

## Help Protect Yourself From Airborne Exposures to Smoke, Ash and Particulate Air Pollution

### Description

Smoke, ash and other small particulates can be present in the air due to wildfires, air pollution and volcanoes. Particles that are small enough to remain airborne are also small enough to be inhaled. Inhalation of these types of particles are associated with a variety of effects ranging from irritation and discomfort to exacerbation of asthma. Individuals with pre-existing conditions, such as heart or lung disease, or smokers, have a greater chance of experiencing additional or more severe symptoms.

There are several ways to help protect yourself against inhalation of particles related to ash, smoke or air pollution. First, the best way is to try to avoid exposure to these particulates and their sources. If that is not possible, then you should follow the advice of your local health authority or a national health agency, such as the US Centers for Disease Control and Prevention (CDC). The US CDC lists a number of strategies to help reduce exposure to smoke and ash, including use of a properly worn N95 respirator.

The CDC emphasizes cloth masks will not protect you from wildfire smoke. Cloth face coverings being worn to help slow the spread of Covid-19 and "comfort" or "dust" masks are not designed and tested to reduce wearers' exposure to airborne particulates. If respiratory protection for the wearer is needed, face coverings and other masks are not a substitute for a government-approved respirator.

[https://www.cdc.gov/disasters/covid-19/wildfire\\_smoke\\_covid-19.html](https://www.cdc.gov/disasters/covid-19/wildfire_smoke_covid-19.html)

N95 respirators are particulate respirators, which when properly selected and worn will filter out airborne particulates. Wildfires, volcanoes and air pollution all produce airborne particulates, but they can also release gases and vapors. N95 respirators do not filter out gases and vapors. Therefore, a different type of respirator must be selected for fire-fighting or when one needs respiratory protection very close to the source of smoke, ash or air pollution.

For more information on the use of N95 respirators for exposures to smoke and ash during wildfires and cleanup please see, [3M Technical Data Bulletin: Personal Protective Equipment During Cleanup of Residential Wildfire Debris](#).

Additionally, the CDC offers further resources regarding effective respirators and their proper use.

[http://www.cdc.gov/niosh/npptl/topics/respirators/disp\\_part/RespSource.html](http://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/RespSource.html)

<http://www.cdc.gov/niosh/docs/2003-144>

Individuals using respiratory protection should always carefully read and follow the *User Instructions* for the model of respirator they are using. It is very important that the user be clean-shaven and follow the donning instructions exactly to get a good seal between the respirator and the face. Users with underlying heart or lung conditions should consult a physician prior to use. The respirator manufacturer and/or their local health authority should be contacted with any further questions.

In addition to respiratory protection, people exposed to smoke, ash or air pollution may also want to consider eye protection, such as tight-fitting goggles.

Cleaning up after a fire or volcano may result in additional exposures beyond smoke and ash. The CDC, California Department of Health, other health agencies and 3M offer additional resources regarding smoke and ash exposure and clean up after wildfires.

<http://emergency.cdc.gov/disasters/wildfires/responders.asp>

## References

- <http://emergency.cdc.gov/disasters/wildfires/facts.asp>

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