

Who is most likely to be affected by smoke?

At-Risk Population Groups:

Elderly persons. An elderly person's lungs generally are not as efficient as when they were younger.

Young children (especially children 7-and-under). Young children breathe in more air per pound of body weight than others and therefore are more susceptible to smoke.

Pregnant women. Pregnant women also breathe in more air per pound of body weight than others.

Individuals with pre-existing respiratory or circulatory conditions like asthma, emphysema, chronic obstructive pulmonary disease (COPD) and cardiovascular disease. If your respiratory or circulatory systems are compromised in one way or another, you are likely to experience more severe symptoms at lower smoke concentrations than others.

Individuals with respiratory infections like colds or flus.

Individuals with smoke allergies. Very few individuals actually are allergic to smoke. Generally, these individuals are aware of their allergies long before they encounter smoke from a wildfire because small amounts of smoke are present in our everyday lives. Woodstoves, internal combustion engines and vehicles of all sorts, campfires and restaurant grills are some of the sources and kinds of smoke inhaled most often. People strongly allergic to smoke are or should be under close medical supervision, and should consider developing a plan in advance for how to deal with a wildfire smoke incident.

Inhaling smoke is not good for anyone, even healthy people.

What are some of the symptoms related to wildfire smoke?

- Eye, nose and/or throat irritation--runny eyes and/or nose.

Coughing, sore throat.

Trouble breathing or tightness of the chest, which may be symptoms of a health emergency.

The onset of symptoms related to pre-existing respiratory ailments like asthma or emphysema.

Especially following days or weeks of smoke exposure, increased short-term likelihood of getting a cold or having similar symptoms of less effective immune responses.

If symptoms persist or are severe, contact your primary health care provider.

[10 Things to Remember When Talking to Your Kids About the Wildfires](#)

[How to Deal with Wildfire Smoke Inhalation](#)

[Health Recommendations for Wildfire Smoke from National Jewish Hospital](#)

What can you do if smoke from wildfires is affecting you and your family?

There are a few simple actions you should consider that can minimize exposure to smoke that makes its way into a community. The extent of the precautions you take should reflect how heavy the smoke is, how long it lasts, and your household's risk as described above.

If you smell smoke and/or are beginning to experience symptoms, consider temporarily locating to another area as long as it is safe for you to do so.

Seek out locations where air is filtered. For example, heading to the local mall, movie theater or recreation center can provide some temporary relief. Local health officials often can help locate places with better air quality during extended smoke episodes.

Close windows and doors and stay indoors. However, do not close up your home tightly if it makes it dangerously warm inside.

Only if they are filtered, run the air conditioning, the fan feature on your home heating system (with the heat turned off) or your evaporative cooler. Keep the outdoor air intake closed and be sure the filter is clean. Filtered air typically has less smoke than the air outdoors. Running these appliances if they are not filtered can make indoor smoke worse.

If you have any HEPA room air filtration units, use them.

In smokey air reduce your physical activity level. Avoid exercise or other strenuous activities in heavy smoke. If smoke is simply unpleasant or mildly irritating, changing the timing of a few activities may be all that is necessary.

Give extra attention to the things that help keep a person healthy at any time. Make healthy eating choices, drink plenty of fluid, get ample sleep, and exercise in clean air. To the extent that you can, avoid or mitigate stress by keeping in touch with friends and family, exercising, and using other methods of taking a break from worries.

Avoid smoking secondhand smoke, vacuuming, candles and other sources of additional air pollution.

Commercially available dust masks may seem like a good idea, but they do virtually nothing to filter out the particles and gasses in smoke.

At Night:

At night smoke may move in different directions than smoke does in the day, and can be heavy--especially if the outdoor air is still. It tends to be worst near dawn.

Close bedroom windows at night.

To prepare for nighttime smoke, consider airing out your home during the early or middle of the afternoon when smoke tends to be more diluted. Use your best judgment. If smoke is thick during the day, follow the tips above.

If symptoms persist or become more severe, please contact your primary health care provider.

What are the known chemical components of smoke from wildfires?

Particulate matter - coarse visible and fine invisible particles including soot and ash that can reach deep into the lungs and may contain irritating and cancer-causing compounds.

Polynuclear aromatic hydrocarbons - a class of organic compounds found on the particulate matter from forest fires, wood stoves, and fireplaces, some of which may be carcinogenic with extended exposure.

Carbon monoxide - a colorless, odorless, toxic gas produced in highest amounts from smoldering forest fires. Firefighters working near the fire are at greatest risk for high doses of carbon monoxide. Areas even a few hundred yards downwind of the fire experiencing high particulate smoke levels typically do not have high levels of carbon monoxide. Signs of high carbon monoxide levels in the blood include headaches, dizziness, nausea, and decreased mental functioning.

Aldehydes - compounds that are extremely irritating to the eyes and mucous membranes of the mouth and nose. Some like formaldehyde are carcinogenic, while others like acrolein can injure lung tissue.

Volatile organic compounds - strong irritants, some of which are carcinogenic.

And many other chemical components...