

AIR POLLUTION & HEALTH RISKS

Health risks from exposure to air pollution are a serious and complex concern. Many people ask whether air pollution can play a role in overall health. The answer is yes. Health outcomes have many contributing factors, including genetics, lifestyle, and environmental considerations. Air pollution is one environmental factor that can adversely impact health over time, particularly for the lungs and heart. Unlike some risks, air pollution can be reduced through cleaner fuels, technologies, and land use practices.



WHAT IS AIR POLLUTION?

Air pollution comes from sources like cars, trucks, trains, equipment, consumer products, industrial activities, and smoke. Some air pollutants linked to health risks include:

- **Ground-level ozone:** a gas formed when pollutants from cars and other sources react in sunlight
- **Fine particles (PM2.5):** very small particles that can be breathed deep into the lungs
- **Toxic air contaminants:** chemicals in the air, such as diesel particulate matter, benzene and acetaldehyde

HOW CAN AIR POLLUTION INCREASE HEALTH RISKS?

Many people experience symptoms from air pollution, such as watery eyes, coughing, or wheezing. Even healthy individuals may have breathing irritation, especially during exercise or outdoor activity. Risks depend on a person's health, the type and level of pollution, and how long they are exposed. Long-term exposure can lead to:

- Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing
- Chest pain, dry throat, headache, or nausea
- Aggravated asthma, chronic obstructive pulmonary disease (COPD), bronchitis, and emphysema
- Development of chronic respiratory disease
- Irregular heartbeat and nonfatal heart attacks
- Premature death in people with heart or lung disease
- Increased risk of cancer

WHO IS MOST VULNERABLE?

Some people are exposed to higher levels of air pollution because of where they live. Others are more sensitive to pollution's health effects.

People at higher risk include:

- People who live near major roads or industrial areas
- Communities that have faced higher pollution levels for many years
- Children, older adults, and people with heart or lung conditions, who may be more sensitive to air pollution

WHAT IS THE AIR DISTRICT DOING TO REDUCE AIR POLLUTION?

Studies show that an effective way to reduce health risk from air pollution is to reduce emissions at their source and reduce exposures.

The Air District does this by:

- Funding cleaner cars, trucks, and heavy-duty vehicles
- Helping replace older, higher-polluting engines with cleaner technology
- Supporting cleaner fuels and zero-emission electric options
- Targeting reductions in communities with the most pollution
- Permitting and inspecting businesses that contribute to air pollution
- Monitoring air quality to track progress
- Promoting streets and neighborhoods safe for walking, biking, and transit

Lower emissions lead to cleaner air. Cleaner air means:

- Less long-term exposure to harmful pollutants
- Reduced health risks over time across the community
- Fewer asthma attacks, heart problems, and other health impacts

SCIENTIFIC STUDIES WITH MORE INFORMATION

The scientific evidence on air pollution and health is vast and well established. The approaches and practices to reduce air pollution are also widely understood. Scan the QR code to access the studies to learn more about air pollution and health risks.



Integrated Science Assessment (ISA) for Ozone and Related Photochemical Oxidants
U.S. Environmental Protection Agency
(Final Report, April 2020)



Integrated Science Assessment (ISA) for Particulate Matter
U.S. Environmental Protection Agency
(Final Report, December 2019)



HOW TO REDUCE YOUR AIR POLLUTION EXPOSURE

You can reduce your exposure by:

- Signing up for daily air quality forecasts and alerts at www.SpareTheAir.com/signup
- Checking current air quality conditions at www.AirNow.gov
- Limiting outdoor activity on high-pollution days
- Using electric and energy-saving appliances
- Using air purifiers and regularly replacing air filters



Outdoor Air Pollution and Cancer: An Overview of the Current Evidence and Public Health Recommendations
Turner et al., CA: A Cancer Journal for Clinicians (2020)