

PENNSYLVANIA DEPARTMENT OF HEALTH
2023– PAHAN –702-06-07-ADV
Air Quality Alert – Wildfire Smoke

DATE:	06/07/23
TO:	Health Alert Network
FROM:	Debra L. Bogen, MD, FAAP, Acting Secretary of Health
SUBJECT:	Air Quality Alert – Wildfire Smoke
DISTRIBUTION:	Statewide
LOCATION:	Statewide
STREET ADDRESS:	n/a
COUNTY:	n/a
MUNICIPALITY:	n/a
ZIP CODE:	n/a

This transmission is a “Health Advisory,” and provides important information for a specific incident or situation; may not require immediate action.

HOSPITALS: PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, INFECTION CONTROL, NURSING AND LABORATORY STAFF IN YOUR HOSPITAL EMS COUNCILS: PLEASE DISTRIBUTE AS APPROPRIATE; FQHCs: PLEASE DISTRIBUTE AS APPROPRIATE; LOCAL HEALTH JURISDICTIONS: PLEASE DISTRIBUTE AS APPROPRIATE; PROFESSIONAL ORGANIZATIONS: PLEASE DISTRIBUTE TO YOUR MEMBERSHIP

- Wildfires in Canada and current weather conditions are bringing wildfire smoke into our region.
- Wildfires are continuing to burn due to dry and windy conditions that increase the potential for fine particulate matter, also known as particulate matter less than 2.5 micrometers in size (PM_{2.5}), to accumulate at the ground-level. This increases the likelihood of inhalation exposure to PM_{2.5}.
- Health effects from wildfire smoke or PM_{2.5} exposure include respiratory symptoms and effects, irritation of the eyes and respiratory tract, cardiovascular effects.
- Poor air quality may increase visits and calls to doctor’s offices, visits to emergency departments, urgent care centers, and hospitalizations.
- The website www.airnow.gov or [AirNow mobile app](#) can give you location-specific air quality index, which uses [categories](#) to provide recommendations for outdoor and indoor activity for the general population and sensitive populations (people with heart or lung disease, older adults, children and teens, pregnant people, outdoor workers, people of low socio-economic status).
- **As of noon on June 7, 2023, portions of Pennsylvania are in “Unhealthy,” “Very unhealthy,” and even “hazardous” air quality.** Please visit www.airnow.gov for the current air quality for your location.
- It is advised to follow the Air Now recommendations based upon the Air Quality Index for activities (indoor and outdoor), especially for sensitive populations.
- If you have questions about this guidance, please call your local health department or 1-877-PA-HEALTH (1-877-724-3258).

Primary Exposures of Concern

Fine particulate matter (PM_{2.5}).

Exposure

During a wildfire, short-term exposure (over a few days) to PM_{2.5} is the principal exposure of concern. It is important to note that wildfire smoke is a complex mixture of gaseous pollutants (carbon monoxide), hazardous air pollutants (e.g., polycyclic aromatic hydrocarbons [PAHs]), water vapor, and particle pollution. Particle pollution is the main component of wildfire smoke and the primary public health threat.

Smoke or PM_{2.5} inhalation may exacerbate underlying respiratory (breathing) diseases, such as asthma or emphysema, COPD, or cardiovascular diseases.

Symptoms

Individuals with short-term exposure to wildfire smoke or PM_{2.5} may complain of the following symptoms:

- Eye, skin, and/or throat irritation
- Sinus irritation
- Runny nose
- Cough, shortness of breath, phlegm, and/or wheezing
- Difficulty breathing
- Headaches
- Tiredness
- Rapid heartbeat

Health Effects Attributed to Wildfire Smoke

The following respiratory and cardiovascular effects have been attributed to short-term wildfire smoke exposure:

- Bronchitis
- Reduced lung function
- Increased risk of asthma exacerbation and aggravation of other lung diseases
- Heart failure
- Heart attack
- Stroke

These respiratory and cardiovascular effects can also contribute to increased risk of emergency department visits or hospital admissions.

Ways to Reduce Exposure

The air quality guide from US Environmental Protection Agency is appended below to describe actions to take based upon the air quality index value in your area. These recommendations can include limiting time spent outdoors, closing windows, and utilizing air conditioning with properly functioning filters. If you have to spend time outdoors when air quality is hazardous, a properly fitted N95 mask may offer some protection. N95 respirators/masks are tested to filter out at least 95% of airborne particles.

Air Quality Guide for Particle Pollution

Harmful particle pollution is one of our nation's most common air pollutants. Use the chart below to help reduce your exposure and protect your health. Visit AirNow.gov for your local air quality forecast (www.airnow.gov).

Air Quality Index	Who Needs to be Concerned?	What Should I Do?
Good (0-50)		It's a great day to be active outside.
Moderate (51-100)	Some people who may be unusually sensitive to particle pollution.	<p>Unusually sensitive people: Consider making outdoor activities shorter and less intense. Watch for symptoms such as coughing or shortness of breath. These are signs to take it easier.</p> <p>Everyone else: It's a good day to be active outside.</p>
Unhealthy for Sensitive Groups (101-150)	Sensitive groups include people with heart or lung disease, older adults, children and teenagers, minority populations, and outdoor workers.	<p>Sensitive groups: Make outdoor activities shorter and less intense. It's OK to be active outdoors, but take more breaks. Watch for symptoms such as coughing or shortness of breath.</p> <p>People with asthma: Follow your asthma action plan and keep quick relief medicine handy.</p> <p>People with heart disease: Symptoms such as palpitations, shortness of breath, or unusual fatigue may indicate a serious problem. If you have any of these, contact your health care provider.</p>
Unhealthy (151-200)	Everyone	<p>Sensitive groups: Avoid long or intense outdoor activities. Consider rescheduling or moving activities indoors.*</p> <p>Everyone else: Reduce long or intense activities. Take more breaks during outdoor activities.</p>
Very Unhealthy (201-300)	Everyone	<p>Sensitive groups: Avoid all physical activity outdoors. Reschedule to a time when air quality is better or move activities indoors.*</p> <p>Everyone else: Avoid long or intense activities. Consider rescheduling or moving activities indoors.*</p>
Hazardous (301-500)	Everyone	<p>Everyone: Avoid all physical activity outdoors.</p> <p>Sensitive groups: Remain indoors and keep activity levels low. Follow tips for keeping particle levels low indoors.*</p>

***Note:** If you don't have an air conditioner, staying inside with the windows closed may be dangerous in extremely hot weather. If you are hot, go someplace with air conditioning or check with your local government to find out if cooling centers are available in your community.

For more information related to wildfire smoke for healthcare providers or patient education, please visit the following resources:

<https://www.cdc.gov/disasters/wildfires/smoke.html>

<https://www.epa.gov/wildfire-smoke-course/why-wildfire-smoke-health-concern>

<https://www.epa.gov/wildfire-smoke-course/health-effects-attributed-wildfire-smoke>

<https://www.epa.gov/wildfire-smoke-course/wildfire-smoke-and-your-patients-health-air-quality-index>

<https://www.epa.gov/wildfire-smoke-course/importance-educating-patients-wildfire-prone-areas>

<https://www.oregon.gov/oha/ph/Preparedness/Prepare/Documents/OHA%208626%20Wildfire%20FAQs-v6c.pdf>

Individuals interested in receiving further PA-HANs are encouraged to register at <https://www.health.pa.gov/topics/prep/PA-HAN/Pages/HAN.aspx>.

If you have questions about this guidance, please call your local health department or **1-877-PA-HEALTH (1-877-724-3258)**.

Categories of Health Alert messages:

Health Alert: conveys the highest level of importance; warrants immediate action or attention.

Health Advisory: provides important information for a specific incident or situation; may not require immediate action.

Health Update: provides updated information regarding an incident or situation; unlikely to require immediate action.

This information is current as of June 7, 2023 but may be modified in the future.
