



LIVE

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PLAY

tune in to your health and environment





# WAVE

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# Introduction



Did you know that the air you breathe, the water you drink, and the food you eat can affect the way your body grows and works? It's true. By learning about hazards in the environment (water, air pollution, pesticides, etc...), and how they can affect your health, you can take charge of your environment and make a real difference in your life and the lives of your family and friends.

*Live, Learn, Play—Tune in to Your Health and Environment* offers you the opportunity to learn about environmental health issues. Each section of this book explains a different environmental problem and provides useful information about how to protect yourself and your friends from harm. You will find fun activities that you can do to spread the news about what you have learned and tips and resources to get more information. We have also included a rap CD for you to enjoy!



Start making a difference now—learn about environmental health in the pages that follow, and help us get the word out to others!

Live, Learn, Play!

*From the United States Environmental Protection Agency (EPA)*

## WHAT IS EPA?

An Agency of the U.S. government that is in charge of protecting the nation's environmental resources and the health of people.

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# Learning in Action – A Success Story

## Burger and Fries, Please Hold the Smoke



Imagine not being able to eat at your favorite restaurant or go bowling with your friends—all because of the tobacco smoke (or secondhand smoke) in the air from people smoking cigarettes, pipes, or cigars.

This is what Mike\* faced. He has asthma, and because of tobacco smoke, he couldn't eat at restaurants or enjoy his favorite hobbies in public places. At each of these places, people smoked and that irritated Mike's lungs so much, it made it difficult for him to breathe.

Mike then decided to learn more about the harmful effects of secondhand smoke.

Using the Internet, he discovered the dangers caused by secondhand smoke. He also learned that of the 1,500 restaurants in his home town, fewer than 10 percent were smoke-free. This left Mike with few places to enjoy good food.







Mike decided to take action. He started a campaign in his community to make public places frequently visited by children and young adults smoke-free.

He named his project *KIS—Keep It Smoke-free*. He designed a logo, created a slogan, *KIS for Kids*, and made a presentation to his school principal and teacher with the hopes of gaining their support. After hearing Mike's plan, they were more than willing to pitch in and help.

Working closely with his principal and teacher, Mike educated his fellow students on the harmful effects of secondhand smoke, and met with community leaders and even the local newspaper.



Due in part to Mike's actions, his city joined the many cities across the country in passing a law banning smoking in all public places.

Now Mike is breathing easier when he goes to his favorite restaurants.



This is just one story of how someone tried to change the world around him. Now read on and think about how you can help, too!

\* This is a fictional character...but **you can make it real!**

# The Dirt On Indoor Air Pollution



Indoor air pollution can make breathing a real chore if you have asthma. Maybe you have asthma or know someone who does. Maybe you've run a few laps around the track and found yourself out of breath, hands on your knees, and gasping for air. Multiply that feeling a 100 times; that's what an asthma attack feels like.

If you have asthma, you probably want to know how to reduce your chances of having an asthma attack. Ask your doctor to help you set up an asthma management plan that can help you learn to monitor your asthma, take proper medication, and identify and avoid asthma triggers (i.e. things that cause or worsen asthma symptoms).



Asthma is just one example of a respiratory illness that may be affected by indoor air pollutants, especially in young children, because their respiratory system is still developing. Several indoor pollutants can trigger an asthma attack or worsen asthma symptoms. Common indoor asthma triggers include animal dander, cockroaches, mold, secondhand smoke, and dust mites. Since you, your family, and friends spend a lot of time at home, day care or school, reducing asthma triggers in these places is especially important.

So do yourself, your family, and friends a big favor: learn more about indoor air pollution and reduce trouble-causing asthma triggers.

# Tips



## 1. Dust Mites

- Help out around the house! Reduce your exposure to dust mites by helping your parents keep your home as clean as possible and by washing your sheets once a week in hot water.
- Keep stuffed toys off the bed.
- Choose washable stuffed toys—wash them often in hot water.
- Vacuum carpet and fabric-covered furniture often to reduce dust buildup. If you have asthma, stay out of the room while it is being vacuumed.
- If you have asthma, make sure your bed has a dust-proof mattress cover.

## 2. Mold and Mildew

- Wash mold and mildew off hard surfaces and dry completely.
- Talk to your parents about fixing leaky plumbing. Make sure wet areas are dry within 24 to 48 hours to prevent mold growth.
- Use exhaust fans or open windows when showering, cooking or using the dishwasher.

## 3. Pet Dander

- Keep pets out of sleeping areas and away from fabric-covered furniture and carpets.
- If you are allergic to your pets, consider keeping them outside.

## 4. Cockroaches

- Make your kitchen unfriendly to bugs. Put food and snacks in sealed containers.
- Always wash dishes after each meal.
- Store trash in sealed containers.
- Eat in selected rooms of the house (i.e. kitchen, dining or family room).

## 5. Secondhand Smoke

- Ask friends and family not to smoke in your home or car.

## Activities



**Help your school become healthy. Visit [www.epa.gov/iaq/schools](http://www.epa.gov/iaq/schools), and learn more about EPA's *Indoor Air Quality Tools for Schools (IAQ Tfs)* program.**

This program helps schools improve their air quality and is being used in thousands of schools nationwide. Talk to your principal to see if your school is already participating in the *IAQ Tools for Schools* program. If not, encourage your school to get involved.

**Learn about a famous person with asthma and how he or she deals with it. Share your report with classmates or elementary school children.**

**Invite a doctor or local health care expert to talk about asthma at your school, church, or community center. To find a doctor, ask your parents or youth group leader for help.**

Before you call, write a short summary describing what you would like to achieve by having him or her visit your community.

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**Write an article for your school or local newspaper about asthma triggers and what can be done to reduce exposure to asthma triggers at home and at school.**

### Info

For more information about indoor air quality and asthma, visit [www.epa.gov/iaq](http://www.epa.gov/iaq).

You can also call the Indoor Air Quality Information Clearinghouse Monday through Friday from 9:00 a.m. to 5:00 p.m. eastern time at 1-800-438-4318, or email [iaqinfo@aol.com](mailto:iaqinfo@aol.com).



# A Different Spin on "Fresh Air"



Even though spending time outdoors is a healthy and fun part of growing up, it pays to know your surroundings. Who doesn't love a bit of "fresh air?" But, when outdoor air pollution levels are high, that "fresh air" can result in some not so cool health effects. When you're outside, you may be exposed to outdoor air pollutants like ground-level ozone (smog) and particle pollution. These pollutants, as well as many others, can be harmful to your health. Young children are especially at risk because they are active outdoors, and their lungs may still be developing.

First, let's discuss these pollutants:

**Ground-level ozone** is most commonly known as smog. It's created by a chemical reaction between **nitrogen oxides (NO<sub>x</sub>)** and **volatile organic compounds (VOC)** combined with heat and sunlight.



Examples of NO<sub>x</sub> and VOCs that form ozone include motor vehicle exhaust, fumes from factories, gasoline vapors, and chemical solvents (a liquid that can dissolve another substance like paint). Because sunlight and hot weather are involved in creating ozone, it is mainly a summertime air pollutant.

Ground-level ozone is nothing to laugh at. It can cause coughing, throat irritation, and chest pain. It can also cause breathing problems and trigger asthma attacks. Kids who are active outdoors on hot summer days may be affected by high levels of ozone.

You should know that there is also good ozone. The good ozone is in the upper atmosphere and protects us from the sun's ultraviolet (UV) radiation.



**Particle pollution** is the term for tiny particles in the air in the form of dust, dirt, soot, smoke, and liquid droplets. Some particles are emitted directly into the air from combustion sources such as cars, trucks, buses, and power plants. Most particles results from chemical reactions of sulfur dioxide (SO<sub>2</sub>) and NO<sub>x</sub> with other chemicals in the atmosphere.

The majority of SO<sub>2</sub> released into the air comes from electric utilities and refineries, particularly those that burn coal. Breathing air polluted with particles has been linked to a number of children's health problems, including bronchitis and asthma.

To see if the air is clean in your community, check out your local Air Quality Index (AQI). The AQI is a guide for reporting daily air quality. It tells you how clean or polluted your air is, and if you need to do anything to protect your health.

To learn more about outdoor air pollution and what you can do, check out the following tips and activities.

## Tips

Check the AQI in your local newspaper, your local weather channel or at [www.epa.gov/airnow](http://www.epa.gov/airnow) to help plan daily activities. This is especially important for children with asthma and before children play outside.

- Reduce your outdoor activity when you hear that outdoor air quality is poor.
- Walk, ride your bike, get a ride from a friend or take public transportation to help reduce pollution from cars.



# Activities

**Ask your science teacher to dedicate a day to outdoor air pollution education.**

Offer to help out by researching air pollution issues at EPA's or other Web sites. Use this information to help design an outdoor air pollution presentation for your class. Start by listing some of the outdoor air pollution topics your presentation will cover.

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For Earth Day, World Health Day, World Asthma Day or Children's Health Month, **create and hand out informational brochures or flyers** in your community about outdoor air quality.

Start by creating an outline of the important messages that you want to get across.

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**Get your class and school to be part of the International Walk to School Day**

(usually held the first week of October).

**Start a Bike to School Day.** Work with your parents and teachers to find safe routes to school.

**Find out if your local newspaper prints the AQI.** If not, work with your science teacher or community groups to include it in the newspaper.

**Get your parents involved.** Remind them to reduce their driving by combining trips and carpooling. Also, avoid mowing the lawn and refueling the car when air quality is poor.

**Info**  
For more information on AQI, visit [www.epa.gov/airnow/](http://www.epa.gov/airnow/).

# Lead The Charge Against Lead Poisoning



**Exposure to lead can be very harmful.** Young children exposed to lead may have damage to their nervous systems, learning and behavioral problems, and reduced intelligence. Lead exposure can affect how quickly children learn and advance in school. It may even affect growth and hearing. It is important that you, and especially young children, limit exposure to lead to prevent the health effects of lead poisoning.



Not too long ago, the amount of lead in children's blood was higher. Kids were exposed to lead because it used to be in gasoline. It's no coincidence that when people stopped using leaded gasoline, lead levels in the blood of young children dropped by 85 percent.

Today, kids can still be exposed to lead. How? Lead was a common ingredient in household paint until 1978. If you live in a house that was built before 1978, it may very well contain lead paint and lead dust. Lead paint is a problem if it is peeling, chipping, or cracking. Lead dust is created when lead paint is sanded, scraped, or rubbed. Little children can get lead dust on their hands by touching objects where lead dust has gathered and then put their hands in their mouths. Children can also eat peeling paint and paint chips.



Step out your front door and lead may also still be lurking in the soil near repair shops, abandoned mines, factories, and highways. Even your drinking water may contain lead.

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One- to three-year old kids are especially at risk of lead poisoning. Their brains are still developing and may be damaged by lead in their bodies. So, watch your younger brothers and sisters closely if you live in an older home that might contain lead.

Exercise your mind and learn more about lead, lead poisoning, and ways to prevent it.

## Tips

1. If your home was built before 1978, ask an adult to test your home for lead paint hazards.
2. Wash your hands often and always before eating and sleeping.
3. Thirsty? Run cold water until it is as cold as it can get. You may need to run the water longer depending on where you live.
4. Make sure you and your brothers and sisters eat foods rich in calcium, iron and vitamin C:
  - Calcium-rich foods: milk, yogurt, cheese, spinach
  - Iron-rich foods: lean red meat, chicken, fish, raisins
  - Vitamin C-rich foods: oranges, orange juice, grapefruits
5. Reduce fatty foods. Foods high in fat tend to absorb more lead.





# Activities



**Invite a doctor or local health care expert to talk about lead poisoning** at your next club meeting or at school. To find an expert, ask your parents or youth group leader for help. Before you call, draft a short script saying what you'd like to achieve by having him or her visit with your group.

**Call your local and state health departments (or department of environmental quality) for information** about testing daycare centers and schools for lead-based paint and lead in drinking water, soil, and dust. Check the phone book to find phone numbers of these agencies.



**Create a poster for your school or community center** that warns about the dangers of lead poisoning. Work with local volunteer groups to "Get the word out...Get the lead out!" by handing out your posters and organizing door-to-door campaigns and youth group activities. When handing out posters or working on door-to-door campaigns, always go with a parent, group leader, or environmental expert.

**List groups in your community that may want to participate in lead safety activities.**

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**Write and place an article in your school or group newspaper about lead.** As you write, make sure you focus on why people should be interested in this topic and what they should do about it.

## Info

For more information and free posters and materials on lead from EPA, call **1-800-424-LEAD** or check out EPA's Web site at **[www.epa.gov/lead](http://www.epa.gov/lead)**.

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# Something's Fishy



Mercury is not just a planet. It's a toxic metal that could end up on your dinner table. Mercury can be found in many places. Mercury is found naturally in coal that is used by power plants to produce electricity. When these power plants burn coal, they release mercury into the air, which eventually falls to the ground and on surface waters. In water, mercury is changed into methylmercury through a chemical reaction and can end up in fish. Methylmercury is very toxic. You and your family may be exposed to methylmercury by eating certain types of contaminated fish.

Mercury may cause several health problems for you, your family, and friends. Children born to moms with high levels of mercury in their blood may have developmental disorders.



Does this mean you should avoid eating fish? No! Fish is an important part of a balanced diet. The type and the amount of the fish you choose to eat is key. If you like to eat the fish you catch, contact your local health or environment department to find out which fish to avoid in your area. Eating fish you buy in a store or restaurant is a little different. Women of childbearing age, women who are nursing, and young children should not eat shark, swordfish, king mackerel, and tilefish. However, it is recommended that they eat fish and shell fish that are low in mercury (salmon, farmed-raised catfish, canned light tuna, and shrimp) two times a week. You can learn about these tips and the fish in your area at [www.epa.gov/waterscience/fish](http://www.epa.gov/waterscience/fish).

To learn more about how you can avoid mercury and other pollutants in the fish you catch, check out the following tips and activities.

# Tips



## 1. Become mercury safe

- Mercury, unlike some other harmful pollutants, is stored in the tissue of fish that we eat. Removing the fat, skin, and organs will not reduce exposure to harmful levels of mercury in fish.
- Follow the recommendations of local, State, and Federal advisories (warnings) on those fish that are safe and how much fish you should eat.

## 2. Cleaning your catch

- Other pollutants, such as pesticides can be found in the skin, fat, and organs of fish and may cause health problems if eaten. To reduce your health risks from these pollutants, inform a parent or group leader to:
  - Always remove the skin before cooking.
  - Cut away fatty areas. The belly, the top of the back, and the dark meat along the sides are the most common places where fat is stored.
  - Remove the head, tail, and all internal organs before cooking.

## 3. Cooking your catch

- Inform a parent or group leader to always grill or broil fish so fat can drip away. By letting the fat drip away, you remove pollutants stored in the fat.
- Don't fry. Frying seals pollutants in the muscle tissue, which is the part you eat.

## 4. Find out if the water in your favorite fishing spot is polluted

- Look for warning signs posted along the edge of the water and follow the instructions. Also check for advisory information in your fishing regulations booklet.
- Call your local or state health, or environmental protection department and ask about the waters where you are planning to fish. Find out if it is OK to eat the fish you catch.

## 5. Choose the right fish

- Choose to eat smaller fish. They usually have fewer pollutants than bigger, older fish.
- Choose lean fish such as bluegill and fish that live in cold water streams and rivers, like brook trout and brown trout.



# Activities

**Write a report about the fish advisories** for two water bodies closest to your school or house. Find out what types of fish are included in the advisories, the size limits, and the suggested amounts of fish to eat. Then, share your report with your friends, families, and teachers.

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**Get an adult to help you talk to your school or youth group about eating the fish you catch.** Give examples of the kinds of fish that should be eaten and, with the help of an adult, show the right way to clean and cook fish to reduce pollutants. You will need the following material for your demonstration: fish from local waters (if available), fish advisories for waters in your area, a sharp knife, and a flat surface to work on.

List some fish found in local waters below.

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## Info

To find fish advisories for your neighborhood, visit [www.epa.gov/waterscience/fish](http://www.epa.gov/waterscience/fish). Click on "Contacts" and then scroll down and click on your State's Web site.



# Things are Heating up with Mercury in Thermometers

Thermometers are very useful when you are sick and need to know your temperature. However, mercury thermometers can cause problems if they break. Just because your mercury thermometer hasn't broken yet, it doesn't mean it never will. Your mercury thermometer has to be shaken down before you can use it to take your temperature. The thermometer is often broken during this process. If mercury spills from a thermometer and is not cleaned up properly, it can be dangerous. It can evaporate into the air, causing toxic fumes in the air that you breathe. If the thermometer breaks in the sink, mercury can even spill down the drain and get into the water system and contaminate nearby ponds, lakes, or rivers, and poison the fish.



Mercury thermometers should be replaced with non-mercury ones. Types of non-mercury thermometers include: digital electronic thermometers, glass alcohol thermometers, and glass gallium-indiumtin thermometers. These types of thermometers are much safer and can be found in most grocery stores and pharmacies.

Broken mercury thermometers can cause health problems for everyone who is exposed, but children are especially at risk. Mercury can be eaten, inhaled, or even absorbed through your skin. When mercury gets into your body, it can damage your brain, nervous system and your kidneys.



Fever thermometers are not the only things in your house that might contain mercury. Other types of thermometers, thermostats, batteries, light and appliance switches, and light bulbs might contain mercury. Go to [www.epa.gov/epaoswer/hazwaste/mercury/product.htm](http://www.epa.gov/epaoswer/hazwaste/mercury/product.htm) to learn more about products with mercury.

## Why is Mercury in Thermometers?

Mercury is the only metal that is liquid at room temperature and expands and contracts evenly with temperature changes.





### Getting Rid of Mercury Thermometers

- Take your mercury thermometer to a special collection event or a collection facility for household hazardous waste.
- If you don't have the container for the thermometer, put it in a plastic soda bottle to keep from breaking
- Never put mercury thermometers in the trash.

## Tips



### 1. Cleaning up Messy Mercury Spills

- If a mercury-containing product is broken, do not touch the mercury.
- Keep all people and pets out of the area and open windows for ventilation.
- Never vacuum or sweep the spill. This will increase the mercury contamination.
- Contact your local health department or your local fire department for proper disposal information.
- Also see <http://www.epa.gov/epaoswer/hazwaste/mercury/spills.htm> for more information.

### 2. And Remember...

- NEVER use a vacuum cleaner to clean spilled mercury.
- NEVER use a broom to sweep up mercury.
- NEVER pour mercury down the drain or trash.
- NEVER wash mercury-contaminated items in a washing machine.
- NEVER walk around if your shoes might be contaminated with mercury. Contaminated clothing can also spread mercury around. Put contaminated clothing and shoes into a plastic bag. Seal the bag with tape and dispose of it at a special collection event or household hazardous waste collection facility.

# Activities



**Find out where you can safely dispose of mercury thermometers in your community.** Work with your local recycling center to help organize a local mercury thermometer collection event in your community. There are many organizations that can help you, such as Health Care without Harm.

Write down the address of your local recycling center.

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**Design an education campaign on the hazards of mercury thermometers.**

Consider making posters, brochures, or public service announcements for local radio stations.

**Help your mom or dad select a new mercury-free thermometer.**



## Info

- Check out EPA's Web site on mercury to help prevent mercury pollution at [www.epa.gov/mercury](http://www.epa.gov/mercury).
- For more information, visit Health Care Without Harm at [www.noharm.org](http://www.noharm.org).

# *Water—Clear Doesn't Always Mean Clean*



Water is something we often take for granted in the United States. Usually we have enough of it and it is safe. But the sources of our drinking water are constantly being challenged by naturally occurring events like landslides and floods, and human activities like littering and pollution.

We rely on a safe water supply for the health of our families and neighbors. Your water may come from a lake, river, or reservoir or it may come from underground wells. In any case, your drinking water starts its journey to your kitchen sink from a watershed. A watershed is the land area that drains into a single body of water or to ground water. Everything that happens in the watershed can affect the quality of your water supply.

## **DID YOU KNOW?**

- To keep bugs and weeds out of our grass, Americans use 67 million pounds of pesticides on our lawns each year. Some of these pesticides may run off into our water.
- In the United States, water supply companies treat nearly 34 billion gallons of water every day.
- Americans drink more than one billion glasses of tap water every day.

**Safe drinking water depends on all of us. Do your part to protect yourself and the water you drink!**

# Tips



1. Don't trash your batteries when they run out of juice because they can pollute water supplies. Ask your local recycling center how to properly get rid of old batteries.
2. It's simple: don't drink water directly from a pond, creek, stream, river, or lake.
3. If your home uses a well for drinking water, ask an adult in the house to have it tested every year by an expert laboratory. Read "Drinking Water from Household Wells," found at [www.epa.gov/safewater/privatewells/booklet/index.html](http://www.epa.gov/safewater/privatewells/booklet/index.html) or call **1-800-426-4791** for help.
4. If you get your drinking water from a community water system, check with your water supplier once a year to find out the water quality.



## Activities



**Develop a checklist of safe drinking water tips** and have your class or a parent help you hand it out to your friends and neighbors.

Visit [www.epa.gov/safewater](http://www.epa.gov/safewater) for safe drinking water tips. List them here.

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**Find out about your local drinking water plant** and what is required to have clean and safe drinking water. Most public water systems have Web sites that list the sources of water they use, how they treat it to remove pollutants, and if any harmful pollutants were found.

**Work with teachers or other volunteers to plan a tour of your local water plant.** Make sure to ask key questions, such as where does the water come from and what steps are taken to make your drinking water safe. Brainstorm your list of questions here.

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Use the information that you learned from the tour to **prepare and give a presentation on safe drinking water** in day care centers, schools, churches, and other places in your community.

### Info

For more information on safe drinking water, visit EPA's drinking water Web site at [www.epa.gov/safewater](http://www.epa.gov/safewater).



# Don't Be Bugged by Pesticides



Bet you didn't know that even though kids weigh less than adults, they drink more water, eat more food, and breathe more air than adults per pound of body weight. That's why kids may be exposed to more pesticides than adults.



What are pesticides and why are they used? Well, when bugs or other living creatures invade our homes, our backyards, our playing fields or our crops, we call them pests. Pesticides are used to kill these pests. Examples of pesticides include bug spray, pet flea collars, rat poison, and weed killer.

Pests such as fleas and ticks on the family dog, cockroaches in cupboards, weeds in the garden, and ants at a picnic can be a real pain. Some pests like ticks may even carry diseases including Rocky Mountain spotted fever which causes headache, muscle pain, fever, and a very nasty rash.



Pesticides are all around us! The more you know about them, the better you can protect yourself and others. You can be exposed to pesticides in lots of ways. Food may contain pesticides because farmers use them to protect crops from weeds and bugs. Kids may be exposed at home and at school when pesticides are used to kill cockroaches, ants, or rodents. Pesticides are also found in flea and tick powders, which are used on the family dog or cat. You may also be around pesticides when playing on lawns and fields that have just been treated with a pesticide. The government limits the amount of pesticides that can be found in food so there's no excuse to stop eating your green beans and peas. Fruits and vegetables are an important part of a healthy diet.

Integrated pest management (IPM) is a way of controlling pests by using the least toxic method first. For example, the first step in keeping pests away is making sure food is stored in air-tight containers. Baits and traps are also great ways to control pests without exposing people to pesticides.

# Tips



1. Prevent pesticide poisoning in your house. Work with an adult in the house to make sure that pesticides are kept in their original containers and stored in locked cabinets or other places that are out of reach of small children like your younger brothers and sisters.
2. If you must use pesticides, be sure to use them with care, under adult supervision, and remember to **READ THE LABEL FIRST!**
3. Never play with pesticides or pesticide containers.
4. Never play on lawns that have been recently sprayed with pesticides. Make sure your pets stay away too.
5. You can cut back on the need to use bug spray by staying inside when mosquitoes or other bugs are most active and if you go outside, cover up by wearing pants and a long-sleeved shirt.
6. Always wash and scrub fruits and vegetables under running water. After washing, peel fruits and vegetables when you can. Throw away the outer leaves of leafy vegetables. Also, have an adult trim the fat from meat and skin from poultry and fish because some pesticides collect in fat.



# Activities

**Have your family sign a household pledge to get rid of pests using the least toxic methods possible.** If pesticides are needed, make sure they will be used in a safe way.

Start your pledge here.

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**Talk to five friends about what they can do to stop pests and pesticide use at school.** Here are some tips for school:

- Keep your school lockers and desks clean; don't store food in your locker.
- Clean up after yourself in the cafeteria.
- Clean up spills and crumbs right away.
- Report any leaky faucets.



**List your five friends here.**

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## Info

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

**Find out how your school controls pests.** Is there an IPM system in place? Learn more about IPM and write an article about it for your school newspaper.

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# Where There's Secondhand Smoke, There's Fire



Most smokers know that smoking is bad for their health. However, many smokers and non-smokers don't know that smoke can also hurt those around them. Secondhand smoke, also called environmental tobacco smoke, is a mix of the smoke exhaled by smokers and smoke from cigarettes, pipes, and cigars. Infants and young children, especially those with asthma, are the most at risk from secondhand smoke.

## CHECK THIS OUT:

- EPA says that exposure to secondhand smoke has been linked to lung cancer.
- Infants and young children whose parents smoke can have trouble breathing and can get sick with things like pneumonia and bronchitis.
- EPA says that secondhand smoke makes asthma worse for almost a million young people in the United States.
- Children and young adults exposed to secondhand smoke are more likely to have trouble breathing and have symptoms like coughing and wheezing.
- Secondhand smoke can lead to buildup of fluid in the middle ear. This can lead to ear infections in young children.
- Secondhand smoke is associated with about 3,000 lung cancer deaths in non-smokers each year.

So, there you have it. Where there's secondhand smoke, there's fire. Learn more and help your family and friends avoid the heat!

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# Tips



1. Encourage everyone not to smoke in your house. Better yet, ask family members and friends to quit.
2. Politely let family members, friends, and others know that you don't want to be around their secondhand smoke.
3. Make your family car a smoke-free zone.
4. In restaurants, ask to sit in the nonsmoking section as far from smokers as possible.





# Activities



**Create and act out a series of commercials on secondhand smoke.** Perform the commercials for scout troops, youth groups, at school or in other places in your neighborhood.

**Develop a handout on the dangers of secondhand smoke.** Have your class, troop or a parent help you pass out the brochure to day care centers, schools, churches, and community centers. List secondhand smoke health effects here.




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**Write and place an article on secondhand smoke** in your community or school newsletter. Discuss the problem, the health effects, and possible solutions. Include tips on how smokers can reduce secondhand smoke exposure to others, and why it is a good idea to quit. Start your outline here.

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**Organize a smoke-free day for your family or community.**

Jot down possible slogans for the day.

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**Info**  
 Ask your friends and family who smoke to take EPA's Smoke-Free Home Pledge by calling toll-free 1-866-SMOKE-FREE or visiting EPA's Web site at [www.epa.gov/smokefree](http://www.epa.gov/smokefree).

# Carbon Monoxide— Gotta Vent It



Did you know that one of the biggest dangers that may be hanging out in your house is invisible and has almost no smell? We're talking about carbon monoxide (CO). CO can be a threat to unborn babies, infants, kids, and teens just like you. Why? CO is a gas. It is formed when a fuel like gas, oil, kerosene, wood, or charcoal is burned. Common house appliances like stoves, clothes dryers, and hot water heaters sometimes use one of these fuels. If appliance fumes are allowed to escape out of the house through a vent, the amount of CO in the air you breathe is usually not dangerous. But if appliances are not vented, CO can reach dangerously high levels, and can cause health effects that are not so invisible. CO poisoning can cause serious injury or even death! There are things you can do to prevent CO poisoning. Here are a few of them.

## Tips



1. Make sure that what keeps you warm can't harm you. Never sleep in un-vented rooms with gas or kerosene space heaters.
2. Ask your parents to have all fuel appliances checked at least once a year by a professional.
3. Ask an adult in your house to put CO alarms in the rooms where you and your family sleep. Make sure the alarms are located near the floor.
4. Keep the cookout outside. Never use barbecues or grills inside or in the garage.
5. Let the drivers in your house know that running cars or lawnmowers in the garage is dangerous.
6. Make sure that car and truck tail pipes are not clogged with snow or other debris.

# Activities



**Create a handout about the dangers of CO** and work with your teachers and friends to pass it out at school. Visit [www.epa.gov/iaq/co.html](http://www.epa.gov/iaq/co.html) and research CO.

**Design a “Seal of Approval” certificate for household appliances** that produce CO. Once an expert says they are safe, display your “Approval Certificate” on the appliance or make a chart that includes all of your household appliances that produce CO. Leave space to note when each appliance has its yearly maintenance check.

**Write a letter or email to friends and family** telling them about the dangers of CO. Include tips on how to keep your house free from CO. Start your list of tips here.



## Info

Visit [www.epa.gov/iaq/co.html](http://www.epa.gov/iaq/co.html) to learn more about CO.

LIVE

LEARN

PLAY

# Be Cool and Practice Sun Safety



Did you know that you will spend more time in the sun as child than as an adult? While you enjoy those carefree sunny days, be careful. Too much sun can be bad news!



Overexposure to ultraviolet (UV) radiation from the sun can cause sunburns in the short term, but also may lead to long-term health problems such as skin cancer and eye problems. Too much sun can also cause you to look older than you are. We're talking all sorts of wrinkles, bags, and sags! Just one or two blistering sunburns as a child may double the risk of some skin cancers as an adult. Ouch!

You're still not safe if it's fake. Artificial sources of UV light, such as tanning beds and sun lamps, can also damage the unprotected eyes and skin.

Here's a cool idea! Learn more about sun safety and share it with your family and friends.

## Tips



1. Dress the part. Wear hats, sunglasses, and protective clothing.
2. Block it out! Use sun screen with Sun Protection Factor (SPF) 15 or more.
3. Keep babies out of direct sunlight.
4. Limit the time you spend in the midday sun. The sun is most intense between 10:00 a.m. and 4:00 p.m.
5. Does your local newspaper publish the UV Index? If so, you can easily check it and take special care to follow sun safety steps when the UV Index is 5 or higher.

LIVE

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# Activities

**Organize a sun-safe hat game.** Have many types of hats to choose from and rank them from best to worst by testing how well they protect you from the sun. Talk about the good and bad things about each hat.

**Call your local television and radio stations,** and ask if the weather man or woman (also called a meteorologist) can give you a tour of the weather center and discuss UV radiation. List questions you'd like to ask here.

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**Organize an Arbor Day (the last Friday in April) event** at your school or community center. Plant young trees that will provide shade for the community when they are fully grown. List school or community leaders who could help you organize the event.

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**Start a sun safety poster contest** to show the steps we should take to protect ourselves, family, and friends. Display the winning poster and all the other drawings collected at a community or school event. List the things or ideas that the poster should show in order to win the contest.

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## Info

For more information, visit EPA's Sun Wise Web site at [www.epa.gov/sunwise](http://www.epa.gov/sunwise).

Learn more about the UV Index at [www.epa.gov/sunwise/uvindex/index.html](http://www.epa.gov/sunwise/uvindex/index.html).

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# PLAY

LIVE

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PLAY

# *Tune in to Your Health and Environment*



## **Audio CD**

### Play List

1. Environmental Hazards Rap (with vocals)
2. Environmental Hazards Rap (instrumental)
3. In our Sight (with vocals)
4. In our Sight (instrumental)

LIVE

LEARN

PLAY



**United States  
Environmental Protection  
Agency**  
1107A  
Washington, DC 20460



### **About the Office of Children's Health Protection**

In 1997, the Office of Children's Health Protection (OCHP) was established to implement EPA's commitment to protect children from environmental health hazards. In 2002, OCHP expanded its work to include older adults. OCHP's mission is to promote environmental health protection for children and older adults in the United States and around the world.

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