

Smoke Exposure in the Workplace

How does wildfire smoke affect air quality?

Wildfire smoke is a mix of gas and tiny particles, that includes ash from everything that is burning in a fire. Those particles pollute the air, which is why the sky becomes dark and smoky.

Why is wildfire smoke dangerous?

The main harmful pollutants are the tiny particles called particulate matter (PM) that measure 2.5 microns or less. The particles are much smaller than a grain of sand and can enter the bloodstream through the lungs when they are breathed in.

Grain of Sand
90 μm (microns)

Particulate Matter
2.5 μm (microns)



Air Quality Index (AQI)

The AQI shows how polluted the air is. You can check the current AQI for PM2.5 in your specific location at www.AirNow.gov.

301-500	Hazardous
201-300	Very Unhealthy
151-200	Unhealthy
101-150	Unhealthy for Sensitive Groups
51-100	Moderate
0-50	Good

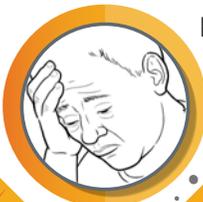
Wildfire Smoke Exposure Symptoms

Short-term Symptoms

Chest pain



Fatigue



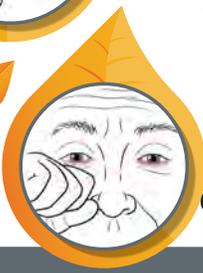
Coughing



Runny nose



Burning eyes



Difficulty breathing



Rapid heartbeat



Long-term Symptoms

- Reduced lung function
- Chronic bronchitis
- Worsening of asthma
- Heart failure

People at Higher Risk for Symptoms

- Adults over 65
- Children
- Pregnant people
- People with existing heart and lung conditions
- People with weakened immune systems

Protection from Wildfire Smoke

The Cal/OSHA Protection from Wildfire Smoke standard (Section 5141.1) requires employers to reduce workers' exposure to wildfire smoke when the current AQI for PM2.5 reaches 151 or higher, for one continuous hour or longer per work shift.

Workers are protected in California regardless of immigration status. The standard does not apply to wildland firefighters or workers in enclosed buildings, structures, or vehicles with filtered air.



What is the employer required to do?



Check the current AQI for PM2.5 throughout the day and communicate with workers.



Provide training on smoke exposure symptoms, how to receive medical treatment, and how they will protect workers.



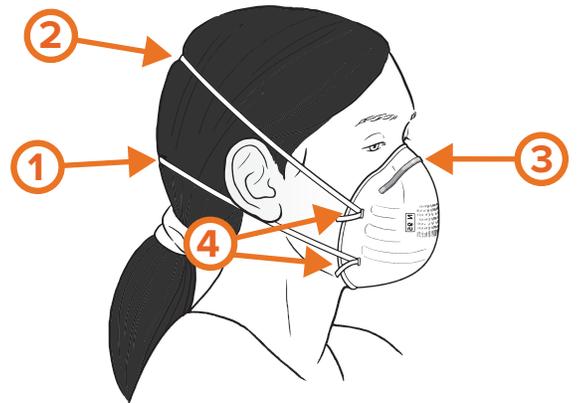
When the current AQI for PM2.5 is 151 or higher:

- ▶ Provide clean NIOSH-approved respirators (such as N95s) for voluntary use.
- ▶ Reduce smoke exposure by relocating the work, changing work schedules, lessening work intensity, or providing additional rest breaks.



When the current AQI for PM2.5 is 500 or higher, respirator use is required if work has not been relocated or postponed.

How to wear a respirator properly



- 1 Pull bottom strap over head and place on lower part of head, below ears.
- 2 Pull top strap over head and place on top of head.
- 3 Press gently on nose piece.
- 4 Check for air leaks by placing both hands gently on mask and breathing in and out. If the respirator does not sink a little when you breathe in, adjust the straps and the nose piece to make it tighter.
- 5 Employers should provide a new respirator at the beginning of each shift or if it becomes dirty or damaged.



Those who suffer from any pre-existing conditions or are pregnant should check with a healthcare provider before wearing a respirator.

Regardless of immigration status, any worker can contact Cal/OSHA (www.dir.ca.gov/dosh/districtoffices.htm) if they believe their workplace is not safe. Former employees and community members can also contact Cal/OSHA on a worker's behalf.

