

# Wildfire Smoke and Health

## Why is wildfire smoke dangerous?

- Wildfire smoke is a mix of gases, water vapor and fine particles that can increase air pollution levels thousands of miles away from the fire zone.
- When air pollution levels rise from wildfire smoke, the health risks can also increase.



**Particulate Matter (PM)** is the most harmful pollutant from short-term exposure to wildfire smoke. Particles can be <math>< 2.5\text{ microns } (\mu\text{m})</math> in diameter and can be inhaled into the deepest parts of the lungs causing heart and lung effects.

## Who is at risk?

Wildfire smoke can affect anyone's health. However, the groups listed below are most sensitive. If you belong to one or more of these sensitive groups, take extra care to protect yourself.

- Older adults
- Children
- Pregnant people
- People with underlying health conditions like asthma, COPD, or heart conditions
- People who have a higher exposure to wildfire smoke, such as people who work or exercise outside, are unhoused, or do not have access to clean air at home or at work

Talk with your doctor about how best to protect yourself during a wildfire smoke event.

## Air Quality Index (AQI)

WHEN THE AQI IS:	WHAT DOES IT MEAN?
<b>Good</b> GREEN (0 TO 50)	Air quality is satisfactory, and air pollution poses little or no risk.
<b>Moderate</b> YELLOW (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.
<b>Unhealthy for sensitive groups</b> ORANGE (101 TO 150)	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
<b>Unhealthy for everyone</b> RED (151 TO 200)	Everyone may experience health effects; members of sensitive groups may experience more serious health effects.
<b>Very unhealthy for everyone</b> PURPLE (201 TO 300)	Health alert: The risk of health effects is increased for everyone.
<b>Hazardous for everyone</b> MAROON (301 TO 500)	Health warning of emergency conditions: everyone is more likely to be affected.

## What are the symptoms of wildfire smoke exposure?

- Mild cough
- Runny nose
- Watery or dry eyes
- Sinus irritation
- Sore throat
- Wheezing or shortness of breath
- Headaches
- Fatigue
- Asthma attacks
- Severe or persistent coughing
- Chest pain
- Fast or irregular heartbeat

Wildfire smoke exposure can cause severe or life-threatening symptoms in some people. **Seek medical attention immediately if you experience a medical emergency from smoke exposure.**

## Stay informed! Check the air quality near you.



Before going outdoors, check local air quality conditions by scanning the QR code or following the link below.  
<https://airquality.climate.ncsu.edu>



Sign up to receive emergency air quality alerts for your area by scanning the QR code or following the link below.  
[www.enviroflash.info](http://www.enviroflash.info)

## When air quality is forecasted to reach unhealthy levels for you:

### Seek Cleaner Air Indoors

- Stay indoors and keep windows and doors closed.
- If your home is too hot or has poor air quality, go to a designated public building with air conditioning and air filtration systems, like community centers, libraries, or shopping malls.
- If you must go outside, consider wearing an N95 or KN95 mask. Talk to your health care provider before using an N95/KN95 mask if you have heart or lung problems. N95/KN95 masks are not recommended for children.

### Limit Indoor Air Pollution

- Avoid smoking or vaping, using candles, gas, or aerosol sprays, frying or broiling meat, and vacuuming indoors.
- Set your HVAC system to "recirculate" mode.
- Use a high-efficiency particulate air (HEPA) filter or close off one or two rooms to protect them from air pollution.
- For more tips for keeping indoor air clean at home go to [www.epa.gov/indoor-air-quality-iaq](http://www.epa.gov/indoor-air-quality-iaq).