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The Environment and Women's Health

The Environment

Q: What do you mean by the environment?

A: The environment is everything around us wherever we are—at home, at work, or outdoors. It includes, among other things, the air we breathe, the water we drink and use, and the food we eat.

Q: How does the environment affect women's health?

A: Chemicals found in air, water, and soil can cause serious health problems in women and men, such as cancer and problems with the lungs or reproductive system. Children are more at risk than adults for health problems caused by substances in the environment. This is because their immune system, which helps their body fight illness, is not fully mature. They also inhale air more deeply than adults when they breathe, which makes them take in more pollution. Children also spend more time outdoors and are less likely to notice any health problems.

It's important that you know what things in the environment can affect your health, as well as what you can do to help protect yourself and your family. This fact sheet mostly discusses things in the home environment that can affect a woman's and her family's health. For more information on workplace exposures, you can go to the Occupational Safety and Health Administration's (OSHA) web site at http://www.osha.gov or call 1-800-321-6742.

Q: What are the things outdoors that should concern me the most?

A: There are many sources of pollution outdoors, like gases from cars, dust from tractors, or smoke from fires. Outdoor air pollutants can weaken the protective ozone layer, create smog and acid rain, and cause changes in our climate, which lead to global warming (an increase in the earth's average temperature). Outdoor air pollution can make you sick. It can cause your eyes and nose to burn, your throat to itch, and even breathing problems. Some chemicals found in polluted air cause cancer, birth defects, brain and nerve damage, and long-term injury to the lungs and breathing passages.

Toxins and Children

Q: I've heard toxins in the environment are more dangerous for children. Is this true?

A: Proportional to body weight, children eat, breathe, and drink more than adults. So they take in higher concentrations of the toxins in our environment. As children's bodies develop, especially in the womb and newborns, they are vulnerable to damage from toxic substances. For example, a small amount of certain pesticides during a critical time in a

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child's development could impact brain and body function, causing ADHD, reproductive health problems, as well as other problems. Some toxins, like mercury, can build up in body fat and be passed from mother to child during pregnancy or after birth through breast milk.

Acid Rain

Q: What is "acid rain?"

A: "Acid rain" is a term used to describe the many ways in which acids fall from the sky. Rain, snow, fog, dry gases, and particles may contain acids. Sulfur dioxide and nitrogen oxides released by power plants, cars and trucks, and other sources cause acid rain. Acid rain harms plants, animals, fish, and building surfaces. It can also create smog in the air and hurt people's lungs.

Since the energy used to power modern life (electricity and burning fuels like gas and oil) is the main cause of acid rain, there are many things you can do to stop or reduce its effects.

- Turn off lights, computers, and other appliances when you are not using them.
- Only use electrical appliances when you need them.
- Keep your home well insulated.
- Carpool, use public transportation, or walk or bike when you can.
- Use appliances that are energy efficient.
- Buy vehicles that only give off low levels of nitrogen oxide. Look for electric- or gas- powered or alternative-fueled cars. Find and compare cars on the U.S. Department of Energy's Fuel Economy Web site (http://www.fueleconomy.gov/) or the Environmental Protection Agency's Green Vehicles Guide. (http://www.epa.gov/greenvehicles)

Ozone

Q: How does the ozone layer affect my health?

A: Ozone is a gas that occurs in two layers in the sky. It can be "good" or "bad" for your health and the environment. This depends on where it's located. The layer closest to the Earth's surface is the troposphere. Here, ground level or "bad" ozone pollutes the air. It is harmful to breathe and damages crops, trees, and other plant life. Bad ozone is one of the main parts of urban smog. It is of greatest concern during the summer months because strong sunlight and hot weather result in harmful ozone levels in the air we breathe. Many urban and suburban areas have high levels of "bad" ozone. Breathing in "bad" ozone can trigger many health problems, such as:

- chest pain
- coughing
- throat irritation
- congestion

It can worsen bronchitis, emphysema, and asthma. Being exposed over time can even scar lung tissue. Healthy people also have problems breathing when exposed to ozone pollution. Because ozone forms in hot weather, anyone who spends time outdoors in the summer may be affected. This includes children.

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The troposphere extends up about six miles. Here it meets the second layer, or the stratosphere. The stratosphere or "good" ozone layer extends upward from about six to 30 miles. It protects us from the sun's harmful ultraviolet, or UV rays. "Good" ozone is made naturally. But man-made chemicals can destroy it. The substances that destroy it were mostly used in the past in coolants, pesticides, and fire extinguishers. Once released into the air, these substances break down very slowly for years. When they reach the stratosphere, the sun's ultraviolet (UV) rays break them down. This destroys "good" ozone and causes higher amounts of UV rays to reach the Earth. This can lead to more cases of skin cancer, cataracts, and impaired immune systems in people. UV can also damage sensitive crops, such as soybeans, and reduce crop yields.

Q: How can I protect my family from the harmful effects of ozone?

A: Through the Clean Air Act, the Environmental Protection Agency (EPA) sets limits on how much of a pollutant can be in the air anywhere in the United States. This helps to make sure that all citizens have the same basic protection. But there are still things you can do to help keep yourself and your family safe.

- Protect yourself and your children against sunburn. When the UV index is high or very high, limit being outside between 10am and 4pm. This is when the sun is most intense. Apply a sunscreen with a SPF (sun protection factor) of at least 15, twenty minutes before going outside. Put on more sunscreen every two hours or after working or playing. Even waterproof sunscreen can come off when you towel off, sweat, or spend lots of time in the water.
- Wear a hat with a wide brim to protect your eyes, ears, face, and the back of your neck from the sun.
- Wear tightly woven, loose-fitting, and full-length clothing to protect yourself.
- Wear sunglasses that provide 99-100% of UVA (rays not absorbed by ozone) and UVB (rays from the sun which have harmful effects) protection to reduce your chance of cataracts and other eye damage.
- Avoid sunlamps and sunbeds.
- Check the air quality forecast in your area. At times when the Air Quality Index (AQI) is unhealthy, limit being outdoors to times when ozone levels are not as high. In many places, ozone peaks in mid-afternoon to early evening.
- Conserve energy at home and in the office.
- During the summer, fill your gas tank during the cooler evening hours.
- Reduce driving. Carpool and use public transportation when you can. Walk or bike to reduce ozone pollution, especially on hot summer days.
- Read labels for proper use of household and garden chemicals.

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Q: What is global warming?

A: Global warming is an increase in the Earth's average temperature. This, in turn, causes climate changes. A warmer Earth may lead to changes in rainfall patterns and a rise in sea level. It also triggers a wide range of changes in plants, wildlife, and human life. Hotter weather increases "bad" ozone and cause more cases of heat-related problems.

Many common things you do at home and on the road add "greenhouse gases" to the air. These gases, such as carbon dioxide and methane, trap the heat of the Earth. Just by starting your car and turning on a light, you could be adding to the levels of these gases in the air.

There are things you can do to help protect the environment. These climate savers will reduce your energy use and decrease the levels of greenhouse gases. Find out how your daily life affects global warming and what you can do. Use EPAs Personal Greenhouse Gas Calculator. (http://yosemite.epa.gov/oar/globalwarming.nsf/content/ResourceCenterToolsGHGCalculator.html)

Q: Should I be concerned about haze?

A: When sunlight comes into contact with tiny bits or particles of pollution, this causes haze in the air outside. Haze reduces the clearness and color of what we see. Motor vehicles and burning fuel release haze-causing pollution. Other gases released into the air and carried by wind many miles from the pollution source can form haze.

Serious health problems have been linked to some pollutants that cause haze. Breathing problems and even death can also happen after being exposed to very small amounts. In scenic parks and wilderness areas, haze has reduced how much we can see. Find out more about haze in a park and wilderness area at http://www.epa.gov/air/visibility/monitor.html).

Water

Q: Is my tap water safe to drink?

A: The taste or quality of drinking water can vary from place to place. This is because water comes from different sources and is treated in different ways. Drinking water for people in large cities often comes from lakes, rivers, and reservoirs. In rural areas, people are more likely to drink ground water that was pumped from a well. Most water systems meet EPA standards for tap water. Under the Safe Drinking Water Act, EPA sets standards for about 90 pollutants in drinking water. The best way to find out about your drinking water is from your water supplier. Water suppliers that serve the same people year-round send their customers an annual water quality report. Contact your water supplier to get a copy. (You can also see if your report is posted on-line at http://www.epa.gov/safewater/dwinfo.htm). Your local report tells which pollutants are in your drinking water, the source, and the levels at which they were found. If after reading your report you are concerned, you can call a certified lab in your state to test your drinking water. Find contact information at http://www.epa.gov/safewater/privatewells/labs.html. A water test can cost from $15 to hundreds of dollars. If your water isn't

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safe to drink, your water supplier must tell you by radio, TV, or another method. The notice will tell you how to make your drinking water safe, such as boiling your water. This kills most disease-causing germs.

But if you have your own well, you have to make sure that your water is safe to drink. You should test your well at least once a year for bacteria. You should also test more often for other pollutants, such as radon and pesticides.

Q: Should I drink bottled water instead of tap water?

A: Your tap water may be just as safe as bottled water. The Food and Drug Administration (FDA) sets bottled water standards based on EPA's tap water standards. Both bottled water and tap water are safe to drink if they meet these standards. But some people may be more at risk for health problems from pollutants in water. This includes people who:

- have HIV/AIDS
- are being treated for cancer
- take steroids
- have a weakened immune system

If you or someone in your family has these health concerns, talk with your doctor. You may need to boil your water or drink bottled water.

When choosing whether to drink tap or bottled water, also keep in mind that tap water (except well water) has fluoride in it, which helps prevent dental cavities in children. Most bottled waters do not contain fluoride. Talk with your baby's doctor before using bottled water to make formula.

Young children are also more at risk for health problems from high levels of lead. Many older pipes are made of lead or soldered with lead. Homes built before 1986 are more likely to have lead pipes, joints, or lead solder. But new homes are also at risk. As a result, lead can leak into your tap water. To avoid lead in your tap water:

- Use water only from the cold tap for making baby formula, for drinking water, and for cooking.
- Let the water run for at least one minute before using it if the water hasn't been turned on for six hours or more. If you have a lead service line, you may need to let the water run for up to 10 minutes.

Environmental hormones

Q: What are environmental hormones?

A: The female sex hormone, estrogen, controls the growth of cells. It does this by attaching itself to proteins called estrogen receptors throughout the body. There are also estrogens in the environment that can attach themselves to these same proteins. Environmental estrogens block the body's estrogens and may cause health problems. Environmental estrogens are all around us—in what we eat, drink, the air we breathe, in things we use at home, and at work. They include things such as:

- DDT and kepone—chemicals once found in pesticides. They break down slowly in the environment and may stay for years in soil and water.

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- Polychlorinated biphenyls—a mixture of chemicals once used as coolants in electrical devices. They are still in the air.
- DES or diethylstilbestrol—until banned in the 1970s, used to prevent miscarriage in women. Some daughters of women who took DES during pregnancy have had reproductive problems and rarely, vaginal or cervical cancer, when they reached childbearing age.

These chemicals may play a role in causing cancers of the breast, uterus, and ovaries; endometriosis; and uterine fibroids.

Indoor Air Pollution

Q: What are the things indoors that should concern me the most?

A: Most people spend about 90 percent of their time indoors—in their homes or other buildings. So for many people, the health risks of indoor air pollution are greater than those outdoors. Gases are the main cause of indoor air problems in homes. Their sources include:

- oil, gas, coal, wood, kerosene, and tobacco products
- materials used to build your home, such as insulation
- home furnishings, such as cabinets made of certain pressed wood products
- cleaning, pest control, painting, and personal care products

These are other common sources of indoor air pollution:

- bacteria
- molds and mildew
- animal dander and cat saliva
- dust mites
- cockroaches

Having poor air flow, or ventilation, in combination with heating and cooling systems can also cause indoor air problems. Radon, pesticides, and other outdoor sources of pollution can enter your home through cracks in walls, opened windows, and fans. Hot and humid weather can also increase levels of some pollutants.

Q: How can indoor air pollution affect my health?

A: Health effects from indoor air pollution may start right away or occur years later. These things can happen after exposed once or many times:

- irritation of the eyes, nose, and throat
- headaches
- dizziness
- fatigue
- wheezing and other asthma symptoms

Most of the time, you can treat these symptoms, and they do not last long. Sometimes, the treatment is simply avoiding the source of the pollution, if you know what it is. Other health effects may show up years later, or only after long periods of being exposed. These health effects include:

- heart disease
- cancer
- breathing and lung problems

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How indoor air pollution affects you depends on many factors. Your age and current and past health problems are two main factors. Reactions vary from person to person. And some people's bodies can even become used to pollutants after being exposed for long periods of time.

If you think your home environment is causing you to have health problems, talk with your doctor about it. You should also look for signs in your home that it may not have good ventilation. Signs of poor ventilation include:

- moisture on windows or walls
- smelly or stuffy air
- areas where books, shoes, and other items become moldy

Q: How can I improve the indoor air quality in my home?

A: There are many things you can to do reduce indoor air pollution in your home.

- Get rid of sources you know affect you or your family.
- Keep air flowing through your home when doing home projects like painting and paint stripping.
- Control the humidity level in your home to help reduce the growth of some indoor pollution sources. EPA recommends a humidity level of 30 to 50 percent for homes. You may need to run a de-humidifier in the basement to keep it at this level. Standing water and wet surfaces also serve as breeding grounds for molds, mildews, bacteria, and insects. House dust mites grow in damp, warm places.
- Install and use exhaust fans that are vented to the outdoors in kitchens and bathrooms. Vent clothes dryers outdoors. These actions can get rid of most of the moisture that builds up from everyday living.
- If using cool mist or other humidifiers, clean them according to the directions. Refill with fresh water every day. These humidifiers can become breeding grounds for mold, mildew, and other sources of pollution.
- Clean and dry carpets damaged by water as soon as you can. They can retain mold and bacteria after being damaged.
- Keep the house clean. If you or a family member has allergies, use allergy-proof mattress covers, wash bedding in hot water, and avoid buying things for your home that collect dust. Leave the house while it's being vacuumed if you are very sensitive to dust. Vacuuming increases air levels of dust mites and other pollutants. You can also buy a central vacuum system that is vented to the outdoors. Or use a vacuum with a good (high efficiency) filter.

Household products

Q: Can household products be dangerous to my family or me?

A: Paint, cleaning, and cosmetic products all contain chemicals. Chemicals can be released while you are using them, and in some cases, when they are stored. We do not know much about the health effects of chemicals from household products after a person is exposed to them. Many of these

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products are known to cause cancer in animals and some are thought or known to cause cancer in humans.

To help keep you and your family safe, follow these tips:

- Follow label instructions carefully. Products that can be dangerous often have warnings. For example, if a label says to use the product in a well-ventilated area, use it outdoors or in areas with an exhaust fan, or open up windows to provide as much air as you can.
- Safely throw out containers of old or unneeded products. Gases can even leak from closed containers.
- Store chemicals in well-ventilated areas and safely out of the reach of children.
- Buy only as much as you need. If you use products—such as paints—only once in a while, buy only what you will use right away.
- Properly use paint strippers and other products that contain methylene chloride. Methylene chloride is known to cause cancer in animals. Also, when present in the body, it causes symptoms similar to carbon monoxide poisoning. When you can, only use these products outdoors. When using them indoors, keep the area where they are being used well-ventilated.
- Be careful with your newly dry-cleaned clothes. Percholoroethylene or perc is the chemical most widely used in dry cleaning. It is known to cause cancer in animals. In homes where dry-cleaned clothes are kept and as they are worn, people may breathe in low levels of perc. Don't accept your dry-cleaning if it has a strong chemical odor when you pick it up. Insist that dry-cleaned clothes be properly dried.

Pesticides

Q: Should I be concerned about pesticides in my food?

A: Pesticides are used to protect food from pests, such as insects, rodents, weeds, mold, and bacteria. Pesticides used on food include:

- insecticides to control insects
- rodenticides to control rodents
- herbicides to control weeds
- fungicides to control mold and fungus
- antimicrobials to control bacteria

Studies show that pesticides can cause health problems, such as birth defects, nerve damage, cancer, and other effects that might occur over a long period of time. But these effects depend on how toxic the pesticide is and how much of it is consumed. Some pesticides also cause more health risks in children. Infants and children may be very sensitive to the health risks of pesticides in foods for these reasons:

- Their internal organs are still growing. Pesticides may block food nutrients from being absorbed that are needed for normal healthy growth.
- In relation to their body weight, infants and children eat and drink more than adults. This may increase their exposure to pesticides in food and water.

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- Playing on the floor, on outside lawns, or putting objects in their mouths may increase a child's exposure to pesticides.

EPA's Food Quality Protection Act of 1996 sets a standard for pesticide use on food. But you can still reduce the amount of pesticides you and your family consume by taking these steps:

- Wash and scrub all fresh fruits and vegetables under running water. This will help remove bacteria and traces of chemicals from the surfaces of fruits and vegetables.
- Peel fruits and vegetables when you can to reduce dirt, bacteria, and pesticides. Take off and throw out the outer leaves of leafy vegetables. Trim fat from meat and skin from poultry and fish, because some pesticides collect in fat.
- Eat a variety of foods. This will give you a better mix of nutrients and reduce your chance of exposure to a single pesticide.

Q: What about using pesticides to control pests in my home?

A: Pesticides used in and around the home can be dangerous if not used as the labels indicate. As with other household products, we do not know what pesticide levels cause health problems. Take these steps to help protect yourself against exposure to pesticides in your home:

- Read the label on the pesticide container and follow the directions on the label. Use only the pesticides approved for use by the general public. And then use them only in recommended amounts. Using more does not give you more protection against pests. This can be harmful to you, your family, pets, and plants.
- Mix pesticides outdoors or in an area with good air flow. Only mix the amount that you will need right away.
- Use other methods of pest control when you can. For example, wash your pets often. Store firewood away from the home to reduce termites.
- Choose a good pest control company. Have the company inspect your home and give you a pest control program in writing before you sign a contract. The control program should list the names of pests and chemicals they will use.
- Limit your exposure to moth repellents. The chemical in moth repellants causes cancer in animals, but we are not sure how it affects people. Store moth repellants and items you want to protect from moths in areas that are ventilated separately from your home. This could be your attic or a detached garage.

Q: How can I help protect my children from pesticides?

A: Pesticides can pose a danger to children if not stored out of their reach. Pesticides in the home poison thousands of children each year. Examples of some common pesticides include insect sprays and kitchen and bath cleaners. The pesticide law requires that most pesticides used in the home have warnings on the labels and be in

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child-resistant packaging. But you must also take steps to help keep your children safe:

- Always store pesticides away from children's reach in a locked cabinet. Install childproof safety latches.
- Read the label before using. Follow the directions.
- Before using pesticides indoors or outdoors, remove children, their toys, and pets from the area. Keep them away until the pesticide has dried or as long as the label says.
- Never put pesticides in other bottles that children may think are food or drink.
- Never place rodent or insect traps where small children can get them.
- Close containers tightly after use.
- Tell caregivers and other family members about doing these same things.
- Teach children to stay away from pesticides.
- Keep the National Poison Control Center phone number—1-800-222-1112—near or on every telephone.
- Call 911 or your local emergency service in case of emergency. Talk with your doctor or nurse about what you should do in case of accidental poisoning.

Carbon monoxide and nitrogen dioxide

Q: What are carbon monoxide and nitrogen dioxide?

A: Carbon monoxide is a gas that you can't see, taste, or smell. It interferes with the movement of oxygen throughout the body. At high levels, it can cause you to become unconscious or even die. Lower levels can cause a range of symptoms, such as:

- headaches
- dizziness
- weakness
- nausea
- confusion
- fatigue
- chest pain in people with heart disease

Symptoms of carbon monoxide poisoning are sometimes confused with symptoms of the flu or food poisoning. Infants, older adults, and people with anemia, heart, or lung problems can be very sensitive to carbon monoxide.

Nitrogen dioxide is also a gas without color and odor. It irritates the eyes, nose, and throat. It can also cause shortness of breath in a person exposed to high levels of it. Studies show that being exposed to high levels or to low levels for a long period of time increases the risk of lung infection and disease.

Sources of carbon monoxide and nitrogen dioxide are:

- unvented kerosene and gas space heaters
- leaky chimneys and furnaces
- back-drafts from furnaces, gas water heaters, woodstoves, and fireplaces
- gas stoves
- second-hand smoke
- exhaust from cars and trucks in attached garages

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Q: How can I help keep my family safe from carbon monoxide and nitrogen dioxide?

A:
- Use proper fuel in kerosene space heaters.
- Make sure that doors in old woodstoves are tight-fitting. Use aged or dried wood only. Chemicals used to pressure-treat wood should never be burned indoors.
- Install and use an exhaust fan over gas stoves. Make sure it vents outdoors.
- Open flues (passageway to carry off smoke) when fireplaces are in use.
- Have a trained contractor inspect, clean, and tune-up furnaces, flues, chimneys, and gas appliances every year. Repair any leaks as soon as you can. Change filters at least once every month during periods of use.
- Do not keep the car on while inside the garage.
- Install carbon monoxide detectors in your home.

Lead

Q: I don't hear as much about lead poisoning anymore? Is it still a problem?

A: Yes, it's still a problem. Lead can harm almost every system in the human body. It is very harmful to the developing brain and nervous system of fetuses and young children. Currently, the "safe" blood lead level is 10 micrograms/deciliter. However, studies suggest that there is no level that is safe to a developing brain. Lead can also cause children to suffer from slowed growth, hearing problems, and headaches.

Lead is also harmful to adults. Adults can suffer from:

- problems during pregnancy
- other reproductive problems (in both men and women)
- high blood pressure
- problems with digestion
- nerve problems
- memory and concentration problems
- muscle and joint pain

Too much lead in the body can seriously injure the brain, nervous system, red blood cells, and kidneys. High levels of lead in the body can cause mental retardation, seizures, blacking out, coma, and even death. In many cases, there are no symptoms or signs of high blood-lead levels or lead poisoning.

Q: How does lead get into the body?

A: The most common cause of lead poisoning is from the lead paints that were used in the late 1970s and earlier. Lead is also in dust, soil, water, food, and in the air. Children can get lead poisoning by:

- putting their hands or toys with lead dust on them in their mouths
- eating the lead paint chips that peel off the walls
- chewing on window sills and door frames

Lead is more dangerous to children than adults.

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- Babies and young children often put their hands and other objects in their mouths. These objects can have lead dust on them.
- Children's growing bodies absorb more lead.
- Children's brains and nervous systems are more sensitive to the damaging effects of lead.

Most well and city water does not contain lead. But water can pick up lead inside the home from household plumbing that is made with lead materials. If you work with lead or have a hobby that uses lead, such as making pottery or stained glass, you can bring lead into your home on your hands or clothes. You may also track in lead from soil around your home. Some folk remedies, such as "Great" and "azarcon" used to treat an upset stomach, also contain lead.

Q: How can I find out if my child or I have been exposed to lead?

A: The only way to be sure is with a quick and easy blood test. Your doctor should first test your child at six months and then on a regular basis after that. This is very important if your child lives in or often visits a home built before 1978. Talk with your doctor and your child's doctor to find out how often both of you should be tested.

Q: How is lead poisoning treated?

A: Removing lead from the environment is the main treatment. In some cases, blood lead levels are lowered with medicines.

Q: Why should pregnant women be concerned about lead poisoning?

A: A pregnant woman can pass lead to her fetus. Low levels of lead in the body when a child's brain is developing can slow the child's development and cause learning and behavior problems. To help prevent lead from affecting a child, pregnant women should **not**:

- engage in any activity that disturbs lead-based paint
- live in or be present in a house or apartment where work is under way that disturbs lead-based paint
- return to a house or apartment where lead-based paint has been disturbed until at least 24 hours after the work has been completed

Q: What can I do to help protect my family from lead?

A:
- Keep areas where children play as dust-free and clean as you can. Mop floors and wipe window ledges with a mixture of powdered dishwasher detergent and warm water. Wash toys and stuffed animals often. Make sure that children wash their hands before meals, after playing outdoors, at naptime, and at bedtime. Try to keep your children from eating dirt. Wash your hands before preparing food.
- At least once a year, take your children under six years old to be tested for lead.
- Keep children away from peeling paint. If your home was built before 1978, and you have peeling paint, call your state health or housing department for advice on whom to

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contact to help test your home for lead in paint. Don't try to remove lead paint yourself. To remove dangerous lead for good, you need to hire a lead "abatement" contractor. Lead abatement can also involve "encapsulating" or covering the lead paint under another type of coating approved by the EPA. Just painting over the hazard with regular paint is not enough.

- Don't let children play under bridges, near highways, and near heavily traveled roads. Materials used in repairing bridges and highways, and gases released from cars and trucks cause high levels of lead in these areas.
- Serve meals that are high in iron and calcium to help prevent lead from being absorbed into your child's body. Foods rich in iron include beans and eggs. Dairy products and dark green leafy vegetables are high in calcium. Do not store food or liquid in lead crystal glassware or old pottery. If you reuse old plastic bags to store or carry food, keep the printing on the outside of the bag.
- Run cold water for at least a minute before using it. Never use hot water from the faucet to make baby formula or for cooking. If you have a lead service line, you may need to let the water run for up to 10 minutes.
- If you work in construction or your hobby involves lead, change your clothes before going home and wash these clothes separately. Soils very close to homes may contain lead, so wipe your feet before entering your home, or remove your shoes before you enter.
- If you are concerned about lead in your water, contact your local health department or water supplier to find out about testing your water. Boiling your water will not get rid of lead. If you think your plumbing might have lead in it, use only cold water for drinking and cooking. Also, run water for at least one minute before drinking it, especially if you have not used your water for a few hours. If you have a lead service line, you may need to let the water run for up to 10 minutes.

You and your family can learn more about lead together. Visit the National Institute of Environmental Health Sciences Lead Poisoning Kid's Page at www.niehs.nih.gov/kids/lead.htm. And visit the U.S. Department of Housing and Urban Development's web site at http://www.hud.gov/offices/lead/leadtips.cfm.

Radon

Q: Should I be concerned about radon in my home?

A: Even though you can't see, taste, or smell radon, it may be a problem in your home. Radon may cause many thousands of deaths each year. That's because when you breathe air with radon in it, you can get lung cancer. The Surgeon General has even warned that radon is the second leading cause of lung cancer. Only smoking causes more lung cancer deaths. If you smoke and your home has high radon levels, your risk of lung cancer is even higher. There is no proof that radon is linked to asthma or that children are at any greater risk of lung cancer due to radon than adults.

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Nearly one out of every 15 homes may have high radon levels. Every state has high radon levels. Uranium is the most common source of indoor radon. The soil or rock on which homes are built contains radon. As uranium naturally breaks down, it releases radon gas and gets into the air you breathe. Radon gas enters homes through dirt floors, cracks in concrete walls and floors, floor drains, and sump pumps (machines that pump water out of the basement area to prevent flooding). Exposure to radon is a concern when the levels build up indoors.

Any home can have a radon problem. This means new and old homes, well-sealed and drafty homes, and homes with or without basements. Sometimes radon enters the home through well water. In a small number of homes, the building materials can give off radon too. But building materials rarely cause radon problems by themselves.

Q: How I tell if my home has a radon problem?

A: Since you can't see if your home has a radon problem, the most important thing you can do is measure your home's radon level. It's not hard to find out if you have a problem in your home. Testing is the only way to know if you and your family are at risk from radon. It's easy and should only take a little bit of your time. EPA recommends testing all homes below the third floor. There are many kinds of low-cost, do-it-yourself radon test kits you can order through the mail and buy in hardware stores. Look for test kits that are state-certified. After you complete the testing yourself, mail your testing kit back to a lab to get your results. You can also hire a trained contractor to do the testing for you. Contact your state radon office (http://www.epa.gov/iaq/whereyoulive.html) to get a list of qualified contractors in your area.

If you want to do a quick test, there are short-term kits that remain in your home from two to 90 days, depending on the device. Charcoal canisters are a common short-term kit. Because radon levels tend to vary from season to season, a short-term kit is less likely than a long-term kit to tell you your year-round average radon level. The amount of radon in the air is measured in picoCuries per liter of air or pCi/l. Sometimes test results are shown in Working Levels or WL.

Long-term tests remain in your home longer than 90 days and will give you a more accurate reading. Common long-term test kits are alpha track and electret. They are available at hardware stores. To use your test kit:

- Follow the directions that come with your test kit.
- If you are doing a short-term test, close your windows and outside doors. Keep them closed as much as you can during the test. If the short-term test lasts just two or three days, be sure to close your windows and outside doors at least 12 hours before starting the test. Do not use fans or other machines that bring in air from outside.
- Place the test kit in the lowest lived-in level of the home. For example, the basement if it is used often. Do not place the kit in the kitchen or bathroom. Put the kit at least 20 inches above the floor in a place where it won't be disturbed. Place it

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away from drafts, high heat, high humidity, and outside walls. Leave the kit in place for as long as the package says.

- Once the test is done, reseal the package and send it right away to the lab noted on the package for testing. You should get your tests results within a few weeks.
- If your result is 4 pCi/l or higher (0.02 Working Levels or higher) after a short-term test, use a long-term test kit or a second short-term test kit or to be sure the reading is accurate.
- If you followed up with a long-term test and it showed radon levels of 4pCi/L or more (0.02 WL or higher), you need to take action to reduce the radon levels in your home.
- If you followed up with a second short-term test, the higher your results, the more certain you can be that you should fix your home. Consider fixing your home if the average of your first and second tests are 4 pCi/L or higher (0.02 WLor higher).
- Keep in mind that radon levels below 4 pCi/L still pose some risk and that radon levels can be reduced to 2 pCi/L or below in most homes.

Q: How can I reduce radon levels in my home?

A: If the radon level in your home is confirmed to be 4 pCi/l or higher, it's important to reduce the level. Choose a qualified radon mitigator contractor to do so. Start by checking with your state radon office (http://www.epa.gov/iaq/whereyoulive.html). It is wise to get more than one estimate and ask for and check references.

The average cost of reducing radon levels in your home may range from $800 to $2500. Your costs may vary depending on the size and design of your home and which radon reduction methods are needed. There are many methods that a contractor can use to lower radon levels in your home. Some prevent radon from coming inside. Others reduce radon levels after radon has entered.

If you use well water, have your water tested. Radon problems in water can be fixed. Contact your state radon office (http://www.epa.gov/iaq/whereyoulive.html) or the EPA Safe Drinking Water Hotline at 800-426-4791.

Asbestos

Q: Should I be concerned about asbestos in my home?

A: Asbestos is a fiber that has been used in insulation and fireproofing materials. EPA has banned many asbestos products. Many companies have also cut down on their use of asbestos. Today, asbestos is most often found in:

- older homes (in building, pipe, and insulation materials)
- textured paints
- floor tiles

The most dangerous asbestos fibers are too small to see. After they are inhaled, they can remain and build up in the lungs. Asbestos can cause:

- lung cancer
- lung scarring (asbestosis)

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- cancer of the chest and stomach lining (mesothelioma)

Symptoms of these problems do not show up until many years after a person is exposed. Most people with asbestos-related problems were exposed to high levels on their job. Or they were exposed when family members brought asbestos home on their clothing from job sites.

If asbestos fibers are disturbed or damaged, levels can increase in the home. For your safety, have these asbestos fibers safely removed. But if you think your home may have asbestos, don't try to remove it yourself. It may be best to leave asbestos material that is in good condition alone. Fibers are not a danger unless they are released and inhaled into the lungs. If asbestos materials are damaged or you disturb them, have them removed by a trained person. Choose a contractor only after talking about the problems in your home and the steps the contractor will take to clean up or remove the asbestos. You may want to think about sealing off the materials containing asbestos instead of removing them. Call EPA's Toxic Substances Control Act (TSCA) Hotline at (202) 554-1404 for help.

Formaldehyde

Q: What is formaldehyde, and what products used in my home may contain it?

A: Formaldehyde is a colorless gas used in home building materials and household products. It is also a by-product of burning fuels and other natural events. This means it can be present in high levels both indoors and outdoors.

In the home, pressed wood products are the major source of formaldehyde. These products are used for shelving, in cabinetry and furniture, and in hardwood and plywood paneling. Medium density fiberboard is the greatest source of formaldehyde in pressed wood products. Other sources of formaldehyde in the home include:

- building materials
- smoke
- household products
- use of unvented, fuel-burning appliances, like gas stoves

The health effects of formaldehyde can range from watery, burning eyes to nausea and trouble breathing. High levels may trigger attacks in people with asthma. It has also been shown to cause cancer in animals and may cause cancer in humans. Take these steps to reduce your exposure to formaldehyde in your home:

Ask about the content of pressed wood products before you purchase them. This includes building materials, cabinets, and furniture.

Keep your home at a comfortable temperature with good ventilation. Formaldehyde is released faster in hot conditions.

Smoke

Q: What about smoke? Should I think of this as a danger?

A: Environmental tobacco smoke (ETS) or second-hand smoke contains over 4,000 compounds—more than 40 of which are known to cause cancer. Studies have shown that second-hand smoke can cause lung cancer in healthy

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adults who do not smoke. Children of parents who smoke are more likely to suffer from pneumonia, bronchitis, ear infections, asthma, and SIDS (sudden infant death syndrome). To help protect yourself and your family from the harmful effects of second-hand smoke:

- Don't smoke at home or allow others to do so. Ask smokers to smoke outdoors.
- If smoking indoors cannot be avoided, open windows. Or use exhaust fans to keep as much smoke out of your home as you can. This will help reduce, but not completely get rid of, second-hand smoke.
- Don't smoke around children, especially infants and toddlers.

"Sick building" syndrome

Q: What is "sick building" syndrome?

A: Indoor air pollution problems don't only happen in homes. The environment in office buildings may cause some health problems. Even though most can be treated, some pose serious risks. Sometimes, people have symptoms that do not fit the pattern of any illness and are hard to trace to a source. This problem has been labeled "sick building" syndrome. People may suffer from one or more of these symptoms:

- dry or burning in nose, eyes, and throat
- sneezing
- stuffy or runny nose
- fatigue or feeling tired or sluggish
- headache
- dizziness
- nausea
- feeling irritable
- being forgetful

There is no single way in which these health problems appear. In some cases, problems begin as workers enter their offices or office buildings and go away as workers leave their offices or office buildings. At other times, symptoms continue until the illness is treated. Sometimes, there are even outbreaks of illness among many workers in a building. In other cases, health symptoms only show up in a few workers.

The main factor that affects office air quality is pollution. Some common sources of office pollution are:

- tobacco smoke
- asbestos from insulating and fire-proof building supplies
- formaldehyde from pressed wood products
- cleaning products
- water-damaged walls, ceilings, and carpets
- pesticides
- poor air flow

Poor lighting, unacceptable noise levels, comfort problems due to improper temperature and relative humidity conditions, and job-related psycho-social stressors are problems which may also be related to indoor air quality.

If you think indoor air pollution could be causing your health problems, report your concerns. Talk to the employee health nurse or safety officer on your job site. Also, talk with your doctor.

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The National Institute for Occupational Safety and Health (NIOSH) can give you information on how to have your office tested. Call 800-35NIOSH. You can also call the Occupational Safety and Health Administration (OSHA) at 800-321-OSHA (6742).

Mercury

Q: Is it safe to eat fish? Should I limit how much fish I eat when I'm pregnant?

A: Fish and shellfish are an important part of a healthy diet. Fish and shellfish contain high-quality protein and other essential nutrients, are low in saturated fat, and contain omega-3 fatty acids. A well-balanced diet that includes a variety of fish and shellfish can contribute to heart health and children's proper growth and development. So women and young children, in particular, should include fish or shellfish in their diets because of the many nutritional benefits.

However, nearly all fish and shellfish contain traces of mercury. Mercury occurs naturally in the environment and can also be released into the air through pollution. Mercury falls from the air and goes into streams and oceans. Fish absorb the mercury as they feed in these waters. It builds up more in some types of fish and shellfish than others, depending on what the fish eat, which is why the levels vary. For most people, the risk from mercury by eating fish and shellfish is not a health concern. Yet, some fish and shellfish contain higher levels of mercury that may harm an unborn baby or young child's developing nervous system. The risks from mercury in fish and shellfish depend on the amount of fish and shellfish eaten and the levels of mercury in the fish and shellfish.

There are some fish you should NOT eat if you are pregnant. Here are some guidelines:

- Do **not** eat any shark, swordfish, king mackerel, and tilefish (also called golden or white snapper) because these fish have high levels of mercury.
- Many of us enjoy tuna. But, to be safe, don't eat more than six ounces of "white" or "albacore" tuna or tuna steak each week.
- If you can, buy "light" tuna. But don't eat more than 12 ounces of light tuna or other cooked fish each week. Other fish that are low in mercury are shrimp, salmon, pollock, and catfish. ■

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For More Information

You can find out more about the environment and your health by contacting the National Women's Health Information Center (NWHIC) at 1-800-994-9662 or the following organizations:

Agency for Toxic Substances and Disease Registry (ATSDR), OPHS, HHS
Phone: (888) 422-8737
Internet Address: http://www.atsdr.cdc.gov

EPA Headquarters Information Resources Center
Phone: (202) 272-0167
Internet Address: http://www.epa.gov

Indoor Air Quality (IAQ) Information Clearinghouse, EPA
Phone: (800) 438-4318
Internet Address: http://www.epa.gov/iaq

National Center for Environmental Health (NCEH), CDC, HHS
Phone: 888-232-6789
Internet Address: http://www.cdc.gov/nceh

National Institute of Environmental Health Sciences (NIEHS), NIH, HHS
Phone: (919) 541-3345
Internet Address: http://www.niehs.nih.gov

National Institute for Occupational Safety and Health (NIOSH), CDC, HHS
Phone: 800-311-3435
Internet Address: http://www.cdc.gov/niosh

National Lead Information Center (NLIC), EPA
Phone: (800) 424-LEAD
Internet Address: http://www.epa.gov/lead

Occupational Safety and Health Administration (OSHA), DOL
Phone: 800-321-6742
Internet Address: http://www.osha.gov

U.S. Department of Housing and Urban Development (HUD), Healthy Homes and Lead Hazard Control
Phone: 202-708-1112
Internet Address: http://www.hud.gov/offices/lead/healthyhomes

DES Action USA
Phone: (800) 337-9288
Internet Address: http://www.desaction.org

National Poison Control Hotline
Phone: (800) 222-1222
Internet Address: http://www.poison.org

National Radon Hotline
Phone: (800) 557-2366
Internet Address: http://www.nsc.org/ehc/radon.htm

This FAQ was reviewed by the Federal Interagency Working Group on Women's Health and the Environment.

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