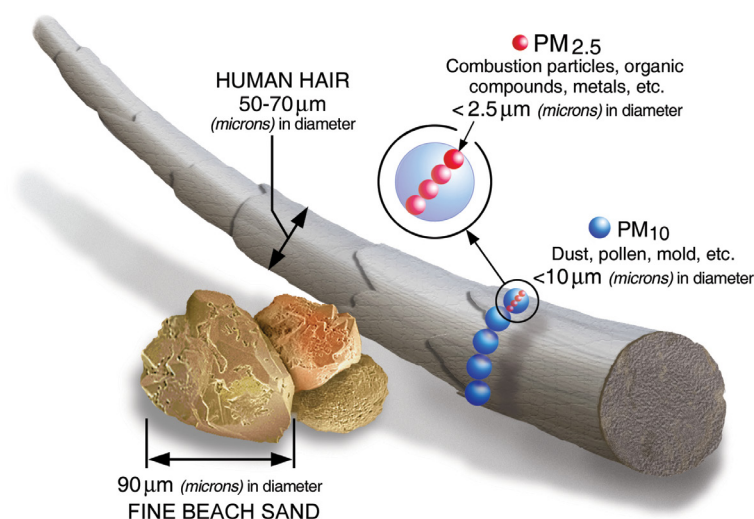


# Particulate Matter Pollution and Your Health

*The air we breathe can contain harmful particulate matter (PM) pollution. It is a mixture of tiny droplets of liquids and solids created by fires, certain factories and power plants, construction activities, driving, mold, pollen, and other sources.*

## What is PM pollution?

- PM is a mixture of very tiny solid and liquid droplets that float in the air. PM pollution can be made up of acids (such as nitrates and sulfates), organic chemicals, metals, dust, dirt, ash, soot, and allergens (pollen or mold spores).
- PM pollution can affect surface water, soil, and ecosystems; damage fragile forests and farm crops; contribute to acid rain; and stain and damage stone and other materials.
- There are two types of PM: PM<sub>10</sub> which are inhalable “coarse particles” measured at less than 10 microns and PM<sub>2.5</sub> which are fine inhalable “fine particles” measured at less than 2.5 microns.



Source: <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#PM>

## Where does PM pollution come from?

- PM<sub>2.5</sub> (fine particles) can be created from forest fires, woodstoves, fireplaces, or gases emitted from power plants, factories, and automobiles. Because PM<sub>2.5</sub> is so small, it can stay in the air and travel extremely long distances. PM<sub>2.5</sub> is a major cause of reduced visibility and haze in parts of the U.S.
- PM<sub>10</sub> (coarse particles) can be found near roadways and dusty factories. PM<sub>10</sub> is often from winds blowing dust off the desert or farm fields, crushing, and grinding processes, dust from driving on dirt roads, and some agricultural activities. Pollen and mold spores are also considered PM<sub>10</sub>.

## How can I protect myself from PM pollution?

- Monitor air quality by visiting: [Airnow.gov](http://Airnow.gov).
- On poor air quality days:
  - Reduce time spent outdoors.
  - Avoid vigorous physical activity.
  - Stay indoors with the windows closed and the air conditioning on.
  - Avoid using your wood stove and fireplace.
  - Avoid using leaf blowers and other dust-producing equipment.
- Drive slowly on unpaved roads and other dirt surfaces.
- Do not burn leaves and other yard waste.
- HEPA filters and room air cleaners along with regular maintenance of HVAC systems and routine changing of air filters can help lower indoor particle levels.

## Does being exposed to PM pollution mean I'll get sick or impact my health?

- PM pollution can be breathed deep into your lungs and may even get into your bloodstream, affecting your lungs and heart.
- Both long-term and short-term exposures can cause health problems such as:
  - Irritation of the eyes, nose, and throat.
  - Shortness of breath or cough.
  - Worsening of lung and heart disease.
  - Chest pain, irregular heartbeat, or heart attack.
  - Premature death of some people who have lung and heart disease.
- Exposure to PM pollution can cause health problems for anyone, but certain people may be more at risk than others. They include:
  - The elderly.
  - Infants and children.
  - Pregnant women.
  - People with chronic (ongoing) heart conditions such as angina or congestive heart failure may be at a higher risk of heart attacks.
  - People with chronic (ongoing) lung diseases such as asthma, COPD, or emphysema may not be able to breathe as deeply or have flare-ups.

## Additional Resources:

“Particulate Matter (PM) Basics.” Website. U.S. Environmental Protection Agency. Source:  
<https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#PM>

“AirNow”. Website. U.S. Environmental Protection Agency and partners. Source:  
<https://www.airnow.gov/>

“Smoke Events Factsheet” Ohio Department of Health, Bureau of Environmental Health and Radiation Protection, Health Assessment Section. 5/11/2018. Source:  
<https://odh.ohio.gov/know-our-programs/health-assessment-section/media/smoke-events-factsheet>

Ohio Department of Health  
Health Assessment Section  
(614) 728-9452  
[BEH@odh.ohio.gov](mailto:BEH@odh.ohio.gov)