



# Outdoor Workers and Wildfire Smoke

When the smoke rolls into our valley it affects all of us, and climate change is bringing longer and more intense wildfire seasons. While we don't have control over smoke, there are steps outdoor workers can take to stay healthy.

## How to know when the air is unhealthy:

### 3 ways to find out

#### LOOK outside!

Basic visibility rules are:

- Cannot see 5 miles?  
*Unhealthy*
- Cannot see 2 miles?  
*Very Unhealthy*
- Cannot see 1 mile?  
*Hazardous*

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#### CHECK Today's Air

[todaysair.mt.gov](http://todaysair.mt.gov)

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#### CALL 406-258-3600

The Missoula area  
Air Quality Hotline

## What's the problem?

Wildfire smoke contains harmful chemicals, as well as small particulate matter called PM 2.5. These microscopic particles can easily get into our lungs or even enter our bloodstream.

## Who is at risk and why?

Wildfire smoke is unhealthy for everyone, especially outdoor workers including farmers and farmworkers who are at a greater risk for exposure to PM 2.5, ash, and chemical residue due to the nature of their work outside and long shifts. These tiny particles can set off an inflammatory response and cause more frequent and severe asthma attacks, worsened COPD symptoms, increased risk of heart attack and strokes, reduced lung function, hospitalizations, and even death. That's why it's important to understand just how unhealthy the air is on any smoky day.

## What do people experience?

Outdoor & agricultural workers may experience: burning eyes, runny nose, chest pain, fatigue, coughing, wheezing, difficulty breathing, worsening of asthma, rapid heartbeat, stress, anxiety, or depression.



## What should outdoor workers do during a smoke event?

**Monitor the air quality** at the start of each shift and continue to monitor while you are working.



**Pay attention to your body.** If the air quality is worsening or you feel sick or have difficulty breathing, stop working. Don't wait for an emergency.

**Consider using an N95 respirator** if air quality is unhealthy or worse. Cloth face coverings do not provide protection from wildfire smoke. If you use a respirator, make sure it seals close to your face. If you have difficulty breathing through the respirator, do not use it.

### N95 Respirator Basics:

- Double strings: 1 above ear, 1 below
- Pinch at nose
- Labelled NIOSH + N95 or P100
- Mask should collapse as you breathe and not let air in at sides.



**Take frequent breaks** in an indoor area with clean air. Ask your supervisor to provide a cleaner air shelter on site.

**Get respite at night.** Clean indoor air where you sleep can reduce symptoms of daytime exposure to wildfire smoke.

## How do I create clean indoor air?

### Use a HEPA Portable Air Cleaner (PAC)

HEPA PACs cost ~\$100-\$200. Get one large enough for the room it's in, and place it where you spend the most time. Close the doors and windows in that room so air can circulate through the filter. Ensure you have extra filters & replace when dirty.

### Make a DIY box fan/filter combination

High efficiency filters (MERV 13) can be purchased at a hardware store or online and easily attached to a box fan. They are louder than a HEPA PAC, but lower cost and nearly as efficient. Use a newer fan (manufactured after 2011). See our website below for simple directions and safety guidance.

### Central Air and HVAC systems

Keep the furnace fan on (i.e., uncouple it from the thermostat) for continuous cleaning. You may not be able to run your A/C with a better filter, so you may need to use PACs to clean individual rooms. Use the highest efficiency filter your system can handle. A MERV 13 or better is best, but MERV 11 or 12 will still help clean the air. Keep extra filters on hand and change them when dirty.