

## About the American Lung Association

The American Lung Association is the leading organization working to save lives by improving lung health and preventing lung disease through research, education and advocacy. The work of the American Lung Association is focused on four strategic imperatives: to defeat lung cancer; to champion clean air for all; to improve the quality of life for those with lung disease and their families; and to create a tobacco-free future. For more information about the American Lung Association, a holder of the Better Business Bureau Wise Giving Guide Seal, or to support the work it does, call **1-800-LUNGUSA** (1-800-586-4872) or visit: **Lung.org**.



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## Facts About Indoor Air Pollution and Your Health



# The Unwelcome Guest in Your Home

Most of us have heard about the dangers of outdoor air pollution. We see smokestacks and dirty diesel trucks and know it's not good for our health. When we step inside, we feel safe. What most of us don't realize is **indoor air pollution may be at levels two to five times higher than outdoors**, according to the U.S. Environmental Protection Agency (EPA). At times, it can be more than 100 times higher!

Here are three reasons to learn more about indoor air quality right now:

1. Most Americans spend the majority of their time indoors.
2. Indoor air pollutants can cause allergic reactions, serious lung disease and even death.
3. You CAN protect yourself with two key steps.

## How Indoor Air Gets Polluted

Indoor air pollution comes from many sources: the materials used to build your home, the furniture you sit on, the appliances you use and the household products you purchase. All of these things can contain chemicals that enter the air and get trapped indoors. Other pollutants occur naturally, such as mold and radon.

And, it's not just our homes. Indoor air pollution can be a problem in your child's school or your workplace.

Some building materials, furnishings and home air fresheners release pollutants continuously!

## Common Indoor Pollutants and Sources

Pollutant	Sources
<b>Asbestos:</b> microscopic mineral fibers that can be inhaled into the lungs	Older roofing and flooring materials, insulation, spackling compounds, fireproofing, acoustical materials
<b>Biological Pollutants:</b> viruses, bacteria, fungi, mold, dust mites, cockroaches	Carried indoors by people or pets, or naturally occurring in the home; growth encouraged by high humidity and dampness
<b>Combustion Pollutants:</b> includes <b>Carbon Monoxide</b> (CO) and <b>Nitrogen Dioxide</b> (NO <sub>2</sub> ), odorless, colorless gases	Poorly vented gas appliances, fireplaces and wood stoves, coal/oil furnaces, space heaters, charcoal grills, car exhaust, gas-powered tools, cigarette smoke
<b>Lead:</b> toxic metal once common in household products and paint	Old paint and water pipes, lead-contaminated soil and dust that is tracked indoors
<b>Radon:</b> naturally occurring radioactive gas that is colorless and odorless	Emitted from the ground and into the home through cracks, basements, other openings
<b>Secondhand Smoke:</b> tobacco smoke that enters the air; includes benzene, formaldehyde and CO	Burning cigarettes, cigars, pipes
<b>Volatile Organic Compounds (VOCs):</b> chemicals in some household products that are released during use or storage, includes formaldehyde	Paint, paint stripper, household cleaners, building materials, home furnishings, air fresheners, dry-cleaned clothing





## The Health Effects of Indoor Air Pollution

If you feel sick after being indoors, then better once you leave, indoor air pollution is likely to blame. Common short-term effects include itchy eyes, runny nose, headaches, coughing, wheezing, dizziness, nausea and tiredness. Asthma symptoms may be triggered.

Sometimes however, there are no warning signs. Radon, a colorless, odorless gas, causes no immediate symptoms. But long-term, radon exposure is the second-leading cause of lung cancer in the U.S. (after smoking)!

Other long-term, even life-threatening effects of indoor air pollution include:

- Respiratory illness such as bronchitis, pneumonia and chronic obstructive pulmonary disease (COPD)
- Lung and other cancers
- Liver, kidney and central nervous system damage
- Immune system diseases
- Death

Some people are at greater risk than others, including children, teens, pregnant women, older adults, those with allergies and people with lung disease, heart disease or diabetes. But indoor air pollution can be a danger for anyone.

# You CAN Protect Yourself

There is good news. There are things you can do to make your home a safer place.

Take these steps for better air now:

1. Keep Pollution Out
2. Ventilate to Clean Air

## Keep Pollution Out

With a few easy changes, you can prevent or remove many sources of pollution from your home.

- Make your home a smokefree zone and avoid places where smoking is allowed. Learn more at [Lung.org/smokefree](https://lung.org/smokefree).
- Test for radon, and take action if levels are high. Learn more at [Lung.org/radon](https://lung.org/radon).
- Keep humidity levels low. A dehumidifier or air conditioner can help.
- Fix leaks and drips to keep mold from growing.
- Don't burn wood. It creates pollution, indoors and out.
- Don't use scented candles or air fresheners to hide odors. Remove the source instead.
- Use cleaning, household and hobby products that are less toxic.
- Don't store hazardous chemicals inside. They can let off fumes, even when not being used.
- If you have asbestos or lead paint, leave it intact. If you plan to renovate, or need to make repairs, call a professional to remove it.
- Use hard surface flooring and damp mop/dust twice a week to keep dust levels down.

## Ventilate to Clean Air

Proper ventilation is another key to cleaner, healthier air. To keep air moving and problems from happening:

- Use exhaust fans in bathrooms to push moisture and gases out of the house.
- Make sure gas appliances vent completely to the outside. Do not use ventless stoves or fireplaces.
- Have your gas or oil company inspect your appliances at least once a year.
- Install carbon monoxide detectors. Be sure to follow all manufacturer instructions for proper placement.
- Never leave a car running in the garage—even with the door open.
- When you paint or use chemicals, open the windows and use a window fan to pull the air out of the room.
- Don't use your gas oven to heat your home.
- Don't block air vents or grilles. The house needs them to supply fresh air.





## About Air Cleaners

If you've followed the steps listed, and still have indoor air problems, an air purifier device might help. Keep in mind, effectiveness varies greatly. Avoid any device that produces ozone, a lung irritant. Devices target different pollutants, e.g. HEPA filters capture small airborne particles; gas-phase or carbon filters capture some gases and odors. Always be sure the device you choose is big enough for the room you want to clean. To learn more before buying, visit [epa.gov/iaq](http://epa.gov/iaq).

Buyer beware: Some air purifiers actually produce ozone—the main ingredient of harmful smog!

## Special Considerations

- **If you rent a home:** Although you can do some things to keep pollution out, you'll need to rely on your building manager or landlord for major fixes. Inform the landlord right away about things like secondhand smoke intrusion, leaks or standing water. If your landlord refuses to help, check with your local housing authority to find out what protections exist in your community.





- **At your child's school:** Given the amount of time most children spend in the classroom each year, air quality at school is as important as it is at home. Be an advocate for your child by bringing up any concerns to school administration. You can also tell your child's school about the free resources available on the American Lung Association's website.
- **In the workplace:** Your employer is legally responsible for telling you about any hazards connected with your job and for providing you with a safe, healthy workplace. You can help by being alert for unsafe or unhealthy conditions and reporting any problems.

## For More Information

To learn more about indoor air pollution, how to protect yourself and support local and national efforts to advocate for clean air at home, in school and at work, call the American Lung Association at **1-800-LUNGUSA** or visit us at **[Lung.org/air](http://Lung.org/air)**.