U.S. Department of Housing and Urban Development • Office of Healthy Homes and Lead Hazard Control

HEALTHYHOMES
Healthy Families | Healthy Children

RADON

"You can't see radon. But it may be a problem in your home"

U.S. Environmental Protection Agency

Did you know...?

- Radon is the second leading cause of lung cancer, after smoking.[1]
- Approximately 20,000 cancer deaths each year are caused by radon.[2]
- Radon is the leading cause of cancer among nonsmokers.[3]

What is it?

Radon is a radioactive gas that cannot be seen or smelled and is found naturally around the country. When you breathe air containing radon, cells in your airway may be damaged, increasing your risk of getting lung cancer.

Radon is found in the dirt and rocks beneath houses, in well water, and in some building materials. It can enter your house through soil, dirt floors in crawlspaces, and cracks in foundations, floors, and walls.

All houses have some radon, but houses next to each other can have very different radon levels, so the only way to determine your particular risk is to test your home. Radon is measured in "picoCuries per liter of air," abbreviated "pCi/L." This unit of measure describes the number of radon gas particles in one liter of air. The amount of radon outdoors is usually around 0.4 pCi/L, and indoors is around 1.3 pCi/L. Even though all radon exposure is unhealthy, radon at levels below 4 pCi/L are considered acceptable.

There is no known "safe" level of radon exposure. If your home has a radon level of 4 pCi/L or more, you should take action to lower this level.

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RADON

What can you do?

Test your Home!

About 1 out of every 15 homes has a radon problem. The only way to know for sure is to test your home. You can buy a radon test at a hardware store or order it by mail. There are two types of tests: short-term tests take 2 to 90 days, while long-term tests take more than 90 days but provide a better estimate of your annual average radon level.

In real estate transactions, short-term tests are more common because of the time limitations. (Consult EPA's Home Buyer's and Seller's Guide for more on radon testing in real estate transactions.

Follow all the instructions that come with your test kit. If possible during the test, keep your windows closed to keep air from escaping. Place your test kit in a room on the lowest level of your home that you use regularly, probably on the first floor or in the basement. When the test is done, send it to a lab to process your results.

You can also hire a professional tester to do the test for you. Contact your state's radon office for a list of qualified testers. (www.epa.gov/iaq/whereyoulive.html)

Other helpful steps:

1. Stop smoking and discourage smoking in your home. Smoking significantly increases the risk of lung cancer from radon.
2. Increase air flow in your house by opening windows and using fans and vents to circulate air. Natural ventilation in any type of house is only a temporary strategy to reduce radon.
3. Seal cracks in floors and walls with plaster, caulk, or other materials designed for this purpose. Contact your state radon office for a list of qualified contractors in your area and for information on how to fix radon problems yourself. Always test again after finishing to make sure you've fixed your radon problem.
4. Ask about radon resistant construction techniques if you are buying a new home. It is almost always cheaper and easier to build these features into new homes than to add them later.

For more information . . .

Visit HUD's website at www.hud.gov/offices/lead for more information about addressing health hazards in homes or to learn if HUD has a Healthy Homes program in your community.

Download a copy of "Help Yourself to A Healthy Home" for more practical steps you can take to make your home a healthy home.

More Federal Resources

US Environmental Protection Agency (EPA)
www.epa.gov/radon

Other Resources

State Radon Contacts
1-800-438-4318 (Indoor Air Quality Information Clearinghouse)

National Radon Hotline to order radon test kits
1-800/SOS-RADON (1-800-767-7236)

National Safety Council and EPA Radon Hotline with an operator to answer questions about radon
1-800-55RADON (1-800-557-2366)

Radon Fix-it Hotline
1-800-644-6999

Spanish Language Radon Hotline
1-800-725-8312

American Lung Association
www.lungusa.org

Radon test kits are available at hardware stores or by mail

[1]U.S. Environmental Protection Agency "Indoor Air- Radon" www.epa.gov/radon August 25, 2004
[2]U.S. Environmental Protection Agency "Assessment of Risks from Radon in Homes" www.epa.gov/radon/risk_assessment.html August 25, 2004
3U.S. Environmental Protection Agency "Indoor Air-Radon"www.epa.gov/iaq/radon/index.html August 4, 2008

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ALLERGY

"Allergic diseases can be controlled; symptoms can be prevented or minimized."

American Academy of Allergy, Asthma and Immunology, "The Allergy Report"

Did you know...?

- As many as 40 or 50 million people in the United States suffer from Allergies.[1]
- Allergies cause swollen eyes, itching skin, dripping noses, lightheadedness and even death.

What is it?

An allergy is a strong reaction by your body's immune system to something that would normally be harmless–a food, plant, or medicine, for example. Common reactions include a stuffy nose, itchy eyes, or a skin rash. Severe allergic reactions (see below) require immediate medical attention (see below).

Many people who have allergies also have asthma. Allergic reactions may trigger asthma attacks, where a swelling and tightening of your airways makes it difficult to breathe (see "Asthma" fact sheet).

Signs of Allergies and Allergic Reactions include:

- Asthma, shortness of breath, cough, chest tightness or wheezing (See "Asthma" fact sheet)
- Itchy, watery eyes
- Itchy, inflamed or runny nose
- Hives or itchy rash on skin
- Dark circles under and around eyes
- Recurring headache
- Diarrhea or stomach cramps
- Anaphylaxis (a severe reaction) may be life-threatening. Symptoms include: swelling, redness of the skin, hives, confusion, anxiety, lightheadness, stomach cramps, and nausea. If these symptoms are present, go immediately to a doctor or emergency room for treatment.

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ALLERGY

Types of allergies

There are many types of allergies. The following are some of the most common:

Indoor	Outdoor	Foods	Medications	Insect Stings and Bites	Contact with Skin
■ dust ■ dust mites ■ mold ■ pets (most often animal skin flakes or "dander")	■ pollen (from flowering trees and grass) ■ mold	■ milk ■ citrus fruits ■ eggs ■ peanuts ■ wheat ■ fish & shellfish	■ antibiotics (like Penicillin) ■ anti-seizure drugs ■ anesthetics	■ bees ■ wasps ■ hornets ■ yellow jackets	■ plants (like poison ivy) ■ cosmetics ■ skin-care products ■ jewelry ■ latex (gloves or condoms)

What you can do

Know your allergies, and know what to avoid. Not everyone is allergic.

- Contact your doctor about any unusual reactions to food, plants, medicines, or other items.
- Avoid contact with things you know trigger allergies.
  - Avoid being outside or having the windows open when pollen counts are high.
  - Read food, medicine, and home care product lavels carefully to avoid ingredients that cuase reactions.
  - Use mattress and pillow covers and wash bedding in hot water.
- Keep a clean home (for more tips, see "Asthma" fact sheet).
  - Control pests such as mice and cockroaches.
  - Vacuum floors and upholstery regurlarly using a HEPA (High Efficiency Particle Air) filter or micro-filtration bag, if possible.
  - Consider replacing carpet with smooth, easily cleaned flooring.
  - Avoid having mold, cigarette smoke, and hazardous chemicals inside the house.
  - Keep pets out of the bedrooms of family members who are allergic to them.
- In the event of a severe allergic reaction, seek emergency medical attention immediately.

For more information . . .

Visit HUD's website at www.hud.gov/offices/lead for more information about addressing health hazards in homes or to learn if HUD has a Healthy Homes program in your community. From this website, you can download a copy of "Help Yourself to A Healthy Home" for more practical steps you can take to make your home a healthy home.

Other Federal Resources

US Centers for Disease Control and Prevention
www.cdc.gov/od/oc/childhealth

US Environmental Protection Agency
www.epa.gov/children

Other Resources

American Academy of Allergy, Asthma, and Immunology (AAAAI)
www.aaaai.org

Asthma and Allergy Foundation of America
www.aafa.org

The Allergy & Asthma Network: Mothers of Asthmatics (AANMA)
www.aanma.org

Ask your doctor or contact your local or state department of health.

Keeping a clean home can reduce some allergens

[1]Source: American Academy of Allergy, Asthma and Immunology (AAAAI). The Allergy Report: Science Based Findings on the Diagnosis & Treatment of Allergic Disorders, 1996-2001

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ASTHMA

"The important thing to remember is that you can control your asthma."

Centers for Disease Control "Basic Facts About Asthma"

Did you know...?

- Over 20 million people in the United States suffer from asthma?[1]
- Over 6.3 million children under 18 report having asthma?[2]
- There were 75% more cases of asthma in 1994 than in 1980?[3]
- Asthma is the third leading cause of hospitalization in the United States?[4]

What is it?

Asthma is a lung disease. It causes people to wheeze, cough, be short of breath, and sometimes even die. People with asthma can suffer from frequent periods of difficulty breathing called "asthma attacks." During an attack, the airways swell, the muscles around them tighten, and the airways produce thick yellow mucous.

Asthma is not contagious, but it does run in families. If parents have asthma, their children are more likely to develop it too.

Children, particularly those living in low-income urban households, are especially at risk for developing asthma. "African-American children in low-income households have more severe asthma and are at greater risk of death."[5]

Each person is different, but many things (called asthma "triggers") can cause asthma attacks. These can be found both outdoors and indoors and include:

- Cold weather
- Pollen
- Exercise
- Stress
- Dust and dust mites
- Cockroaches
- Mold
- Pet dander (skin flakes)
- Rodents
- Tobacco smoke
- Air fresheners

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ASTHMA

Mold is a common asthma trigger.

Photo by: January E. Jones, Improving Kids' Environment

What can you do?

There are three steps you can take to reduce asthma symptoms.

1.Keep a clean home.

- Make sure that your home is free of dust, mold, smoke, and other potential triggers.
- Vacuum often using a vacuum with a HEPA (High Efficiency Particle Air) filter or microfiltration bag, if possible.
- Keep foods stored in tightly sealed containers to avoid attracting cockroaches and rodents.
- Clear crumbs, drips, spills, and dirty dishes immediately.
- Identify and quickly fix water leaks in your home.

2. Keep people with asthma away from dust, dust mites, and smoke.

- Use zippered "allergen resistant" mattress and pillow covers to prevent contact with dust mite allergens.
- Keep pets outdoors or away from sleeping areas; clear hairs from carpets and furniture.
- Quit smoking, or smoke only outside your home and car. Always keep tobacco smoke away from children.
- Wash bed sheets weekly in hot water (130 F) to kill dust mites.
- Keep people with asthma out of a room while vacuuming or dusting.

3. Get medical advice and follow the doctor's instructions.

- Get medical attention for breathing problems.
- Get emergency medical care for bad attacks of shortness of breath or wheezing.
- Work with your doctor to develop an asthma management plan.
- Take all prescribed medication, either to prevent attacks or to lessen the symptoms.
- Find out what allergies you have so you can avoid these potential asthma triggers.

For more information . . .

Visit HUD's website at www.hud.gov/offices/lead for more information about addressing health hazards in homes or to learn if HUD has a Healthy Homes program in your community. From this website, you can download a copy of "Help Yourself to A Healthy Home" for more practical steps you can take to make your home a healthy home.

Other Federal Resources

US Centers for Disease Control and Prevention
www.cdc.gov/od/oc/childhealth

US Environmental Protection Agency
www.epa.gov/children

Other Resources

American Academy of Allergy, Asthma, and Immunology (AAAAI)
www.aaaai.org

Asthma and Allergy Foundation of America
www.aafa.org

The Allergy & Asthma Network Mothers of Asthmatics (AANMA)
www.aanma.org

Ask your doctor or contact your local or state department of health.

Cockroaches can trigger asthma. Use traps, gel bait, and cleaning to deal with roaches.

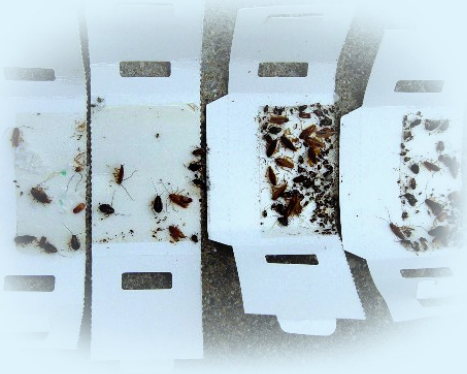

Photo by: January E. Jones, Improving Kids' Environment

[1]"Asthma Prevalence, Health Care Use, and Mortality, 2000-2001," National Center for Health Statistics, Centers for Disease Control and Prevention.
[2]Ibid
[3]Centers for Disease Control. Surveillance for Asthma – United States, 1960-1995, MMWR. 1998; 47 (SS-1).
[4]Environmental Health Watch, website www.ehw.org/Asthma/ASTH_home1.htm. August 25, 2004
[5]Centers for Disease Control. Surveillance for Asthma – United States, 1980-1999, MMWR, 2002; 51 (SS-01).

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MOLD

"The key to mold control is moisture control."

U.S. Environmental Protection Agency

- Stains or discoloration on your walls, ceiling, or furniture?
- A damp or musty smell?
- Water problems like a leaky roof or water in the basement?

Molds are alive. There are hundreds of thousands of different types of mold. They are living organisms that grow naturally, particularly in warm, damp, humid conditions where there is little air movement. Often called "mildew," we can only see or smell mold when there is a large quantity. Mold can grow almost anywhere: on walls, ceilings, carpets, or furniture. Humidity or wetness, caused by water leaks, spills from bathtubs or showers, or condensation, can cause mold to grow in your home.

Mold produces "spores," tiny particles that float through the air. These can sometimes cause health problems. Mold does not affect everyone, and different people are affected differently when mold is breathed or inhaled. People who are allergic to mold may get watery eyes, runny or stuffed noses, itching, headaches, and may have difficulty breathing. Mold can also trigger asthma attacks (see "Asthma" fact sheet). Some molds produce toxins (poisons) that may be hazardous if people are exposed to large amounts of these molds.

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MOLD

You cannot eliminate all mold spores from a home, but you can take the following steps to prevent and get rid of mold.

1. Prevent: keep your house clean and dry.

- Fix water problems such as roof leaks, wet basements, and leaking pipes or faucets.
- Make sure your home is well ventilated and always use ventilation fans in bathrooms and kitchens.
- If possible, keep humidity in your house below 50% by using an air conditioner or dehumidifier.
- Avoid carpeting in kitchens, bathrooms, and basements. Dry floor mats as quickly as possible.

2. Identify: find mold that might be growing in your home.

- Search for areas that have a damp or moldy smell, especially in basements, kitchens, and bathrooms.
- Look for water stains fuzzy growth or discoloration on and around ceilings, walls, floors, window sills and pipes.
- Search behind and underneath materials such as carpeting, furniture, or stored items.
- Inspect kitchens, bathrooms, and basements for standing water, water stains, and patches of out-of-place color.

3. Respond: fix any water problems immediately and clean or remove wet materials, furnishings, or mold.

- Clean up spills or floods within one day.
- Dry all surfaces and fix the problem or leak to prevent further damage.
- Install a dehumidifier where there is high humidity.
- Replace water damaged components, such as drywall and insulation.
- Clean mold off non-porous surfaces with a weak solution of bleach and water (no more than 1 cup to 1 gallon water).
- Throw away moldy materials that cannot be cleaned, such as carpet, upholstered furniture, drywall, and floorboards.
- When cleaning mold, protect yourself by wearing long sleeves, pants, shoes, and rubber gloves, as well as goggles and a facemask.
- If you find a large area of mold (larger than the top of a twin-sized bed) or are allergic to mold, consider hiring a professional to clean it and fix the cause of the problem.

(For a list of mold-removal professionals, look under "Fire and Water Damage Restoration" in your telephone book.)

Moldy materials that cannot be cleaned should be thrown away.

For More Information...

Visit HUD's website at www.hud.gov/offices/lead for more information about addressing health hazards in homes or to learn if HUD has a Healthy Homes program in your community. From this website, you can download a copy of "Help Yourself to A Healthy Home" for more practical steps you can take to make your home a healthy home.

Other Federal Resources

EPA: Indoor Air Quality – Mold. "Mold Resources"
www.epa.gov/mold

CDC: National Center for Environmental Health, Mold
www.cdc.gov/nceh/airpollution/mold/

FEMA: Actions to Take Following a Flood
www.fema.gov/hazards/floods/

Other Resources

American Academy of Allergy, Asthma, and Immunology (AAAAI):
www.aaaai.org

American Industrial Hygiene Association
www.aiha.org/

Minnesota Department of Health, Mold
www.health.state.mn.us/divs/eh/indoorair/mold/

California Department of Health, Mold
www.cal-iaq.org

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LEAD

"Despite progress, lead poisoning remains one of the top childhood environmental health problems today."

President's Task Force on Environmental Health Risks and Safety Risks to Children

Did you know...?

- Many homes built before 1978 have lead-based paint.
- 24 million homes in the United States have peeling or chipping lead-based paint or high levels of lead in dust.
- There is no known safe level of lead exposure for children.

What is it?

Lead is a toxic metal used in a variety of products and materials. When lead is absorbed into the body, it can cause damage to the central nervous system and vital organs like the brain, kidneys, nerves, and blood cells. Some symptoms of lead poisoning include headaches, stomachaches, nausea, tiredness, and irritability, which may also occur with the flu and some viruses. Lead can also harm children without causing obvious symptoms.

Both inside and outside the home, deteriorated lead-paint releases its lead, which then mixes with household dust and soil. Children can become lead poisoned by putting their hands or other lead contaminated objects into their mouths, by eating paint chips found in homes with peeling or flaking lead-based paint, and from playing in lead contaminated soil.

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LEAD

In homes built before 1978, treat peeling paint as a lead hazard.

What can you do?

1. In your home, if it was built before 1978:
   - Mop smooth floors (using a damp mop) weekly to control dust.
   - Vacum carpets and upholstery to remove dust, using a vacum with a HEPA filter or a "high efficiency" collection bag.
   - Take off shoes when entering the house.
   - Pick up loose paint chips carefully with a paper towel; wipe the surface clean with a wet paper towel.
   - Take precautions to avoid creating lead dust when remodeling, renovating, or maintaining your home.
   - Have your home checked for lead hazards by a lead professional (including the soil).
2. For your child:
   - Frequently wash your child's hands and toys to reduce exposure.
   - Use cold tap water for drinking and cooking.
   - Avoid using home remedies (such as arzacon, greta, or pay-loo-ah) and cosmetics (such as kohl or alkohl) that contain lead.
   - Children under 6 years of age should have their blood lead level tested if they may have been exposed to lead. Reasons to seek testing include:at age 1 and 2. Children from 3 to 6 years of age should have their blood tested, if they have not been tested before and:
     - They live in or regularly visit a house built before 1950;
     - They live in or regularly visit a house built before 1978 with peeling paint or on-going or recent renovations or remodeling; or
     - They have a sibling or playmate who has or did have lead poisoning.

Ask your health care provider or local health department if your child should be tested for lead

For more information...

Visit HUD's website at www.hud.gov/offices/lead for more information about addressing health hazards in homes or to learn if HUD has a Healthy Homes program in your community. From this website, you can download a copy of "Help Yourself to A Healthy Home" for more practical steps you can take to make your home a healthy home.

Other Federal Resources

U.S Department of Housing and Urban Development, Office of Healthy Homes and Lead Hazard Control (OHHLHC)
www.hud.gov/offices/lead or call (202) 755-1785 x. 104

The National Lead Information Center
1-800-424-LEAD (5323)
www.epa.gov/lead/leadpbed.htm

Centers for Disease Control and Prevention (CDC)
www.cdc.gov/nceh/lead/lead.htm

Environmental Protection Agency (EPA)
www.epa.gov/lead

U.S Department of Labor, Occupational Safety and Health Administration (OSHA)
www.osha-slc.gov/SLTC/lead/index.html

U.S Consumer Product Safety Commission (CSPC)
www.cpsc.gov or call
1-800-638-8270

Dust created by opening and closing windows is a common lead hazard.

Photo by: January E. Jones, Improving Kids' Environment

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HEALTHYHOMES
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HOME SAFETY

" There are simple steps you can take to help keep your loved ones safe in and around the home."

Did you know...?

- Home accidents kill one person every 16 minutes and injure one person every four seconds in the U.S..[1]
- More than 1.2 million poisonings among children under age 5 were reported to U.S. poison control centers in 2002.[2]
- Nearly 40,000 children under age 14 are injured by fires each year.[3]

Home Safety is the prevention of unintentional injuries that occur in and around the home.

What you can do

Many home related injuries are preventable. Below are some of the many small and easy things you can do to protect your family.

Post emergency telephone numbers next to all phones to get help quickly for any type of injury.

Poison

- Read warning labels and follow storage directions on household products. Poisonous products can include medicines, cleaning supplies, pesticides, and hair spray.
- Keep poisonous products out of children's sight and reach. Store on high shelves in locked cabinets and install child-proof latches.

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HOME SAFETY

- Store food and non-food products separately to prevent confusion and possible food contamination.
- Always choose non-toxic alternatives when possible and use products with child-resistant caps.
- Never mix cleaning products together; they may produce dangerous fumes (ammonia and bleach should never be mixed).
- Install Carbon Monoxide (CO) detectors in your home.
- Properly dispose of expired medicines.
- If it is necessary to use harsh chemicals, use them when children are not at home, follow manufacturer's instructions, and wear protective clothing such as gloves and eye protection.

Fires and Burns

- Install smoke detectors on every floor of your home near every bedroom. Test detectors every month and change their batteries every year. Never disable smoke detectors.
- Develop a family escape plan.
- Keep matches, lighters, and candles out of children's reach.
- Never smoke in bed. It is the leading cause of fire-related deaths.
- Keep anything that can catch fire away from fireplaces, heaters, and radiators.
- Keep electrical systems in good condition. Replace frayed electrical wires.
- Avoid kitchen fires and burns.
  - Stay in the kitchen while cooking.
  - Turn pot handles toward the inside of the stove so children cannot grab them.
  - Install ground-fault circuit interrupters (GFCIs) in kitchens and bathrooms.
- Set water-heater thermostats below 120° F (50° C). Always test the water before bathing yourself or your child.

Drowning, Choking, Suffocation, and Strangulation

- Never leave children alone near water, including bathtubs, buckets, swimming pools, rivers, and the ocean. Learn and practice First Aid and CPR.
- Use child-proof fencing around all swimming pools and hot-tubs.
- Avoid toys for children under 3 years of age that are smaller than 2 inches long and 1 inche wide. Toys for young children should never have small or removable parts that could be choked on.
- Avoid window blinds with looped cords, which may cause strangulation if not stored out of children's reach.
- Keep plastic bags and drawstring cords away from children.

Falls and Other Injuries

- Keep your floors free of anything that may cause tripping, such as toys, shoes, or magazines.
- Use stools, ladders and stepladders carefully.
- Make sure that your home is well lit.
- Use guards on windows and safety gates near stairs to keep children from falling
- Follow manufacturers' instructions for storing and using lawn equipment or chemicals.
- Wear protective gear on eyes and ears when using power tools.
- Keep sharp objects out of children's reach.
- Keep electric appliances away from water.
- Always keep firearms well secured. Firearms should always be locked, unloaded, and stored out of reach of children. Store ammunition in a separate, locked location.

For more information . . .

Visit HUD's website at www.hud.gov/offices/lead for more information about addressing health and safety hazards in homes or to learn if HUD has a Healthy Homes program in your community. From this website, you can download a copy of "Help Yourself to A Healthy Home" for more practical steps you can take to make your home a healthy home.

Other Federal Resources

US Centers for Disease Control and Prevention
www.bam.gov (for kids)

US Environmental Protection Agency
www.epa.gov/children

Other Resources

National Safe Kids Campaign
www.safekids.org

National Safety Council
www.nationalsafetycouncil.org

Home Safety Council
www.homesafetycouncil.org

Emergency Resources

National Poison Control Center hotline: 1-800-222-1222.
For other emergencies (fire, drowning, choking, falls, etc.) call 911. In areas without 911 service, memorize your fire department's emergency phone number. In case of fire, dial 911 from outside your home.

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CARBON MONOXIDE

"You can't see or smell carbon monoxide, but at high levels it can kill a person in minutes."

U.S. Environmental Protection Agency

Did you know...?

- Over 500 people in the United States die from accidental carbon monoxide (CO) poisoning each year.[1]
- Over 10,000 people seek medical attention for CO poisoning each year.[2]
- Infants, people with lung or heart disease, or people with anemia are more seriously affected.

What is it?

Carbon monoxide is a gas that cannot be seen, smelled or tasted, and can be fatal when breathed. The symptoms that occur with carbon monoxide poisoning, such as a headache, can be similar to those of common illnesses. These similarities often lead to an incorrect diagnosis, such as flu, allergies, migraine headache, stroke.

Carbon monoxide poisoning is caused by:

- Operating fuel-burning products such as electrical generators without proper ventilation. Read manufacturers' instructions before operating any fuel-burning device in your home.
- Car exhaust entering the home from the garage.
- Combustion equipment such as furnaces or hot water heaters that are not working properly or have blocked exhaust systems.

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CARBON MONOXIDE

Do not run you car in a closed garage.

What can you do?

- Make sure fuel burning appliances are installed by a professional and
  are working properly.
- Never idle your car in the garage, even if the garage door is open to the outside.
- Never use a gas range or oven to heat a home.
- Choose vented appliances (like gas fireplaces) whenever possible.
- Have your heating systems and chimneys inspected and cleaned by a qualified technician every year.
- Replace dirty air filters on heating and cooling systems.
- Never run a generator, pressure washer, or any gasoline-powered engine inside a basement, garage, or other enclosed structure, even if the doors or windows are open, unless the equipment is professionally installed and vented.
- Never use a charcoal grill, hibachi, fuel lantern, or portable camping stove inside a home, tent, or camper.
- Make sure there is good ventilation at all times. Install proper ventilation for interior combustion appliances, and consider installing air exchangers or air conditioning for "tightly-sealed" homes.
- Install carbon monoxide detectors near sleeping areas and replace batteries on a regular basis.

For more information...

Visit HUD's website at www.hud.gov/offices/lead for more information about addressing health hazards in homes or to learn if HUD has a Healthy Homes program in your community. From this website, you can download a copy of "Help Yourself to A Healthy Home" for more practical steps you can take to make your home a healthy home.

Other Federal Resources

US Centers for Disease Control and Prevention
www.cdc.gov/co

US Environmental Protection Agency
www.epa.gov/iaq

Other Resources

Healthy Indoor Air America's Homes
www.healthyindoorair.org/facts_co.html

Community Environmental Health Resource Center (CEHRC)
www.cehrc.org/tools/carbon/cobacmat.cfm

Ask your doctor or contact your local or state department of health.

Install carbon monoxide detectors in your home.

[1]Centers for Disease Control and Prevention. "Carbon Monoxide Poisoning Fact Sheet" www.cdc.gov/nceh/airpollution/carbonmonoxide/cofaq.htm August 25, 2004
[2]Community Environmental Health Resource Center (CEHRC) "Carbon Monoxide Background Materials" www.cehrc.org/tools/carbon/cobacmat.cfm August 25, 2004