that makes it hard to breathe

- Cannot be cured but can be treated and controlled
- Causes are unknown
- Environmental factors can start (trigger) asthma attacks
 - Triggers vary from person to person
- Only a doctor can tell if someone has asthma or another breathing problem



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Explain

Asthma is a serious lung disease that makes it hard to breathe. Asthma is chronic, which means it is always there, to some degree. It ranges from mild to life-threatening.

Although this disease cannot be cured, it can be treated and controlled. People who have asthma **can** live normal lives if their asthma is properly treated by a doctor and if they take the proper medicines to control their symptoms.

Doctors are not certain what causes asthma to develop. However, they do know that the disease is linked to both inherited factors (genetics) and environmental factors. In this lesson, we'll focus on the environmental factors.

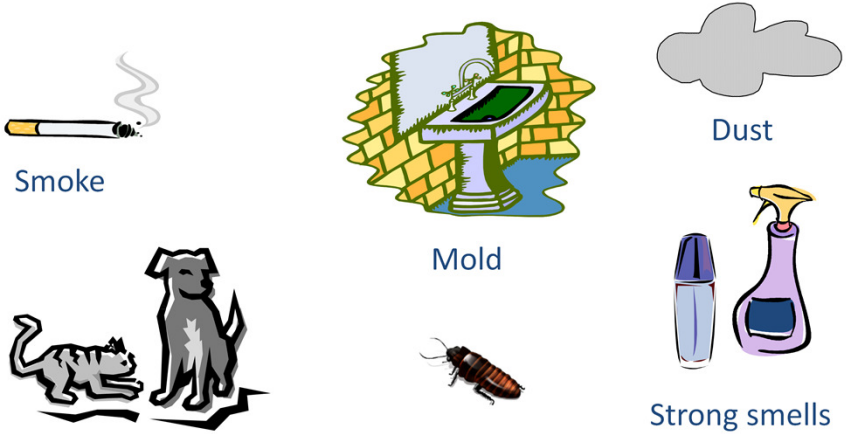
Environmental factors can start (or **trigger**) an asthma attack. These triggers vary from person to person.

FYI: Asthma causes problems in the airways (the breathing tubes that carry air to the lungs). During an asthma attack the airways become swollen, and extra mucus blocks air from getting to the person's lungs. Muscles around the airway start to twitch and tighten. All these make it difficult to breathe.

Keep it clean

Health effects

Common asthma triggers include



Smoke

Furry pets

Mold

Cockroaches

Dust

Strong smells

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Explain

Common asthma triggers include

- Things that people are allergic to (like pollen or peanuts)
- Things that irritate the lungs (like tobacco smoke and strong-smelling household chemicals)
- Colds, flu, and other respiratory illnesses
- Cold weather
- Exercise

Keep it clean

Signs of problem





- Dirt or dust on floors, windows, furniture, or counters
- Grease or dirt on stove or counters
- Old food or food wrappings lying around
- Garbage cans not covered
- Pests or their droppings or urine
- Clutter



Keep it clean

Fix the problem

- Clear away clutter
 - Pick up things that do not belong on the floor, countertops, and furniture
 - Store them where they do belong
- Clean often
- Use safer cleaning and household products



- Use a damp mop and damp dust cloth to clean
- Vacuum carefully and often
 - If possible, use vacuum that has a HEPA filter, which picks up very small particles of dirt

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To learn more

- National Center for Healthy Housing, “Dust,” <http://www.nchh.org/What-We-Do/Health-Hazards--Prevention--and-Solutions/Dust.aspx>
- Connecticut Department of Energy and Environmental Protection, “Household Alternatives for Reducing Toxic Products in Your Home,” http://www.ct.gov/dep/cwp/view.asp?a=2708&q=323956&depNav_GID=1763

Keep it clean

Fix the problem

Bedrooms

- Wash bedding once a week
 - Use hot water to kill dust mites



- Keep pets off beds and out of bedroom

Floors

- Leave shoes at door to keep dirt out of home
- Put doormats at each door to trap dirt
- If possible, replace materials that are more difficult to clean (like carpets) with materials that are easier to clean (like wood or linoleum floors)

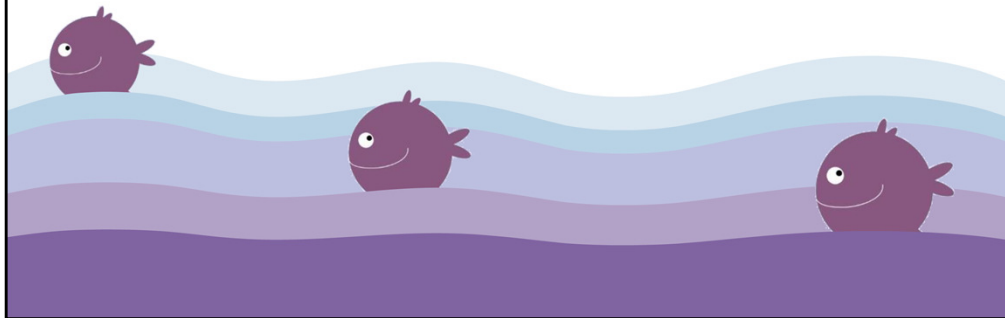


Keep it dry

Main idea

Reduce pests and mold

- A home with too much moisture encourages mold and pests to live and grow
- Both mold and pests can
 - Damage belongings
 - Cause various health problems



Keep it dry

Health effects

Mold

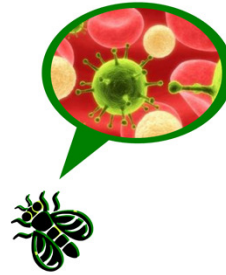
- May make breathing problems worse, especially for people with




- Asthma
- Allergies to mold
- Respiratory illnesses (such as lung infections)

Pests

- May trigger asthma attacks
- May carry diseases



Keep it dry		Signs of problem
	<ul style="list-style-type: none">• Leaking or dripping pipes• Water droplets on cold windows• Water stains or damage• Warping or rotting wood• Peeling, blistering, or cracking paint• Clogged gutters or plugged downspouts• Cracks in foundation	<ul style="list-style-type: none">• Mold that you see (often as speckled patches, in any color) or smell (musty or earthy), especially in<ul style="list-style-type: none">– Bathrooms and kitchens– Damp basements, closets, and laundry areas– Areas where there have been leaks or water damage

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Explain

Mold is often found in bathrooms (under sinks or around pipes, and on walls, ceilings, or shower curtains) and in kitchens (under sinks or around pipes, under a refrigerator, and in cabinets).

Keep it dry

Fix the problem

Reduce moisture

- Find sources of moisture—such as leaks inside and outside home—and repair them
- Clean up water and other spills right away
- Use exhaust fans or open windows
 - In bathroom after showering or bathing
 - In kitchen when cooking and washing dishes
- Clean downspouts and gutters
- Make sure that water drains away from home
- Use dehumidifiers and air-conditioners if available



Keep it dry

Fix the problem

Mold

If you see or smell it, it should be cleaned up promptly

- Usually **not** necessary to test to learn
 - Whether you have mold
 - Type of mold
- Consider hiring trained professional if
 - Moldy area is large
 - Damage was caused by contaminated water (like sewage)
 - Mold is hidden in walls or ceilings
 - You have asthma, severe allergies to mold, or a weak immune system



What's
that
nasty
smell?

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Explain

Moldy areas that are larger than 10 square feet require special precautions and are probably best handled by trained professionals.

Keep it dry

Fix the problem

Mold

To safely clean hard surfaces (like tile or fiberglass)

- Keep other people away from area where you'll be working
- Close off area: shut door, or put up plastic sheet
- Bring in fresh air (open windows, or blow air **from inside to outside** with exhaust fan)
- Protect yourself
 - Wear long rubber gloves
 - Consider goggles and a face mask
- Scrub well with detergent and water
- Rinse with clean rag or sponge and clean water
- Dry thoroughly with clean rags or paper towels



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Explain

If you are cleaning an area that is almost 10 square feet, you may also need

- Goggles without holes or air vents to keep mold and spores out of your eyes
- Mask labeled N95 (not a plain dust mask)

You don't have to use bleach to get rid of mold, and most experts no longer recommend using bleach as the first step to remove mold. Bleach is poisonous if someone swallows it, and the fumes can irritate the eyes, nose, and throat. Spilled bleach can irritate the skin and damage clothing, shoes, furniture, and carpets. It's very important to keep bleach out of reach of children and pets.

Always clean with soap and water or detergent and water first. Afterwards, if you want to kill any remaining germs, you'll need only a mild mixture of bleach and water or a commercial mold product. If you decide to use bleach,

- Open windows and doors to provide fresh air.
- Wear dishwashing gloves and eye protection.
- **Dilute the bleach before you use it.** Use 1 part bleach plus 9 parts water. For example, use 1 cup of bleach plus 9 cups of water for big areas, or use 1 tablespoon of bleach plus 9 tablespoons of water for very small areas.
- Do not spray the bleach and water mixture. Instead, pour it onto the rag, sponge, or area to be cleaned.
- Keep the bleach on the cleaned surface for at least 10 minutes. Then rinse and dry the material.
- Store the bleach safely out of reach of children and pets.
- **Never mix bleach** with other household cleaning products, especially those that contain ammonia or vinegar, because these combinations may produce poisonous fumes.

To learn more

- Connecticut Department of Public Health, "Mold in the Home: Health Concerns," www.ct.gov/dph/lib/dph/environmental_health/eoha/pdf/mold_in_the_home_5-10.pdf
- U.S. Environmental Protection Agency, *A Brief Guide to Mold, Moisture, and Your Home*: www.epa.gov/mold/moldguide.html
- Oregon State University Extension Service, "Home Moisture Problems," <http://extension.oregonstate.edu/catalog/pdf/ec/ec1437.pdf>

Keep it dry

Fix the problem

Mold

- If item—like carpet or upholstered furniture—absorbs water, you **may** be able to save it **if**
 - You can dry it **completely** within 24 hours (warm weather) to 48 hours (cold weather) *and*
 - You don't see or smell any mold
- If item has been wet for more than 24-48 hours
 - Throw it out



When in doubt, throw it out

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To learn more






- Connecticut Department of Public Health, “Mold in the Home: Health Concerns,” www.ct.gov/dph/lib/dph/environmental_health/eoha/pdf/mold_in_the_home_5-10.pdf
- U.S. Environmental Protection Agency, *A Brief Guide to Mold, Moisture, and Your Home*: www.epa.gov/mold/moldguide.html
- Oregon State University Extension Service, “Home Moisture Problems,” <http://extension.oregonstate.edu/catalog/pdf/ec/ec1437.pdf>

Keep it safe

Main idea

Reduce accidents and injuries

- Common causes of accidental injuries in the home

Falls	Fires	Drowning	Choking	Poisoning
				

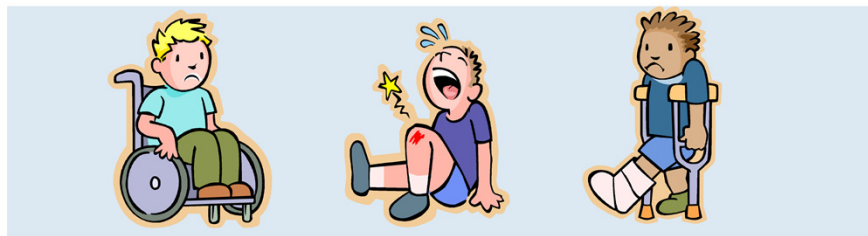
- Young children and older adults often the most likely to be injured

Keep it safe

Health effects

Accidental injuries

- Can result in hospitalizations, surgeries, and long-term disabilities
- Are among leading causes of death in the home



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Keep it safe

Signs of problem

- Clutter—such as clothing, shoes, papers, and toys—creates dangers for slips, trips, and falls
- Smoke detectors and carbon monoxide detectors either not present or not working
- Poor or no lighting in
 - Stairways
 - Doorways
 - Walkways
- Damaged electrical cords



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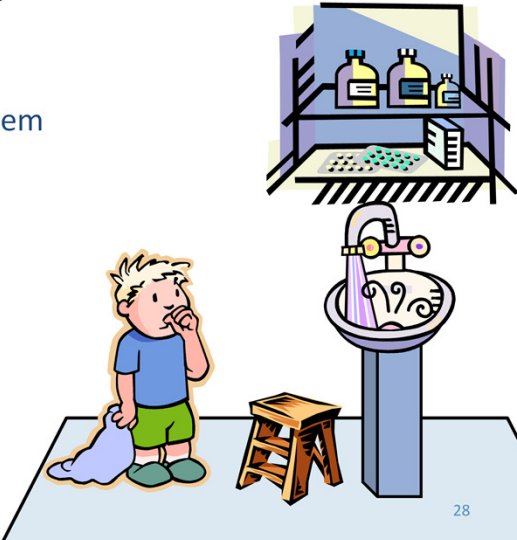
Explain

Each floor of a home should have at least one smoke detector and one carbon monoxide detector

Keep it safe

Signs of problem

- Hot water from the faucet is very hot
- Dangerous items are stored where children can reach them
 - Medicines and vitamins
 - Household cleaning products
 - Matches and lighters
 - Sharp tools



The illustration shows a young boy with blonde hair, wearing a blue t-shirt and green shorts, standing in a bathroom. He is looking up at a white pedestal sink with a wooden step stool in front of it. Above the sink, a shelf holds several bottles of medicine and vitamins. The boy has a thoughtful expression, with his hand to his chin. The number 28 is visible in the bottom right corner of the illustration.

Ask learners

Can you think of other items that would be dangerous for children?
Where could you store them safely?

Keep it safe

Fix the problem

Prevent slips, trips, and falls

- Add or fix lighting, especially in
 - Stairways
 - Doorways
 - Walkways
- Clear away things that might make you slip, trip, or fall
 - Clutter
 - Loose electrical cords
 - Slippery throw rugs
 - Spilled food



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Ask learners

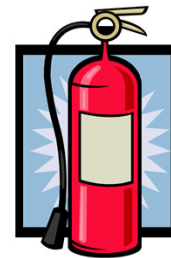
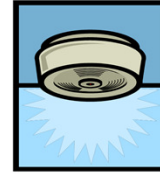
Can you think of other things that might make you slip, trip, or fall?

Keep it safe

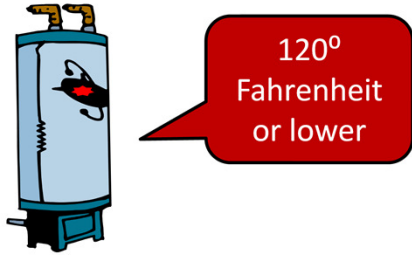

Fix the problem

Safety equipment

- Install smoke alarms and carbon monoxide detectors on each level
 - Put in fresh batteries every autumn and spring
 - Check that devices are working properly
- Put fire extinguishers in key places, such as the kitchen, bedroom, and basement
 - Replace or recharge when needed



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Keep it safe		Fix the problem
<p>Prevent burns</p> <ul style="list-style-type: none"> Set temperature of water heater to prevent burns  <p>Prevent electric shocks</p> <ul style="list-style-type: none"> Replace damaged electrical cords 	<p>Prevent poisoning</p> <ul style="list-style-type: none"> Post the phone number for the Poison Control Center next to every phone Program cell phones with that number  <p>Free, expert medical advice 24/7/365</p>	<p>31</p>

To learn more

- For a detailed home safety checklist, see Safe Kids USA: <http://www.safekids.org>
- Connecticut Poison Control Center, <http://poisoncontrol.uhc.edu/>

Keep it safe	
	Fix the problem
Protect children who live in or visit your home <ul style="list-style-type: none">• Supervise them at all times• Childproof your home<ul style="list-style-type: none">– Store all dangerous items out of reach of children– Always use safety devices, such as<ul style="list-style-type: none">• Baby gates• Child-proof containers• Safety latches on doors, windows, and cabinets	Do a thorough home safety check <ul style="list-style-type: none">✓ Basement✓ Bathroom✓ Bedrooms✓ Family room✓ Garage✓ Kitchen✓ Laundry area✓ Living room✓ Stairs✓ Yard <small>32</small>

To learn more

- For a detailed home safety checklist, see Safe Kids USA: <http://www.safekids.org>
- Connecticut Poison Control Center, <http://poisoncontrol.uhc.edu/>

Keep it safe

Fix the problem

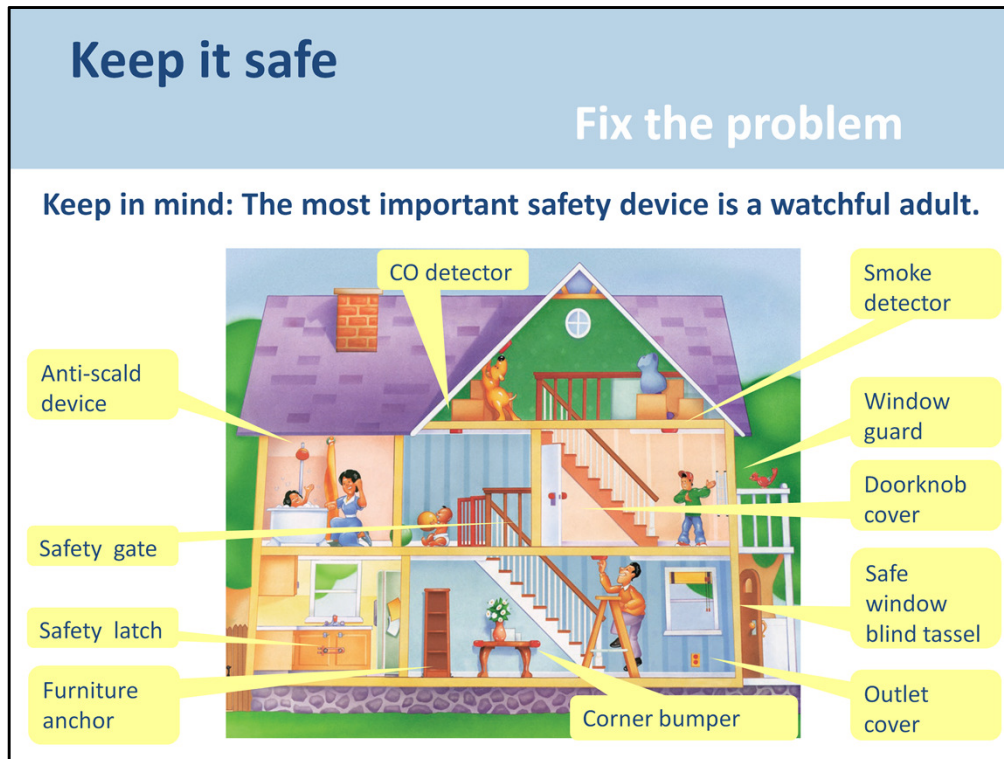
How is this family keeping children safe?



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Ask learners to identify ways this family in this picture is keeping its children safe. The answers are on the next slide.

Illustration from: <http://publications.usa.gov/USAPubs.php?PubID=5617>.

**Answers:**

- Use **safety latches and locks** for cabinets and drawers in kitchens, bathrooms, and other areas to keep children away from medicines, household cleaners, sharp objects, and other dangerous items.
- Use **safety gates** to keep children from falling down stairs and away from dangerous areas.
- Use **doorknob covers and door locks** to keep children from entering rooms and other areas with possible dangers.
- Use **anti-scald devices** for faucets and shower heads, and set your water heater temperature to 120 degrees Fahrenheit to prevent burns from hot water.
- Use **smoke detectors** on every floor of your home and near bedrooms to alert you to fires.
- Use **window guards and safety netting** to keep children from falling from windows, balconies, decks, and landings.
- Use **corner and edge bumpers** to prevent injuries from falls against sharp edges of furniture and fireplaces.
- Use **outlet covers and outlet plates** to prevent electrical shock.
- Use a **carbon monoxide (CO) detector** outside bedrooms to prevent CO poisoning.
- Cut **window blind cords and use safety tassels** to prevent children from strangling in cord loops.
- Use **furniture anchors** to keep furniture and appliances from tipping over.

Keep in mind: **The most important safety device is a watchful adult.**

Keep the air fresh

Main idea

Make breathing easier

- Most people spend most of their time indoors
- Indoor air often contains unhealthy chemicals from
 - Household products (such as cleaning supplies)
 - Furnaces
 - Other devices
- Bringing fresh air into home
 - Helps to remove or dilute these chemicals
 - Makes breathing healthier



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Keep the air fresh

Health effects

- Chemicals from household products may have various health effects
- In home that is poorly ventilated, poor air quality may

- Make allergy or asthma symptoms worse
- Make your eyes red
- Make your nose and throat burn
- Make you feel tired
- Give you headaches often
- Allow mold to grow



Keep the air fresh

Signs of problem

- You see or smell mold, fumes, smoke, or strong or unpleasant smells
- Surfaces are very dusty
- Heating and air conditioner filters and vents are dirty or clogged with dust
- Clothes dryer is not vented to outside
- Exhaust fans in bathrooms or kitchen are
 - Missing
 - Not working
 - Not vented to outside



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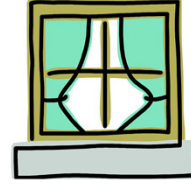
Explain

You shouldn't need a respirator to breathe easily in your home.

Keep the air fresh

Fix the problem

- Bring in fresh air
 - Open windows whenever possible
- Vent air that's not fresh to the outside
 - Use exhaust fans vented to the outside in bathrooms and kitchens
 - Vent all appliances that burn fuel to the outside
- Don't put dangerous chemicals into the air
 - Choose household products—like safer paints, adhesives, and wood items—that do not give off dangerous gases
 - Don't allow smoking in home
 - Don't use aerosol sprays, scented candles, and air fresheners



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Keep the air fresh

Fix the problem

- Maintain heating and cooling equipment
 - Clean heating and air conditioner vents regularly
 - Replace filters regularly
 - Have fuel-burning equipment checked every year by qualified professionals
 - Furnace
 - Hot water heater
 - Gas appliances
 - Fireplace or woodstove



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To learn more

U.S. Environmental Protection Agency, *Homeowner's Guide to Ventilation*,
http://www.nchh.org/Portals/0/Contents/Homeowners_Guide_to_Ventilation.pdf

U.S. Department of Energy, *Guide to Home Ventilation*,
http://www1.eere.energy.gov/buildings/openhouse/pdfs/ventilation_factsheet16.pdf

Keep the air fresh


- Test for radon, a natural gas that causes lung cancer
 - If needed, install systems to reduce radon



Radon is radioactive

Fix the problem

- Consider indoor air quality if you make your home more energy efficient



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To learn more

U.S. Environmental Protection Agency, *Homeowner's Guide to Ventilation*,
http://www.nchh.org/Portals/0/Contents/Homeowners_Guide_to_Ventilation.pdf


U.S. Department of Energy, *Guide to Home Ventilation*,
http://www1.eere.energy.gov/buildings/openhouse/pdfs/ventilation_factsheet16.pdf

Keep it free of pests

Main idea

Reduce diseases and asthma triggers

- A pest is any animal that is somewhere it is not wanted
- Pests may
 - Eat or spoil your food
 - Damage your home or belongings
 - Make you uncomfortable
- Many people apply strong pesticides at first signs of pest problem
 - But pesticides may cause worse problems than pests do
- Pests can be controlled safely



Ask learners to name as many indoor and outdoor pests as they can in one minute.

Common answers include the following:

Inside pests: mice, rats, pigeons, bats, bedbugs, fleas, ants, spiders, cockroaches, silverfish, flies, moths, lice

Outside pests: mice, rats, squirrels, raccoons, skunks, wasps, bees, yellow jackets, mosquitoes, ticks, poison ivy, poison oak

Keep it free of pests

Health effects

Pests

such as rats, mice, cockroaches, mosquitoes, ticks, and bedbugs

- May trigger asthma attacks in some people
- Some pests—such as deer ticks, fleas, cockroaches, and rats—carry diseases
- Although bedbugs do not carry diseases, their bites may itch and irritate the skin

Pesticides

chemicals designed to kill pests



- May trigger asthma attacks, other breathing problems, nausea, and headaches in some people
- May have long-term effects, such as birth defects, learning disabilities, and cancer

Keep it free of pests

Signs of problem

- Seeing or hearing the pest itself—dead or alive—often in
 - Damp areas (like bathrooms and basements)
 - Wherever food is stored
 - At night
- Droppings, hair, or nests
- Damage from gnawing on walls, wires, food, food packages, or newspapers
- Tracks (areas where pests frequently run, usually along walls, where there is no dust or dirt)
- Rows of red bite marks on the skin from bedbugs



Keep it free of pests

Fix the problem

Use integrated pest management (IPM)

- Remove food, water, and places where pests can live
 - Repair moisture problems, such as leaks
 - Store food in strong, covered containers
 - Keep dining and kitchen areas clean and dry
 - Take out trash every day
 - Clear away clutter where pests can live
 - Vacuum well and often

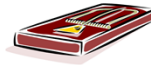


Keep it free of pests

Fix the problem

Use integrated pest management (IPM)

- Keep pests out
 - Seal cracks and openings in floors or walls, using copper mesh, brass wool, or silicone caulk
- Capture or kill without dangerous chemicals
 - Use the least harmful solution to solve pest problems, such as sticky traps or boric acid
- Use pesticides only when other methods fail
 - Read and follow directions very carefully
 - Store pesticides where children cannot reach them



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To learn more

Stop Pests in Housing, www.stoppests.org

National Center for Healthy Housing, www.healthyhomestraining.org/ipm

New Hampshire Bed Bug Action Committee, www.nhbedbugs.com/bed-bug-resources.php

Keep it free of dangerous chemicals

Main idea

Reduce poisonings, injuries, and other harmful effects

- Many commonly used household products contain chemicals that may be harmful
 - Use safer alternatives whenever possible
- Other dangerous chemicals include
 - Lead paint
 - Radon (a natural gas that is radioactive)
 - Smoke from cigarettes, cigars, and pipes
 - Asbestos

Examples of common household products

- Air fresheners
- Bleach
- Carpet shampoos
- Drain cleaners
- Furniture polish
- Laundry and dishwasher detergents

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Keep it free of dangerous chemicals

Health effects

If you breathe, swallow, or touch them, various chemicals may

- Cause dizziness, headaches, fatigue, or depression
- Cause nausea, vomiting, or diarrhea
- Irritate the eyes, skin, and lungs
- Damage the liver, lungs, kidneys, or nervous system
- Cause cancer in various parts of the body
- Cause birth defects
- Lead to convulsions, coma, and death

Keep it free of dangerous chemicals

Signs of problem

- Your household products contain strong fragrances and harsh chemicals, with labels that say
 - *Caution*
 - *Warning*
 - *Danger*
 - *Poison*
- Smoking in and around your home
- Peeling, flaking, or chalking paint in a home built before 1978 that may contain lead

Products labeled *Danger* and *Poison* are the most dangerous

Keep it free of dangerous chemicals

Fix the problem

Household products

- Use safest possible products
 - Consider homemade “green” products
 - Safe ingredients include baking soda, vinegar, liquid castile soap, and salt
- Read product warning labels carefully,
 - Follow directions for use, storage, and disposal
- Keep chemicals in their original containers
 - Never remove labels
- Keep dangerous household chemicals out of children’s reach
- Do not use air fresheners, other products with fragrances, or aerosol sprays

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Keep it free of dangerous chemicals

Fix the problem

- Post the phone number for the Poison Control Center near every phone, and program the number into cell phones
- Do not allow smoking in or around your home
- If your home was built before 1978, have it tested for lead paint
- Test for radon, and install systems to remove it if necessary



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To learn more

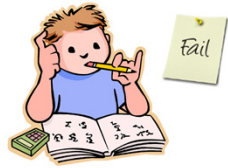
- U.S. Department of Health and Human Services, Household Products Database, <http://householdproducts.nlm.nih.gov/index.htm>
- Connecticut Poison Control Center, http://poisoncontrol.uchc.edu/about_poisons/index.html
- U.S. Environmental Protection Agency, www.epa.gov/wastes/conservation/materials/pubs/hhw-safe.htm

Keep it free of dangerous chemicals

Lead

Main idea

- Lead is a poison
- Damages developing brains and nervous systems of unborn and young children
- Also harms adults



Health effects

- In children
 - Learning disabilities
 - Reduced IQ
 - Attention problems
 - Behavior problems, aggression
 - Hyperactivity
 - Hearing problems
 - Slowed growth
- In adults
 - Brain and nervous system damage
 - Anemia
 - High blood pressure
 - Kidney problems

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Explain

The effects of lead poisoning, especially on children, are usually **permanent**.

Keep it free of dangerous chemicals

Lead

Signs of lead poisoning

Child may

- Seem very tired
- Be hyperactive
- Be cranky
- Lose normal appetite
- Lose weight
- Have shorter attention span
- Have trouble sleeping
- Be constipated

But children with lead poisoning may not look or act sick

- Only way to know is through blood test
- All children should be screened at ages of one and two years



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Explain

This slide discusses lead poisoning and children, who are the most seriously harmed. Connecticut law requires blood lead testing at ages one and two years.

Adults may show similar symptoms and may also need blood tests.

Keep it free of dangerous chemicals

Lead

Signs of problem

- **Dust from old lead paint**
- Old lead pipes
- Soil contaminated with old paint or old leaded gasoline
- Some old or imported pottery, toys, and novelties



The illustration shows various sources of lead: a bucket of yellow paint, a blue and yellow pipe, a child in a blue jacket and hat holding a green plant in a garden, a house with a rocking horse, and several pieces of pottery.

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Explain

The most common source of lead poisoning in the United States is dust from old lead paint.

Keep it free of dangerous chemicals

Lead

Fix the problem—lead paint in homes built before 1978

Test for lead paint

- Have qualified professionals
 - Test
 - Remove lead hazards
- When renovating or repairing
 - Use lead-safe work practices if you do it yourself *or*
 - Hire contractor certified by U.S. Environmental Protection Agency
- Leave shoes at door, to keep lead dust outside
- Keep children away from chewable surfaces
- Wash children’s hands often, especially before eating
- Wash toys often
- Wet mop floors and wet wipe other surfaces often
- Keep children from playing in bare soil

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Explain

For more information about working lead safe, see www.epa.gov/lead or call 1-800-424-LEAD.

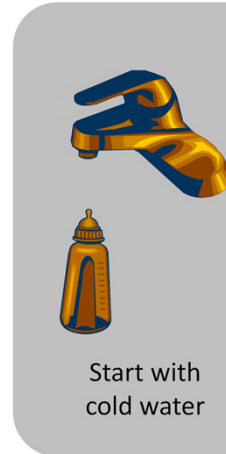
EPA’s Renovation, Repair and Painting Rule requires that contractors be trained and certified in lead-safe work practices when working on a home built before 1978.

Keep it free of dangerous chemicals

Lead

Fix the problem—other sources of lead

- Check www.recalls.gov for products recalled because of lead hazards
- Do not use traditional home remedies or cosmetics that may contain lead
- Do not eat candies imported from Mexico
- Do not use containers, cookware, or tableware that may contain lead to store or cook foods or liquids
- Use only cold water from tap for drinking, cooking, and making baby formula
- Shower and change clothes after working with lead-based products, such as stained glass or bullets



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Explain

For more information, see <http://www.cdc.gov/nceh/lead/tips.htm>

Hot tap water is more likely to contain lead than does cold tap water.

Keep it free of dangerous chemicals

Asbestos

Main idea

Mineral fiber used to resist heat and corrosion

- Found in some older construction materials, such as
 - Shingles for roofing and siding
 - Pipe and boiler insulation
 - Floor tiles and ceiling panels
- If asbestos is not disturbed
 - Not harmful
 - Best, cheapest way solution is to leave it alone
- If asbestos is disturbed or broken down
 - Tiny fibers may get into air, where people may breathe them in

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Explain

Few products made today contain asbestos. Those that do contain asbestos must be labeled as such.

However, until the 1970s, many types of building products and insulation materials used in homes contained asbestos. Asbestos hazards in the home may be found in

- Some roofing and siding shingles
- Insulation in houses built between 1930 and 1950
- Some attic and wall insulation containing vermiculite ore, mined in Montana between 1923 and 1990
- Textured paint and in patching compounds used on wall and ceiling joints, produced before 1977
- Artificial ashes and embers for use in gas-fired fireplaces
- Older products such as stove-top pads
- Paper, millboard, or cement sheets used to protect walls and floors around wood-burning stoves
- Some vinyl floor tiles and the backing on vinyl sheet flooring and adhesives
- Insulation around hot water and steam pipes in older houses
- Insulation around oil and coal furnaces and door gaskets

Keep it free of dangerous chemicals

Asbestos

Health effects

Fibers get trapped in lungs, causing

- Cancers
 - Lung
 - Mesothelioma (cancer of lining of chest or abdomen)
- Asbestosis (inflammation and scarring of lungs)
- Other lung damage



Smokers at greater risk



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Keep it free of dangerous chemicals

Asbestos

Signs of problem

- Cannot tell by looking, unless it is labeled
- If in doubt
 - Treat material as if it contains asbestos *or*
 - Have it sampled and analyzed by **qualified professional**
 - Do not take samples yourself

Fix the problem

- If material is in good shape and will not be disturbed, do nothing
- If it is a problem, qualified professional should repair or remove



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Explain

Sampling should be done by a professional. If done incorrectly, sampling may be more dangerous than leaving asbestos alone.

The professional should sample only material that is damaged or will be disturbed (for example, by remodeling).

In areas that may contain asbestos

- Avoid damaging asbestos material
- Avoid activities in any areas with material that is already damaged
- Have sampling, removal, or repair done by qualified professionals
- Don't dust, sweep, or vacuum debris that may contain asbestos
- Don't saw, sand, scrape, or drill holes in asbestos materials
- Don't use abrasive pads or brushes on power strippers to strip wax from asbestos flooring
- Don't sand or level asbestos flooring or its backing
- When asbestos flooring needs replacing, install new floor covering over it, if possible
- Don't track material that could contain asbestos through the house

Keep it free of dangerous chemicals

Smoking

Main idea

There is no safe level of exposure to tobacco

- Any exposure is harmful
- No form of tobacco has been shown to be safe
- Damage from
 - First-hand smoke
 - Second-hand smoke
 - Third-hand smoke



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Explain

This lesson discusses smoking because it is the most common tobacco problem. But no form of tobacco (such as chewing tobacco or snuff, filtered cigarettes, candy-flavored cigarettes, or water pipes) has been shown to be safe.

Keep it free of dangerous chemicals

Smoking

Health effects

First-hand smoke begins doing damage immediately

Associated with

- Many types of cancer
- Reproductive problems
- Less resistance to colds and flu
- Loss of bone density
- Greater difficulty for diabetics to control blood sugar



Makes people less attractive

- Wrinkled skin
- Yellow teeth
- Bad breath
- Smelly clothing and hair

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Explain

Smoking harms almost every organ in the body. The longer someone smokes, the greater the risk for serious damage.

Keep it free of dangerous chemicals

Smoking

Health effects
Second-hand smoke comes from the burning cigarette, cigar, or pipe and the smoker's breath

- Contains same dangerous chemicals as first-hand smoke
- Associated with most of same diseases
- Nonsmokers are exposed whenever they are near someone smoking: in homes, cars, public places



A cartoon illustration showing a man in a blue coat and hat smoking a pipe on the left. On the right, a young boy is also smoking. In the center, three children (two girls and one boy) are looking up at a large thought bubble. The bubble contains the following text: 'Arsenic (used to kill rats) + Benzene (used in gasoline) + Hydrogen cyanide (used in chemical weapons) + Thousands of other chemicals'. The number '61' is printed in the bottom right corner of the illustration area.

Explain

Second-hand smoke is sometimes called *environmental tobacco smoke*.

According to the Centers for Disease Control and Prevention (CDC), second-hand smoke is responsible for almost 50,000 deaths per year.

- Second-hand smoke contains the same dangerous chemicals that direct smoke contains. In fact, it contains more than 7,000 chemicals. At least 250 of these chemicals are known to be harmful, and 70 of them cause cancer.
- The chemicals found in tobacco smoke get into a person's lungs and then into the bloodstream, which carries them to all parts of the body.
- Most of the same diseases that affect smokers affect children and nonsmokers who are exposed to second-hand smoke.

Note that smoking is banned in many public places in Connecticut, including all restaurants, cafes, bars, schools, public buildings, retail food stores, and most workplaces.

Keep it free of dangerous chemicals

Smoking

Exposure to second-hand smoke increases health risks

- Unborn baby
 - Stillbirth and miscarriage
 - Premature birth
 - Birth defects
- Children
 - Respiratory problems
 - Ear infections
 - Death from Sudden Infant Death Syndrome (SIDS)
- Adults
 - Heart disease
 - Lung cancer
 - Other cancers
 - Stroke



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Explain

Keep it free of dangerous chemicals

Smoking

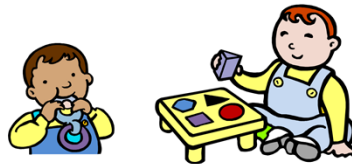
Health effects

Third-hand smoke: chemicals from tobacco smoke that remain on

- Smoker's hair, skin, and clothing
- Surfaces like walls, floors, rugs, furniture, dust, and car interiors

Children may be exposed to dangerous chemicals by

- Putting contaminated objects in mouths
- Touching contaminated surfaces and putting hands in mouths
- Breathing contaminated dust



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Explain

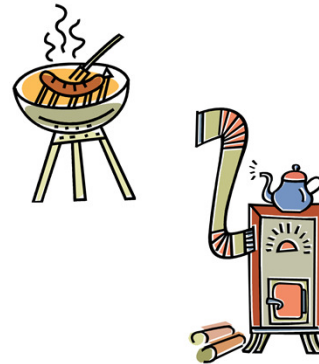
Doctors have recently identified dangers in third-hand smoke, so many people are not yet familiar with this term.

Keep it free of dangerous chemicals

Carbon monoxide (CO)

Main idea

- Gas that you cannot see, smell, or taste
- Produced when fuels such as gas, oil, kerosene, wood, or charcoal are burned
 - If equipment not working or used properly, dangerous amounts produced



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Explain

Possible sources of carbon monoxide include furnaces, gas or kerosene space heaters, boilers, gas cooking stoves, water heaters, clothes dryers, fireplaces, charcoal grills, wood stoves, lawn mowers, power generators, camp stoves, motor vehicles

Keep it free of dangerous chemicals

Carbon monoxide (CO)

Health effects

- Shortness of breath
- Nausea
- Headaches
- Dizziness
- Confusion
- Fainting
- Death



Keep it free of dangerous chemicals

Carbon monoxide

Signs of problem

- Soot around equipment that burns fuel
- No upward draft in chimney
- Excess moisture on windows, walls, or other cold surfaces
- Rusty pipes or leaks around equipment
- Orange or yellow flames (should be blue)
- Smoky smells
- Damaged or discolored bricks at top of chimney

Fix the problem

- Vent all fuel-burning equipment
- Have equipment inspected regularly
- Install carbon monoxide alarms
 - Near sleeping areas
 - On every level of home
 - Not directly above or beside fuel-burning equipment

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Show

Bring a carbon monoxide detector to show the learners.

Keep it free of dangerous chemicals

Radon

Main idea

- Radioactive gas in soil and water
- Has no smell, color, or taste
- Can get into home through
 - Cracks in floors or walls
 - Construction joints
 - Gaps around service pipes
 - Water supply

Health effects

- More than 20,000 deaths from lung cancer each year
 - Second leading cause of lung cancer (after smoking)
 - Leading cause of lung cancer in nonsmokers and people who have never smoked

Keep it free of dangerous chemicals

Radon

Signs of problem

- You cannot see, smell, or taste radon
- Cannot predict on basis of state, local, or even neighboring measurements
- Only way to know is through testing your home

Solve the problem

- If necessary, install radon mitigation system



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Explain

There are short-term and long-term testing methods. Residents can buy test kits and follow their directions or, especially if they are buying or selling a home, may hire qualified testers.

For more information, see

- U.S. Environmental Protection Agency, *Citizen's Guide to Radon*, <http://www.epa.gov/radon/pubs/citguide.html>
- U.S. Environmental Protection Agency, *Home Buyer's and Seller's Guide to Radon*, <http://www.epa.gov/radon/pubs/hmbyguid.html>
- U.S. Environmental Protection Agency, *Consumer Guide to Radon Reduction*, <http://www.epa.gov/radon/pubs/consguid.html>

Image source: <http://www.epa.gov/radon/pubs/citguide.html#howdoes>

Keep it in good repair

Main idea

Keep small problems from becoming big problems

- Homes that are kept in good repair are less likely to have problems with
 - Moisture
 - Pests
 - Safety
- By checking your home regularly, and maintaining or repairing it when needed, you can take care of small problems before they become big problems

Keep it in good repair

Health effects

A home in poor repair

- Increases the risk of injuries from accidents
- Is more likely to contain things that can cause asthma attacks, allergy symptoms, and other health problems
- If built before 1978, may contain lead paint, increasing the risk of lead poisoning
 - Lead poisoning harms children (damaging their ability to learn, think, and behave) and adults (raising their blood pressure and making them tired or irritable)

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Keep it in good repair

Signs of problem

- Moisture or mold, especially in the basement, bathroom, ceiling, or attic
- Leaks, especially from the roof, around windows or doors, and around pipes
- Missing or broken lights or windows
- Missing or broken stair railings or steps
- Worn or damaged electrical wires or cords
- Paint dust or peeling, flaking, or chalking paint, especially in a home built before 1978

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Keep it in good repair

Fix the problem

- Check your home often
 - Maintain good conditions
 - Repair problems as necessary
 - Clean dryer vents, kitchen fans, and bathroom fans often
 - Repair or replace broken windows, doors, railings, stairs, gutters, downspouts, and cracks or holes in foundations
 - Fix leaks promptly
- Hire qualified professionals when necessary, such as for plumbing, electrical, and roof repairs
 - In homes built before 1978
 - Hire contractors who are certified in lead-safe work practices by the U.S. Environmental Protection Agency, or
 - Learn how to work safely around lead paint

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To learn more

U.S. Department of Housing and Urban Development, Healthy Homes Maintenance Checklist, http://portal.hud.gov/hudportal/documents/huddoc?id=DOC_12334.pdf

U.S. Centers for Disease Control and Prevention, A Healthy Home for Everyone, http://www.cdc.gov/nceh/lead/publications/Final_Companion_Piece.pdf

Advocating for a healthy home

- Adults sometimes must act as advocates for family, working with
 - Landlords
 - State and local health, housing, building, and fire officials
 - Nonprofit agencies
 - Other residents in the home
 - Other people or organizations
- If you are a tenant, advocating often starts with landlord
 - Helpful to understand rights and responsibilities of both tenants and landlords



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Advocating for a healthy home

Steps for advocating effectively

1. Believe in yourself and your family
 - You have a right to advocate for your family
 - You have a right to a healthy home
 - You also have responsibilities to keep your home healthy
2. Identify what your family needs
 - Be as specific as possible
 - Break complicated problems into smaller pieces
 - Work on most important needs first

Advocating for a healthy home

Steps for advocating effectively

3. Identify resources that can help meet your family's needs
 - Learn about your legal rights and responsibilities
 - Find people and organizations that can answer questions and offer help
 - Work with other people who share your concerns

Advocating for a healthy home

Steps for advocating effectively

4. Explain your needs to people and organizations that can help
 - Explain specific problem and solution you want
 - Be as pleasant, polite, and positive as possible
 - Stay on topic
 - Take notes of conversations
 - Ask for action by specific date, explain that you'll follow up, and end with a thank you
5. Continue advocating as long as necessary

Conclusion

“Where we live is at the very core of our daily lives. For most Americans, home represents a place of safety, security, and shelter, where families come together.... Given its importance, it is not surprising that **factors related to housing have the potential to help—or harm—our health in major ways....**

“When **adequate housing** protects individuals and families from harmful exposures and provides them with a sense of privacy, security, stability, and control, it **can make important contributions to health**. In contrast, **poor quality and inadequate housing contributes to health problems** such as infectious and chronic diseases, injuries, and poor childhood development.”

—*Commission to Build a Healthier America, 2008*

Source: Robert Wood Johnson Foundation, *Issue Brief 2: Housing and Health*, September 2008, www.commissiononhealth.org

Questions?

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To learn more see

National Center for Healthy Housing, “Steps for Creating a Healthier Home—Costs for a Typical Two-Story Single-Family Home,”

http://nchh.org/Portals/0/Contents/Steps_for_Creating_a_Healthier_Home2009.pdf