Wildfire Smoke 101 – Using an Air Purifier to Filter Wildfire Smoke



Wildfire smoke can get inside your home through windows, doors, vents, air intakes and other openings. This can make your indoor air unhealthy. The fine particles in smoke can be a risk to health.

Who can benefit from using an air PURIFIER?

Those who are most vulnerable to the health effects of wildfire smoke will benefit the most from using an air purifier in their home. People who are at a higher risk of health problems when exposed to wildfire smoke include:

- seniors
- pregnant people
- infants and young children
- people who work outdoors
- people involved in strenuous outdoor exercise
- people with an existing illness or chronic health conditions, such as:
    - cancer
    - diabetes
    - mental illness
    - lung or heart conditions

You can use an air purifier in a room where you spend a lot of time. This can help decrease the fine particles from wildfire smoke in that room.

Air purifiers are self-contained air filtration appliances that are designed to clean a single room. They remove particles from the room they are operating in by pulling the indoor air through a filter that traps the particles.

Choosing an air purifier

There are many kinds of air purifier available and not all air purifiers perform the same to remove indoor smoke particulates. Currently, many effective air purifiers have a High Efficiency Particulate Air (HEPA) filter. If you have a respiratory condition, you should only consider purchasing HEPA portable filtration units, which are able to trap the smallest particles.

Look for a unit certified by the Association of Home Appliance Manufacturers (AHAM).

Choose one that is sized for the room in which you will use it. The AHAM label indicates the square footage of the area that each unit can clean and includes the clean air delivery rate (CADR) for three categories: tobacco smoke, dust and pollen. The CADR describes how well the machine reduces tobacco smoke, dust and pollen. The higher the number, the more particles the air purifier can remove.

Wildfire smoke is most similar to tobacco smoke so use the tobacco smoke CADR as a guide when selecting an air purifier. For wildfire smoke, look for an air purifier with the highest tobacco smoke CADR that fits within your budget.

You can calculate the minimum CADR required for a room. As a general guideline, the CADR of your air purifier should be equal to at least two-thirds of the room's area. For example, a room with the dimensions of 10 feet by 12 feet has an area of 120 square feet. It would be best to have an air purifier with a smoke CADR of at least 80. Using an air purifier with a higher CADR in that room will simply clean the air more often and faster. If your ceilings are higher than 8 feet, an air purifier rated for a larger room will be necessary.

You can find a list of certified air purifiers on the:

- AHAM website
    - air purifiers listed on the AHAM website are certified for energy and performance
- Cal Air Resources Board (CARB) website
    - air purifiers listed on the CARB website are certified for electrical safety and ozone emissions

Online customer reviews can sometimes provide useful information about effectiveness, reliability and noise levels.

Avoid air purifiers and furnace/HVAC air purifiers that produce ozone, such as electrostatic precipitators and ionizers, as ozone can impact your health. Ozone generators and air purifiers that use UV light or photocatalytic oxidation also produce ozone and are not effective at removing harmful particles from the air.

Getting the most out of your air purifier

To get the most out of your portable air purifier:

- keep your doors and windows closed
- operate your air purifier in a room where you spend a lot of time
- operate at the highest setting. Operating at a lower setting may reduce the noise of the unit but it will reduce its effectiveness.
- ensure that your air purifier is sized appropriately for the largest room you will be using it in
- place the air purifier in a location where air flow will not be obstructed by walls, furniture or other objects in the room
- position the air purifier to avoid blowing directly at or between people in the room
- maintain your air purifier by cleaning or replacing the filter as needed
- reduce sources of indoor air pollution, such as smoking, vacuuming, burning incense or candles, using wood stoves and using cleaning products that can emit high levels of volatile organic compounds.

If you have an HVAC system, you can help remove fine particles from your indoor air by:

- installing a high-quality air filter
- running your furnace fan often to filter the air

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