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Wildfire Smoke and COVID-19
Frequently Asked Questions

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 wild- fire smoke during community spread of SARS- CoV-2, the virus that causes COVID-19. This document was created in collaboration with CDC and COVID-19 related information was reviewed and cleared by CDC.

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 pollut- ants 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 younger than 18.

- Adults age 65 years or older.

- Pregnant women.

- People with chronic health conditions such as heart or lung disease, asthma or 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. People who are either sus- ceptible 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.

Fire crew at the Newkirk Fire in Dixie National Forest, June 2018. (Forest Service photo by Derek Bland)

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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 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, 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.

Smoke obscures the view for visitors at Yosemite Valley during the Ferguson Fire in July 2018. (Forest Service photo by Kari Greer)

• 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 wild-fire 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.

Members of the Greenwood CCC Badger Creek Camp Crew pose for a photo during the Ferguson Fire. (Forest Service photo by Kari Green)

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, child-proof 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 wild-fire 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:

- www.airnow.gov
- https://airquality.weather.gov/
- https://inciweb.nwcg.gov/
- https://wildlandfiresmoke.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/#/

- 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].

This information is also available at: https://www.cdc.gov/coronavirus/2019-ncov/php/smoke-faq.html

Citizens show support for fire crews during the Donnell Fire in 2018. (Forest Service photo)