**WILDFIRE SMOKE HEALTH RISKS & GUIDANCE**

BOTTOM LINE: If you are experiencing medical problems for any reason, seek medical treatment immediately.

Many factors determine whether someone will experience smoke-related health problems. Older adults, pregnant women, children, and people with pre-existing respiratory and heart conditions may be more likely to get sick if they breathe in wildfire smoke. Inhaling smoke can cause coughing, scratchy throat, irritated sinuses, shortness of breath, chest pain, headaches, stinging eyes and runny nose.

All persons in areas affected by wildfire smoke are advised to limit outdoor activity; staying indoors whenever possible is the best way to limit your exposure. Further minimize your exposure by using air conditioners that utilize mechanical air cleaners and by keeping your house windows closed. If you do not have an air conditioner, and 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, such as a mall, for a few hours. Avoid using wood burning stoves, burning candles or incense, vacuuming or smoking tobacco. When traveling, ensure car windows are closed.

**Do not** rely on masks for full protection as masks only filter particles, not toxic gases or vapors. Dust masks commonly found at hardware stores are designed to trap large particles such as sawdust. These masks will not protect your lungs from small particles found in wildfire smoke. Cloth masks such as wet towels or bandanas are difficult to seal to the face, and their capacity to filter very small particles is unknown since material quality varies.

Smoke from wildfires is a mixture of gases and fine particles from burning trees and other plant materials. It is measured via the Air Quality Index (AQI) values which ranges from 0 to 500; generally any value below 100 is satisfactory. An AQI value over 100 is considered unhealthy for certain individuals, but risk rises for all with increasing AQI values. The table below shows the full range and levels of health concern. Daily updates can be found here: [https://airnow.gov/](https://airnow.gov/index.cfm?action=airnow.local_state&stateid=27&mapcenter=0&tabs=0)

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| **AQI Values** | **Levels of Health Concern** | **Meaning** | **Colors** |
| 0-50 | Good | Air quality is considered satisfactory and air pollution poses little or no risk. | Green |
| 51-100 | Moderate | Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people. For example, people who are unusually sensitive to ozone may experience respiratory symptoms. | Yellow |
| 101-150 | Unhealthy for Sensitive Groups | The general public is unlikely to be affected at this AQI range, but people with lung disease, older adults and children are at a greater risk from exposure to ozone, whereas persons with heart and lung disease, older adults and children are at greater risk from the presence of particles in the air. | Orange |
| 151-200 | Unhealthy | Everyone may begin to experience some adverse health effects, and members of the sensitive groups may experience more serious effects. | Red |
| 201-300 | Very Unhealthy | This would trigger a health alert signifying that everyone may experience more serious health effects. PPE is recommended | Purple |
| 301-500 | Hazardous | This would trigger a health warning of emergency conditions. The entire population is more likely to be affected. Staying indoors is recommended | Maroon |

Sources:

<https://www.airnow.gov/publications/wildfire-smoke-guide/wildfire-smoke-a-guide-for-public-health-officials/>

<https://blogs.cdc.gov/publichealthmatters/2011/09/wildfires-what-you-need-to-know/>

<http://www.bt.cdc.gov/disasters/wildfires/smoke.asp>