

# Indoor Air Pollution

by Sophia



## WHAT'S COVERED

In this lesson, we will cover the topic of indoor air pollution. We will cover an overview of indoor air quality issues: the sources, the impacts, and the efforts made to improve negative impacts.

Specifically, this lesson will cover the following:

## 1. Sources of Indoor Air Pollution

In the United States, people spend a majority of their time indoors, which is around 87% of the time. Buildings and what is inside them often emit harmful particulate matter and gases. In short, indoor air pollution has the potential to be highly hazardous to human health.

There are many sources of indoor air pollution. Some of these sources are listed in the table below.

Sources of Indoor Air Pollution	Examples/Derivations
Building materials	Asbestos, formaldehyde from upholstery and carpeting, and off-gassing from particleboard, plywood, drywall, and plastics can all produce harmful air pollutants.
Pesticides	When used or stored indoors, pesticides can create air hazards.
Biologicals	Trapped mold or mold growing because of water damage can produce toxins. Dust mites, fungal spores, and pet hair can also pollute air.
Combustibles	Combustibles from heating systems, such as fireplaces, gas heaters, stoves, and kerosene heaters, produce pollutants.
Radon	This naturally occurring radioactive gas can be hazardous.
Lead dust	Lead dust can occur from paint and is an indoor air pollutant.
Ozone	Ozone from copying machines can be an indoor air pollutant as well.
Miscellaneous	This grouping includes grills, car exhaust, secondhand smoke, paints, and cleaning products.

## 2. Impacts of Indoor Air Pollution

The following are some important facts to consider about the sources of indoor air pollution:

- Lead dust, asbestos, radon, and combustibles (like carbon monoxide and nitrogen dioxide) are the most common indoor air pollutants.
- Radon is the second leading cause of lung cancer.
- 40 million people in the United States suffer from allergies, which are exacerbated by indoor air pollutants.
- Asthma is the sixth most common chronic illness in the United States, and it is made worse by air pollution.
- Sadly, 4.3 million people die every year from exposure to household air pollutants, most often from burning combustibles inside.

Because people spend a large part of their time indoors around air pollutants, the risks from exposure to indoor air pollutants could be greater than their outdoor counterparts.



#### DID YOU KNOW

In general, the levels of indoor air pollutants are two to five times higher than those of outdoor ones.

Indoor pollutant levels can be as much as 100 times higher than outdoor pollutant levels.

Immediate effects of indoor air pollution can be eye and nose irritation and even dizziness, and long-term effects can be damage to organs and tissues, visual impairment, and even cancer.

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## 3. Addressing the Impacts of Indoor Air Pollution

There are efforts that can be made to improve the impacts of indoor air pollution, such as the following:

- Eliminating or containing the source of pollution
- Increasing ventilation through open windows or fans to increase outdoor air flowing through a building
- Cleaning the air with an air cleaner and using devices like a HEPA filter (high efficiency particulate air filter)
- Maintaining furnaces while monitoring for carbon dioxide output



#### SUMMARY

In this lesson, we learned about indoor air pollutants. We learned about a variety of **sources of indoor air pollution**, as well as their **impacts**. We also learned about efforts that can help us **address the impacts of indoor air pollution**.

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