



## COVID-19

### **Wildfire Smoke and COVID-19: Frequently Asked Questions and Resources for Air Resource Advisors and Other Environmental Health Professionals**

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The purpose of this document is to provide Air Resource Advisors and other environmental health professionals with key messages about wildfire smoke and COVID-19. It also provides resources that can be given to communities affected by wildfire smoke during community spread of SARS-CoV-2, the virus that causes COVID-19.

#### **Why do people need to consider COVID-19 along with wildfire smoke?**

- The COVID-19 pandemic is overlapping with the occurrence of wildfires in the United States.
- Wildfire smoke is a complex mixture of air pollutants that are harmful to human health.
- Exposure to air pollutants in wildfire smoke can irritate the lungs, cause inflammation, alter immune function, and increase susceptibility to respiratory infections, likely including COVID-19.
- Recent scientific publications ([Conticini et al., 2020](#) & [Travaglio et al., 2020](#)) suggest that air pollutant exposure worsens COVID-19 symptoms and outcomes.

#### **Who is most at risk from wildfire smoke?**

- [Populations known to be vulnerable to wildfire smoke exposures](#) include:
  - Children less than 18 years;
  - Adults age 65 years or older;
  - Pregnant people;
  - People with chronic health conditions such as heart or lung disease, including asthma and diabetes;
  - Outdoor workers;
  - People of low socioeconomic status, including those who are homeless and with limited access to medical care.

#### **Who else is at risk from wildfire smoke during the COVID-19 pandemic?**

- The overlap of the COVID-19 pandemic with wildfire season in the United States complicates public health response to wildfire smoke. Persons who are either susceptible to or affected by COVID-19 may have health conditions that also make them vulnerable to wildfire smoke exposure. Persons who might also be at risk from wildfire smoke because of COVID-19 include:
  - Those who are immunocompromised or taking drugs that suppress the immune system;

- Those with or recovering from COVID-19. Because of compromised heart and lung function due to COVID-19, they may be at increased risk of health effects from exposure to wildfire smoke.

**Respiratory symptoms such as dry cough, sore throat, and difficulty breathing are common to both wildfire smoke exposure and COVID-19.**

**How are symptoms from wildfire smoke exposure different from symptoms of COVID-19?**

- Information on [symptoms of COVID-19](#) is available. If you are experiencing symptoms unrelated to smoke exposure such as, fever or chills, muscle or body aches, diarrhea, the CDC COVID-19 [Self-Checker](#) can help determine whether further assessment or testing for COVID-19 is needed.
- If you have questions after using the CDC COVID-19 [Self-Checker](#), you should contact a healthcare provider.
- If you are experiencing [severe symptoms](#), such as difficulty breathing or chest pain, you should seek prompt medical attention by calling 911 or calling ahead to the nearest emergency facility.

**Where can I find information about current air quality and COVID-19 in my area?**

- Use the [Air Quality Index](#) (AQI) to evaluate local and regional air quality conditions.
- Visit [airnow.gov](http://airnow.gov) to find reliable information about wildfire smoke and air quality.
- If there is a large wildfire in your area, then there is likely an [Air Resource Advisor](#) assigned to provide [wildfire smoke outlooks](#).
- For further information about wildfire smoke and your health, visit, <https://www.cdc.gov/air/wildfire-smoke/default.htm>.
- Visit the [CDC COVID Data Tracker](#) for more information about COVID-19.
- Check resources from [state, local, tribal, and territorial health departments](#) for more information on COVID-19 cases and deaths in a given area.

**What actions can I take to minimize potential health impacts from wildfire smoke?**

- Understand that your planning may be different this year because of the need to protect yourself and others from COVID-19.
- The best way to protect against the potentially harmful effects of wildfire smoke is to reduce wildfire smoke exposure, for example, by seeking [cleaner air shelters and cleaner air spaces](#).
- While [social distancing](#) guidelines are in place, finding cleaner air might be challenging if public facilities such as libraries, community centers, and shopping malls are closed or have limited capacity.
- Create a cleaner air space at home to protect yourself from wildfire smoke during the COVID-19 pandemic.
  - Use a portable air cleaner in one or more rooms. Portable air cleaners work best when run continuously with doors and windows closed.
  - [Do-it-yourself box fan](#) filtration units should never be left unattended.

- During periods of extreme heat, pay attention to [temperature forecasts](#) and know how to [stay safe in the heat](#).
- Whenever possible, use air conditioners, heat pumps, fans, and window shades to keep your cleaner air space comfortably cool on hot days.
- If you have a forced air system in your home, it may be necessary to work with a qualified heating, ventilation, and air conditioning (HVAC) professional about different filters (HEPA or MERV-13 or higher) and settings (recirculate and “on” rather than “Auto”) that can be used to reduce indoor smoke.
- Avoid activities that create more indoor and outdoor air pollution, such as frying foods, sweeping, vacuuming, and using gas-powered appliances.
- Limit outdoor exercise when it is smoky outside or choose lower-intensity activities to reduce smoke exposure.

### **Can masks and face coverings reduce wildfire smoke exposure?**

- Although N95 respirators provide protection from wildfire smoke, they might be in short supply as frontline healthcare workers use them during the pandemic.
- [Cloth face coverings](#) that are used to slow the spread of COVID-19 offer little protection against harmful air pollutants in wildfire smoke because these coverings do not capture most small particles in smoke.

### **What else can I do to stay healthy if it gets smoky this wildfire season?**

- [Get prepared for the wildfire smoke season](#) as you would do in any other summer.
- Give yourself more time than usual to [prepare for wildfire events](#). Home delivery is the safest choice for buying disaster supplies; however, that may not be an option for everyone. If in-person shopping is your only choice, take steps to [protect your and others’ health when running essential errands](#).
- Talk to your healthcare provider. Plan how you will protect yourself against wildfire smoke.
- Stock up on medicine. Store a 7 to 10-day supply of prescription medicines in a waterproof, childproof container to take with you if you evacuate.
- In anticipation of a potential evacuation, consider developing [a family disaster plan](#).

### **What actions can I take if I must evacuate?**

- Pay attention to local guidance about updated plans for evacuations and shelters, including [potential shelters for your pets](#).
- If you are asked to evacuate by public authorities or if you decide to evacuate then please [evacuate safely](#).
- When you check on neighbors and friends before evacuating, be sure to follow [social distancing](#) recommendations (staying at least 6 feet from others) and [other CDC recommendations](#) to protect yourself and others.
- If you need to go to a disaster shelter, follow CDC recommendations for staying safe and healthy in a [public disaster shelter](#) during the COVID-19 pandemic.

## Resources

See <https://www.cdc.gov/coronavirus/2019-ncov/index.html> for more information about COVID-19.

## Additional information about COVID-19

- [Symptoms of coronavirus](#)
- [CDC COVID Data Tracker](#)

## Information about the health effects of wildfire smoke and reducing exposure to wildfire smoke

- [COVID-19 Considerations for Cleaner Air Shelters and Cleaner Air Spaces to Protect the Public from Wildfire Smoke](#)
- [Create a Clean Room to Protect Indoor Air Quality During a Wildfire](#)
- [DIY Box Fan Filter](#)
- [Natural Disasters and Severe Weather: Wildfires](#)
- [Protect Yourself from Wildfire Smoke](#)
- [Wildfire Guide Factsheet: Indoor Air Filtration](#)
- [Wildfire Smoke: A Guide for Public Health Officials](#)
- [Wildfires and Indoor Air Quality](#)

## Air quality, wildfire information, smoke forecasts, and information on vulnerable populations

- [airnow.gov](http://airnow.gov)
- <https://airquality.weather.gov/>
- <https://inciweb.nwcg.gov/>
- [net](#)
- Identifying at-risk areas and populations vulnerable to smoke from wildfires
  - [Smoke forecasts and percent of population without health insurance](#)
  - [Smoke forecasts and percent of households with no internet access](#)
  - [Smoke forecasts and ischemic heart disease mortality rate](#)
  - For more information, visit <https://ephtracking.cdc.gov/DataExplorer/#/>
- <https://www.cdc.gov/disasters/wildfires/links.html>

## Research about air pollution and SARS mortality

- Cui Y, Zhang Z, Froines J, et al. [Air pollution and case fatality of SARS in the People's Republic of China: an ecologic study](#). Environ Health 2003; 2, 15.
- Kan HD, Chen BH, Fu CW, Yu SZ, Mu L. [Relationship between ambient air pollution and daily mortality of SARS in Beijing](#). Biomed Environ Sci 2005; 18(1): 1–4.

## Research about air pollution and COVID-19

- Conticini E, Frediani B, Caro D. [Can atmospheric pollution be considered a co-factor in extremely high level of SARS-CoV-2 lethality in Northern Italy?](#) Environ Pollut 2020; 261: 114465.
- Travaglio M, Yu Y, Popovic R, Santos Leal N, Martins LM. [Links between air pollution and COVID-19 in England](#). medRxiv 2020.04.16.20067405 [pre-print].