

# WILDFIRE SMOKE FACT SHEET



## Protect Yourself from Smoke and Extreme Heat

Although many wildfires are caused by people and their activities, wildfire smoke and heat events are becoming more frequent and are lasting longer because of the changing climate. Extreme heat and smoke can both be dangerous. Recent scientific evidence suggests that exposure to both smoke and extreme heat at the same time may be much worse for your health than exposure to either of them alone. This fact sheet includes information about actions you can take to protect yourself and your family.

### What can happen?

**Wildfire smoke:** The fine particles (also called PM<sub>2.5</sub> or fine particle pollution), volatile organic compounds, and gases in smoke can affect the lungs, heart, and other organs, and can lead to asthma attacks and make chronic obstructive pulmonary disease (COPD) or other lung conditions worse. It can also worsen heart failure and can increase the risk of heart attacks and death.

**Extreme heat:** If temperatures are much hotter than usual, your body may not be able to cool itself fast enough. This can lead to heat-related symptoms and illnesses, such as heat rash, muscle cramps, heat exhaustion, heat stroke, and death. High humidity and high nighttime temperatures, alcohol use, prescription drug use, and sunburn might increase your risk of developing a heat-related illness. See CDC's website, [About Extreme Heat](#), for more information.

### Who is at risk?

If you are at increased risk from the health effects of wildfire smoke, you are also likely at increased risk from extreme heat. This includes people with heart or lung disease, older adults, children and teenagers, and pregnant people. People who spend more time exposed to wildfire smoke and heat (such as outdoor workers and people experiencing homelessness), people who can't reduce their exposure to smoke or heat indoors, and people exercising outdoors are also at increased risk.

In addition, people who take certain medications, such as those for depression, seizures, or poor circulation or some people with mental illness, for example schizophrenia are at increased risk from extreme heat but have not been identified as being at greater risk from smoke. Talk with your health care provider for more information.

### What Can I Do?

Take these steps to help protect yourself from wildfire smoke and extreme heat:

#### 1 Plan:

- If you are at increased risk from either smoke or heat, check with your healthcare provider about what to do during smoke and extreme heat events.
- Keep an eye on weather forecasts and heat advisory information. The CDC's [HeatRisk](#) Dashboard provides a seven-day national-scale heat forecast that tells you when temperatures could reach levels that could harm health and what to do about them.
- Know where to find your local Air Quality Index (AQI) on the [Fire and Smoke Map](#) and wildfire smoke advisories from your state, Tribe, or local governments.
- Check with your state or local government (Tribal, county, or city) to find out whether there are cleaner air and cooling shelters available in your community during episodes of wildfire smoke or

extreme heat. You can also try calling 2-1-1 for referrals to local cooling centers, or see the [National Center for Healthy Housing Cooling Centers by State](#) website for more information.

## 2 Know the symptoms of exposure to smoke and heat:

**Smoke** can cause a range of health effects, including less serious symptoms such as eye, nose, or throat irritation, or coughing, that resolve when the air clears. If you have these symptoms, go somewhere with cleaner indoor air, or wear a well-fitting particulate respirator such as an N95® respirator, often called an N95® mask, when outdoors. See the [Protect Your Lungs from Wildfire Smoke and Ash](#) fact sheet.

Smoke may also cause severe problems such as difficulty breathing, wheezing, or heart problems. If these occur, seek medical attention. See EPA's [Smoke from Fires and Your Health](#) and the CDC's [Protect Yourself from Wildfire Smoke](#) for more information. Healthy people are likely to have only symptomatic effects from short-term (hours to days) exposure to smoke.

**Never ignore the symptoms of heat-related illness.** Early symptoms include feeling unwell, headache, sweating and thirst, nausea, lightheadedness, fatigue, heat rash, or muscle cramps. If you have these symptoms, go somewhere cool and sip water until symptoms improve. Seek medical attention if your symptoms do not improve.

You need immediate medical attention if you have more serious symptoms, including fainting or loss of consciousness, weakness, extreme fatigue, severe nausea, and difficulty speaking. See the CDC's [Warning Signs and Symptoms of Heat-Related Illness](#) for more information.

## 3 Check smoke and heat conditions:

Be aware of current smoke and conditions by checking the AQI on the [AirNow Fire and Smoke Map](#) and heat information by checking [weather.gov](#).

## 4 Follow these tips when you are outdoors:

- Limit strenuous activity and exercise. Pay attention for early signs of heat-related illness.
- Stay hydrated (choose water or drinks with electrolytes instead of sugary beverages).
- Consider using a NIOSH Approved® particulate respirator, such as an N95®, to reduce smoke exposure.
  - Remove the respirator if it becomes uncomfortably warm or leads to symptoms of heat-related illness.
- Keep an eye on air quality and temperature conditions, and time your outdoor activities for cooler and less smoky times of day.
  - Be aware that sometimes, the coolest part of the day can also be the smokiest part of the day. Consider using a respirator if the cooler part of the day is a smokier time.
- Rest often in shady areas or indoors.
- Wear lightweight, loose-fitting clothing (absorbent or wicking clothing is also appropriate).
- Over the course of a work shift, outdoor workers may face greater or more prolonged exposure to both smoke and extreme heat and have less ability to spend time indoors than the public. Because of this, people who work outdoors should be especially careful when there is both smoke and extreme heat present and employers and workers should take what measures they can to reduce exposure to both.

**5****Follow these tips when you are indoors:**

- During extreme heat, you must cool down your home, and you may need to allow some smoke inside while using night air for cooling. Both smoke and heat are harmful to your health, but for most people, extreme heat is more immediately dangerous.

**If You Do Not Have Air Conditioning:****Follow these steps to help control indoor temperatures**

- During the day (before it gets hot outside is best), close windows and window coverings, such as shades, blinds, and awnings.
- At night when it is cooler, open the windows and use fans to exhaust hot air from rooms or draw in cooler air. Do not direct the flow of fans toward you when the room is hotter than 90°F to avoid dehydration.
- Once the air indoors is cool, close doors and windows.
- Use a portable air cleaner or a do-it-yourself (DIY) portable air cleaner (i.e., box fan with a high-efficiency filter) to filter the indoor air. If you have forced air heat, you can also set the furnace fan to “on” at the thermostat (with heat off) and use a high efficiency furnace filter (MERV 13 or greater).

**If you cannot tolerate any smoke and do not have air conditioning, go somewhere to cool off during the smoke event.**

- If your community has designated a ***cleaner air and cooling center***, spend time there to get relief from both the heat and smoke.
- Otherwise, spend time in public places with cooler indoor air, such as libraries, community centers, and shopping malls.
- Consider staying with family and friends who have air conditioning and air cleaners or high-efficiency HVAC filters in use.

For extended heat events, when the temperature stays elevated at night or when humidity is high, ***consider leaving the area or purchasing an affordable air conditioning unit.***

**If You Have Air Conditioning (AC)****Central AC**

- Ensure your system is functioning properly and install the highest-efficiency filters your system can use to filter the PM2.5 in smoke. Filters with an efficiency rating of MERV 13 or higher work best if they are compatible with your HVAC system.
- During a smoke event, run your system’s fan all the time. Otherwise, your air will only be cleaned while cooling.
- Use portable air cleaners or DIY portable air cleaners to filter your indoor air, especially if your system cannot use high-efficiency filters.
- If your system has a fresh air intake, close it, or turn the system to “recirculate.”

**Window AC, portable AC, mini split heat exchanger:**

- These devices typically do not have filters designed for the PM2.5 in smoke. Use portable air cleaners or DIY portable air cleaners to filter your indoor air.
- Make sure the seal between the air conditioner and the window or wall is as tight as possible to keep smoke out.
- Use portable ACs with a single hose sparingly during smoky conditions: these can bring more smoke inside.
- Create a clean room in the room served by the air conditioner. Learn more about [How to Create a Clean Room at Home](#).

**Evaporative (swamp) cooler:**

- If safely accessible, completely cover the outside air intakes with 4-inch-thick high-efficiency (marked “MERV 13”) furnace filters. Note: the external filters will be vulnerable to damage from wind or rain and may need to be replaced frequently.
  - If you cannot cover the outdoor air intakes with high-efficiency filters, use the evaporative cooler sparingly during smoky conditions.
  - In high humidity, evaporative coolers cannot cool the air well. Follow the steps in the section “If You Do Not Have Air Conditioning” if you cannot cool your home.
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**Where to Find More Information:***About wildfire smoke and risk:*

[Wildfire Guide Fact Sheet: At Risk Groups of People](#) (AirNow)

*About heat:*

[Extreme Heat](#) (CDC)

[People at Increased Risk for Heat-Related Illness](#) (CDC)

[Heat Ready California](#)

[Heat Illness Prevention](#) (OSHA) – information for employers and workers

[Heat Stress and Workers](#) (CDC)

*About air filtration*

[Wildfire Guide Fact Sheet: Indoor Air Filtration](#)

[List of CARB-Certified Air Cleaning Devices](#)

*Additional fact sheets*

[Wildfire Guide fact sheets](#)

