

Make **YOUR** House



A Healthy Home

*e<sup>3</sup> more environmentally-friendly, too!*

**Did you know** that most people spend over 90% of their time indoors? This brochure offers ways to make your home a healthy place for you and your family. It provides you with information on **mold, radon, carbon monoxide, asthma and allergies, second-hand smoke, volatile organic compounds,**

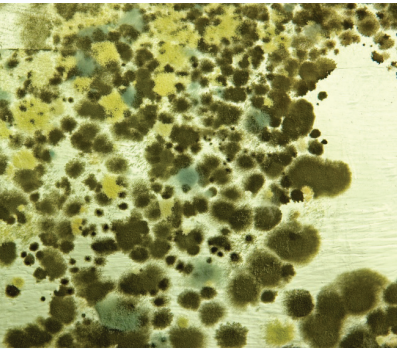
**drinking water contaminants, lead, mercury, and pesticides.**

There are also many things you can do in and around your home to help protect and conserve the environment. In this brochure there are tips to help you save energy, save money and make your home **more environmentally-friendly.**

Learn how you can make your home a healthy place to live.



- ***Do you have mold in your home?***
- ***Is there moisture in your home that could cause mold to grow?***
- ***How do you clean up mold?***



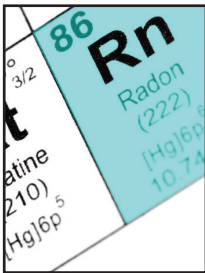
**Molds are living organisms** that grow on wet or damp surfaces like in basements, showers and around plumbing fixtures. Molds reproduce by releasing tiny spores that you can't see into your indoor and outdoor air. When you breathe in mold spores, they get into your lungs. Prolonged exposure to high levels of mold can result in reduced lung function in an otherwise healthy adult. Some people with asthma are particularly sensitive to mold.

## How you can clean up and prevent mold:

- ***Scrub mold with water and detergent.***
- ***Run bathroom and kitchen vents while bathing and cooking.***
- ***Vent bathrooms and clothes dryers to the outside.***
- ***When first turning on home or car air conditioners, leave the room or drive with the windows open for several minutes to allow mold spores to disperse.***
- ***Cover window wells if they leak to prevent moisture from building up indoors.***

For more information on mold and ways to clean up a mold problem safely in your home, go to [www.epa.gov/mold](http://www.epa.gov/mold)

- **What is radon?**
- **How might you be affected by radon?**
- **How do you know if you have radon in your home?**



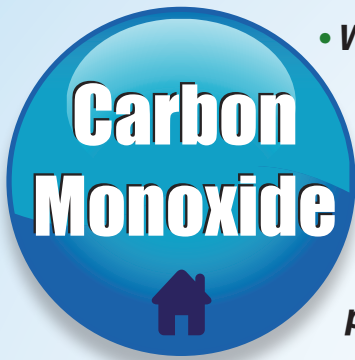
**Radon** is a colorless and odorless radioactive gas that forms when naturally occurring uranium in the soil breaks down and gets into the air you breathe. It cannot be felt when breathing it into your lungs. Radon may enter homes through cracks and holes in the basement or foundation and can become trapped and build up to dangerously high levels. It may be a problem in old and new homes. Prolonged exposure to radon can cause lung cancer in non-smokers and smokers alike. Higher radiation doses may result in children due to their smaller bodies and faster breathing rates compared to adults. The EPA estimates that radon is responsible for 20,000 lung cancer deaths every year, making radon the second leading cause of lung cancer in the U.S., after smoking.

## How you can eliminate the risk of radon in your home:

- *Test your home for radon gas using a cheap and easy-to-use radon test kit purchased from your local hardware store.*
- *If indoor radon levels are 4pCi/L or higher, the EPA recommends using a certified radon specialist.*

More information about radon can be found on EPA's website at [www.epa.gov/radon](http://www.epa.gov/radon)

You can also purchase radon test kits by contacting the **National Radon Helpline at (800) 557-2366**, or their website at [www.sosradon.org](http://www.sosradon.org)



- **What is carbon monoxide (CO)?**
- **What are signs of CO poisoning?**
- **How can you protect yourself and your family from CO poisoning?**

**Carbon monoxide**, or CO, is a colorless, odorless gas that can cause sudden illness and death. It can be found in carbon-based fuels used in gas appliances, cars and trucks, and is a by-product of burning wood, charcoal,

gas or oil. Common symptoms of CO poisoning are flu-like symptoms such as dizziness, fatigue, headaches, and nausea. High levels of CO can result in loss of consciousness and death.



## How you can prevent CO poisoning in your home:

- **Never idle your car or lawnmower in the garage, even if the garage door is open.**
- **Never use charcoal grills, portable generators or kerosene heaters indoors, on balconies, near doors or next to vents or windows.**
- **Never heat your home with a gas oven.**
- **Install carbon monoxide alarms near sleeping areas.**
- **Have all indoor gas appliances regularly inspected, vented and maintained.**

For more information on carbon monoxide, visit EPA's website at [www.epa.gov/iaq/co.html](http://www.epa.gov/iaq/co.html)

# Asthma & Allergies



- ***What are some things that can trigger asthma and allergies?***
- ***How can asthma risks be minimized?***
- ***Does anyone smoke inside your home?***

***Asthma is a disease*** that affects the lungs and makes it hard for people to breathe. Allergies can also make it hard for people to breathe by causing an asthma attack. The most common symptoms of asthma are chest tightness, shortness of breath, wheezing, and nighttime or early morning coughing. Common signs of allergies are a stuffy or runny nose, itching, or a rash. Things that can set off, or trigger, an asthma attack in one person may not be a problem for another. Some common triggers include: mold; first and second-hand smoke; dust mites; cockroaches; rodents; and pet fur or saliva. Asthma can be controlled with medications and by avoiding common triggers that can cause asthma attacks.

## **How you can minimize risks presented by asthma and allergy triggers:**

- ***Dust surfaces with a damp cloth, and vacuum carpets and floors often.***
- ***Wash sheets and blankets weekly in hot water.***
- ***After playing with your pet, wash your hands and clean your clothes to remove pet allergens.***
- ***Smokers should always go outdoors to smoke.***
- ***Add mats on both sides of the door to trap dirt, allergens, bacteria and lawn chemicals.***

For more information on asthma and asthma triggers, visit EPA's website at [www.epa.gov/asthma/triggers.html](http://www.epa.gov/asthma/triggers.html)



- **Can breathing problems be triggered by second-hand tobacco smoke?**
- **What are the effects of second-hand smoke?**
- **How can you eliminate the risks to your family of second-hand smoke?**

**Environmental tobacco smoke**, also known as second-hand smoke, is smoke from tobacco products used by other people. The Surgeon General has found that second-hand smoke is responsible for heart disease, lung cancer, and death in children and adults. Second-hand smoke is also an asthma trigger and can contribute to breathing problems such as bronchitis, respiratory tract infections and reduced lung function.

Smoke-free rules in homes and vehicles can reduce second-hand smoke exposure among children and adults. Some studies indicate that these rules can also help smokers



quit and can reduce the risk of adolescents becoming smokers.

Exposure to a natural mineral fiber called asbestos also increases your risk of developing lung disease, and is made worse by smoking. Asbestos was added to building materials because of its good insulating, sound-proofing, and corrosion-resistance properties. Common products that might have contained asbestos in the past include insulation on steam pipes, boilers and furnace ducts, floor tiles and adhesives for floor tile, and decorative material sprayed on walls and ceilings.

For more information on asbestos, go to [www.epa.gov/asbestos/pubs/help.html](http://www.epa.gov/asbestos/pubs/help.html)

## How you can reduce the risk of second-hand tobacco smoke in your home:

- **Take the smoke-free home pledge.**
- **Adopt a smoke-free home.**
- **Smoke outdoors in areas where children or adults are not present.**
- **If you are concerned about possible asbestos exposure, consult a physician who specializes in lung diseases (pulmonologist).**

For information on EPA's "Take the Smoke Free Home Pledge" go to [www.epa.gov/smokefree/pledge](http://www.epa.gov/smokefree/pledge)





- **Is indoor air pollution a concern in your home?**
- **What things in your home can cause indoor air pollution?**
- **How might you and your family be affected by indoor air pollution?**

**When you buy a new car** that has that “new car smell,” this is an organic vapor or volatile organic compound (VOC) that you smell. In the home, new carpeting, wood paneling, fresh paint, furniture, building materials and other household items are made with the use of chemicals that give off vapors. VOCs can also come from some room fresheners, scented candles, perfumes, deodorants and other products that are used to produce or mask an odor.

VOCs are a health concern because they can trigger asthma

attacks, cause eye, nose, and throat irritation, cause headaches and loss of coordination, and damage the liver, kidneys and nervous system. Persons who are sensitive to chemicals are particularly at risk. In fact, the EPA has said that formaldehyde, used in construction glues and other building materials, may also cause cancer.



### How you can **minimize** the exposure of **organic vapors** or **VOCs** in your home:

- **Make sure you provide plenty of fresh air when using products with strong vapors.**
- **Dispose of any unused products as directed and in a safe manner according to label directions.**
- **Choose products with low vapors or VOCs.**
- **When buying a new home, or when having work done on your existing home, ask that low VOC construction materials be used - low VOC paints, carpets, and other materials are available if requested.**

For more information on VOCs visit EPA's website at [www.epa.gov/iaq/voc.html](http://www.epa.gov/iaq/voc.html)

# Drinking Water Contaminants



- ***Is your drinking water safe?***
- ***Where does your water come from?***
- ***Has your water been tested lately?***

**Clean drinking water** is necessary for good health. Harmful chemicals and germs can get into your drinking water and pose a threat to your health.

If you have a well or other private water supply, test your water frequently (minimum of once a year) to ensure that the water is safe to drink. Public water systems are regulated by the EPA, some states and tribes, and are required to test for contaminants and report results.

If present, elevated levels of lead in your water can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. You can minimize the potential for lead exposure by flushing your tap from 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested.



## How you can be sure that you have clean water in your home:

- ***If your water comes from a public water system, read your water quality report carefully.***
- ***Do not flush unused prescription drugs or dispose of hazardous items down the toilet or drain.***
- ***Do not wash antifreeze or car oil into storm drains.***
- ***If you have a private well, have it tested – your county should be able to assist with testing.***

Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (**1-800-426-4791**) or at **[www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead)**



- **How can you find out if you have lead on your walls or in your home?**
- **What are the effects of lead poisoning in children?**
- **How do you keep lead out of your home?**



**Lead is a highly toxic metal** and can affect anyone. The most common way lead gets into the body is from dust. Lead dust comes from deteriorating lead-based paint and lead-contaminated soil that gets tracked into your home. Children ages 6 and younger are at particular risk of lead poisoning because their brains are developing rapidly and they frequently place their hands, toys, and other objects that could have dust from lead-based paint in their mouths. Some older and newer toys may contain lead or lead paint, and toys can pick up lead from contaminated soil or house dust.

Exposure to lead can result in lower IQ scores in children and has been associated with behavioral and attention problems. Lead can cause kidney, liver, brain and nerve damage. At very high levels, it can cause seizures, coma and even death.

If your home was built before 1978, there is a good chance it has lead-based paint; you may wish to have it tested. Paint chips and dust from cracking paint or activities that cause friction, such as opening and closing windows, doors, or drawers, can contain dangerous levels of lead.

### How you can minimize the risk of lead in your home:

- **Keep your home clean and dust-free.**
- **Wipe up any paint chips or visible dust with a wet sponge or rag.**
- **Wash children's hands, bottles, pacifiers and toys often.**
- **Wipe and remove your shoes at the door and wash your hands often.**
- **During home renovations, repairs or maintenance jobs, hire only contractors that are trained in lead-safe work practices as required by law.**



For more information on lead, visit EPA's website at [www.epa.gov/lead](http://www.epa.gov/lead)

For more information on how to live lead-safe in your home, go to [www.leadfreekids.org](http://www.leadfreekids.org)



- **Do fish contain mercury?**
- **Is there mercury in your home?**
- **Did you know that fluorescent light bulbs contain mercury?**



**Mercury is highly toxic** and can affect adults and children, particularly children in the womb. Mercury may be found in some fish and shellfish caught in local lakes and streams or bought in a grocery store. Children exposed to high levels of mercury in the womb can have problems with memory, attention, language, and fine motor and visual skills. Mercury from broken liquid thermometers or fluorescent light bulbs can also cause health effects when inhaled.

Symptoms of mercury poisoning include: tremors; mood swings; irritability; nervousness; insomnia; weakness; and headaches. At higher exposures there may be kidney effects, respiratory failure and death.

## How you can minimize the risk of mercury in your home:

- *To clean up broken fluorescent light bulbs and mercury thermometers, first open a window to air out the room. Next, using rubber or latex gloves carefully scoop or pick up broken pieces by using stiff paper or cardboard, or a sticky tape, and place them in a glass jar with metal lid or in a plastic bag to minimize any exposure to released mercury vapor.*
- *Pregnant women and children should avoid eating high amounts of fish such as shark, swordfish, king mackerel, or tilefish, because they contain high levels of mercury.*
- *Recycle burned out fluorescent light bulbs or old mercury thermometers rather than disposing of them in regular household trash by contacting your local waste collection agency or your local building supply store.*

For information on fish advisories go to [www.epa.gov/waterscience/fish](http://www.epa.gov/waterscience/fish)  
For information on clean up go to [www.epa.gov/cfl/cflcleanup.html](http://www.epa.gov/cfl/cflcleanup.html) and  
[www.epa.gov/mercury/spills/index.htm#thermometer](http://www.epa.gov/mercury/spills/index.htm#thermometer)

- **Are you bugged by bugs?**
- **Do you have ants in your home or weeds in your garden?**
- **Is there a safer way to control pests?**



**Exposure to some** household chemicals, such as pesticides, may cause harm to humans, pets or the environment, if not used properly. Effects may range from mild distress like nausea or dizziness, to injury to the lungs or damage to the nervous, reproductive, endocrine and immune systems.

Examples of household pesticides include: cockroach sprays and baits; insect repellents for personal use; rat and other rodent poisons; flea and tick sprays; kitchen, laundry, and bath disinfectants and sanitizers; and some lawn and garden products such as weed killers.



Homes may have common pests such as cockroaches, fleas, ants, and mice. Weeds and harmful insects might be found outdoors in lawns and gardens. Pesticides are often used to kill and prevent these common pests.

Always carefully read and follow all instructions on product labels for use and storage of pesticides, and keep them out of the reach of children. Properly dispose of unused pesticides and empty pesticide containers according to the product label.

## How you can reduce pests and the use of pesticides in your home:

- *Clean up crumbs, spills and pet food to prevent pests.*
- *Place tight-fitting lids on trash cans.*
- *Install door sweeps and weatherstripping and seal cracks and crevices around pipes and other areas to prevent pests from entering your home.*
- *Store food and pet food in tightly sealed glass or plastic containers.*
- *Properly dispose of unused pesticides and empty containers according to the product label.*

For more information go to [www.epa.gov/pesticides/about/index.htm](http://www.epa.gov/pesticides/about/index.htm)

# Make Your <sup>a</sup> Home Green Home

*Tips to save energy, save money, and  
make your home more environmentally-friendly*

- Reuse items such as old computers, clothing, and appliances by repairing them, donating them to charity, or selling them to reduce landfill waste.
- Recycle materials such as newspapers, glass, metals, plastics, computers, and cell phones.
- Compost food and yard wastes to be used in gardens and landscaping.
- Use mulch around trees and plants.
- Never pour paints, cleaners, oils, batteries, pesticides or other chemicals down the drain, on the ground, into the storm sewer, or throw them in the regular trash – properly dispose of these products at your local county collection site.
- Turn off unused lights and unplug appliances when not in use.
- Choose products that carry the ENERGY STAR® label.
- Use caulk or weather stripping to seal your home's outer walls and gaps around windows and doors to conserve energy.
- Save water and money by running your clothes washer, dryer, and dishwasher only with a full load.
- Repair leaky faucets, showerheads, and toilets.
- Take a 5-minute shower, which uses 10-25 gallons of water, rather than a full bathtub, which uses up to 70 gallons!
- Turning off the faucet while you brush your teeth can save 8 gallons of water a day!

