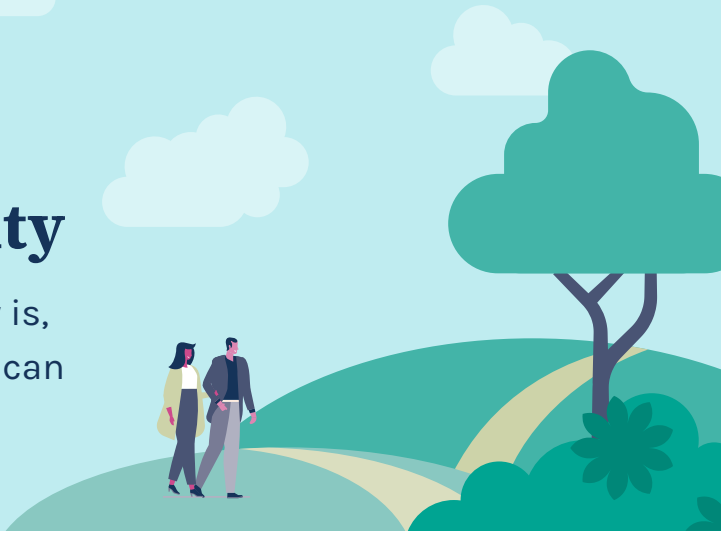
PROTECT YOUR HEALTH:

Understanding Air Quality

Use this guide to understand what air quality is, how it is evaluated, and safety measures you can take when air quality is unhealthy.



What is air quality?

Air quality measures how much pollution is in the air. Air pollutants, like vehicle emissions and wildfire smoke, impact public health and the environment.

Understanding the United States Air Quality Index (AQI)

The United States Air Quality Index (AQI) is a national tool used to communicate about outdoor air quality and health. The AQI runs from 0 to 500, with higher numbers indicating worse pollution and greater health risks.

AQI Basics for Ozone and Particle Pollution			
Daily AQI Color	**Levels of Concern**	**Values of Index**	**Description of Air Quality**
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

SOURCE: www.airnow.gov/aqi/aqi-basics

What to know about AQI:

- An AQI level less than 50 is ideal, but anything below 100 is considered acceptable.
- Levels of 100-150 are considered dangerous for certain groups.
- Levels higher than 150 are unhealthy for all groups, and levels over 300 are considered an emergency and require action.

Who should take extra precautions when AQI is over 100?

- People with heart or lung diseases.
- People with diabetes.
- Older adults (older than 60 years old).
- Children (less than 18 years old).

Accessing local air quality information

Daily AQI reports are required for metro areas with a population of over 350,000 people. However, other areas also report AQI as a public service. Daily AQI measurements are available on AirNow.gov and many health department websites.

Communities at higher risk of air pollution

Communities near highways or busy roads

Communities near transit depots, where buses and trains are stored

Communities near power plants or near other industrial facilities

Health effects of poor air quality

Almost every organ in the body can be impacted by air pollution. The conditions most strongly linked to poor air quality exposure include stroke, heart disease, chronic obstructive pulmonary disease (COPD), lung cancer, and pneumonia.

What leads to a decrease in air quality?

The AQI measures five major pollutants, each of which has a national air quality standard to protect public health.

Routine and Emergency Protections Against Harmful Air Quality

Certain safety measures can protect you and your family from the harmful effects of air pollution.

Plan ahead for hazardous air quality. Prepare for environmental emergencies that create sudden unsafe outdoor conditions. This is especially important if you live in an area that is prone to wildfires or dust storms. Keep an extra supply of necessary medications, and consider stocking up on items like nonperishable food, face masks, and air cleaning supplies.

Read local air quality reports. Stay up to date on local information. Air quality levels can change quickly, and local officials can provide the most up-to-date and accurate information to keep you safe.

Use air cleaners, purifiers, and filters. Choose an air cleaner or purifier that has an appropriate clean air delivery rate (CADR) and use high-efficiency particulate air (HEPA) filters to help keep your space clean. Existing furnaces and HVAC systems can filter the air when operating for long periods and using upgraded filters. Use the Guide to Air Cleaners in the Home for information on choosing the right equipment for your space.

Limit outdoor work and exercise. To decrease the amount of exposure to unhealthy air particles, limit, pause, or reschedule outdoor activities when air quality is poor.

Wear a mask. If you must go outside when air quality is unhealthy, properly fitted high filtration masks such as N95s, KN95s, and KN94s provide the best protection.

Monitor your health. Stay up to date on routine health screenings and notify your healthcare provider of any concerns, symptoms, or health changes you experience.

Minimize personal impact on air quality. Your actions can help reduce pollution. Avoid burning materials outdoors, choose public transportation when possible, plant and care for trees that filter the air, and switch from gas-powered to electric lawn equipment.

For more information, visit the following resources:

AirNow.gov. AirNow is a partnership of the U.S. Environmental Protection Agency (EPA), the National Oceanic and Atmospheric Administration (NOAA), National Park Service (NPS), the National Aeronautics and Space Administration (NASA), the Centers for Disease Control and Prevention (CDC), and tribal, state, and local air quality agencies.

Lung.org. The American Lung Association works to save lives by improving lung health and preventing lung disease through education, advocacy, and research.