



Frequently Asked Questions Regarding Public Health and Wildfires

Q: *What is the health threat from wildfire smoke?*

A: Smoke from wildfires is a mixture of gases and fine particles from burning trees and other plant materials. Smoke can irritate your eyes or your respiratory system, and worsen chronic heart and lung diseases. How much and how long you are exposed to the smoke, as well as your age and degree of susceptibility play a role in determining whether or not someone will experience smoke-related health problems. If you are experiencing serious medical problems for any reason, seek medical treatment immediately.

Q: *How can I tell if the smoke is affecting my family or me?*

A: • Smoke can cause coughing, scratchy throat, irritated sinuses, shortness of breath, chest pain, headaches, stinging eyes and runny nose.

- If you have heart or lung disease, smoke might make your symptoms worse.
- People who have heart disease might experience chest pain, rapid heartbeat, shortness of breath and fatigue.
- Smoke may worsen symptoms for people who have pre-existing respiratory conditions, such as respiratory allergies, asthma, and chronic obstructive pulmonary disease (COPD), in the following ways:
 - Inability to breathe normally
 - Cough with or without mucus
 - Chest discomfort
 - Wheezing and shortness of breath
- When smoke levels are high, even healthy people may experience some of these symptoms.

Q: *How can I protect myself and my family from the harmful effects of smoke?*

A: The best thing to do is to limit your exposure to the smoke. Specific strategies to decrease exposure to smoke include staying indoors whenever possible, using air conditioners (air conditioned homes usually have lower air exchange rates than homes that use open windows for ventilation), using mechanical air cleaners, keeping windows closed while driving in a vehicle, and minimizing other sources of air pollution such as smoking tobacco, using wood burning stoves, burning candles or incense and vacuuming.

Q: *Will I suffocate in my house?*

A: No. The most common call for evacuation during a wildfire is due to the direct threat of the fire, not smoke. Leaving the area of thick smoke may be an option for those who are sensitive to smoke. But it is often difficult to predict the duration, intensity and

direction of smoke, making this an unattractive choice to many people. Those without air conditioning must also remember not to become overheated by closing all windows

Q: *Should I wear a dust mask or N95 respirator?*

A: N95 respirators and dust masks are masks made of filtering material that fit over the nose and mouth. The filter material will filter out some of the small particles that may be found in smoke, but only if there is a good fit to the wearer's face. It is also important to know that N95 particulate respirators and dust masks only filter particles, **not toxic gases and vapors.**

Most people will find it difficult to use the respirators and masks correctly for general use. For instance, it is impossible to get a good seal on individuals with facial hair. **As a result, the respirator will provide little if any protection, and may offer the wearer a false sense of protection.**

Filtering face-piece respirators and masks can make the work of breathing more difficult and can lead to increased breathing rates and heart rates. They can also contribute to heat stress. **Because of this, respirator use by those with heart and respiratory diseases can be dangerous, and should only be done under a doctor's supervision.** Even healthy adults may find that the increased effort required for breathing makes it uncomfortable to wear a respirator for more than short periods of time. Decisions on whether to use respirators or masks as personal protection for people who must work outside should be made on a case by case, day by day basis.

Q: *What is the difference between an N95 respirator and dust mask?*

A: In terms of being used by the public for wildfires and for people that have not been trained and fitted to use respirators, the difference between a dust mask and an N95 respirator is not great. N-95 respirators are tested and approved by the National Institute of Occupational Safety and Health (NIOSH) for use in certain work places. N-95 respirators are tested to filter particles efficiently and are likely to filter small particles like those found in smoke, more effectively than dust masks, which are not tested. If an employer requires an employee to wear a respirator, the employee must be trained and fitted to wear a respirator and may only use a NIOSH approved respirator.

Q: *Will a wet towel or bandana provide any help?*

A: A wet towel or bandana may provide some help but it will be very limited. Since wet towels or bandanas may not be sealed to the face and their capacity to filter very small particles is unknown, they will likely provide little protection.

Q: *What should I do if I must drive to work?*

A: Individuals can reduce the amount of smoke particles in their vehicles by keeping the windows closed and using the air conditioner. The car's ventilation systems typically remove a portion of the particulate coming in from outside. For best results, individuals may also want to use the re-circulate air feature found in most cars, which will help keep the particulate levels lower.

Q: *Our community has an outdoor game scheduled for this evening, should we cancel it?*

A: All persons in areas affected by the wildfire smoke are being advised to limit outdoor activity and stay indoors whenever possible to minimize exposure to the smoke. Contact your local emergency management and sports association officials for more guidance.

Q: *Do air-purifying machines help remove smoke particles inside buildings?*

A: Some air cleaners may be effective at reducing indoor particle levels, but most are not effective at removing gases and odors, and also tend to be expensive. Some devices, known as ozone generators, personal ozone devices, “energized oxygen”, “diatomic oxygen”, “activated oxygen” and “pure air” generators are sold as air cleaners, but they are not recommended for use in occupied buildings. Ozone does not remove particles from the air, and would not be effective during smoke events. Ozone itself is toxic and a regulated outside air pollutant. We advise the public to avoid exposure to ozone indoors by not using air cleaners that produce ozone. For additional information consider reviewing the US Environmental Protection Agency document: “Ozone Generators That Are Sold As Air Cleaners” available at www.epa.gov/iaq/pubs/ozonegen.html

Also, humidifiers or de-humidifiers are not technically air cleaners and will not significantly reduce the amount of particles in the air during a smoke event.

Q: *What should I do about closing up my house when it is so hot in there?*

A: If you do not have an air conditioner and if it is too warm to stay inside with the windows closed, seek alternative shelter by visiting family members or neighbors who have air conditioning. You may also be able to visit an air conditioned location for a few hours such as a mall.

Q: *If I have respiratory problems and can't reach my doctor, where should I go?*

A: If you have a medical emergency you should call 911 or go to the hospital emergency room immediately.

Q: *I operate a nonresidential building with outside air intakes. Should I close the outside air intakes during a wildfire smoke event?*

A: Every nonresidential building has a uniquely designed ventilation system, where any changes even temporary ones, can have an impact on building occupants and indoor air quality. If your building is strictly an office environment it may be wise to cut back or eliminate outside intake into the building during a wildfire smoke event. If the building has labs or special ventilation systems in may not be wise to reduce outside air flow as harmful exposures may be generated by such processes that need ventilation to prevent the build up of chemicals in the building. We recommend you consult with a heating, ventilation and air-conditioning professional or some one who knows your special ventilation needs for guidance on this issue.

Q: *Where can I find information about the air quality in the area I live?*

A: The NC Department of Environment and Natural Resources, Division of Air Quality provides updated information on outdoor air quality in North Carolina. You can access this information by logging into the following website: <http://www.ncair.org/>