How to Create a Clean Room at Home

When wildfire smoke gets inside your home it can make your indoor air unhealthy, but you can create a clean room to help protect your health and improve your indoor air quality. A clean room is a room that is set up to keep levels of smoke and other particles as low as possible during wildfire smoke events.

As long as it is safe to stay indoors at home, anyone can benefit from spending time in a clean room during a wildfire smoke event. A clean room may be most helpful for people who are at greater risk from the effects of smoke such as people with heart disease or lung disease, older adults, children, and pregnant people. This factsheet tells you how to set up a clean room at home.

Steps to Create a Clean Room at Home

1. **Choose a room.** Pick a room big enough for everyone in your household to be comfortable. A bedroom with an attached bathroom is a good choice.

2. **Prevent smoke from entering the room.** Close windows and doors, but don't do anything that makes it hard to get out.

3. **Stay cool.** Run fans, window air conditioners, or central air conditioning. If your air conditioner has a fresh air option, turn it off or close the intake and run it in recirculation mode.

4. **Filter the air in the room** when there is a smoke event. You will need to **buy or make an air-cleaning device before a smoke event, using one or more of the three ways on the top of the next page.**

5. **Avoid activities that create smoke or other particles indoors**, such as smoking, burning candles, using aerosols, frying food, and vacuuming, unless you use a vacuum with markings that say it has a high-efficiency particulate air (HEPA) filter Use a damp cloth or mop to trap settled dust particles.

6. **Spend as much time as you can in the clean room** to get the most benefit from it. When the air quality improves, even temporarily, air out the clean room to freshen the air.

In Some Cases, It May Be Best to Seek Shelter Elsewhere

After you have followed the steps to create a clean room, if you can't stay cool at home, the power goes out, or too much smoke is still getting in your home, staying in a clean room may not be the best option for you. Consider staying with friends or family, going to a public cleaner air shelter, or seeking relief from the smoke in another location with air conditioning and good air filtration.

For more information:

*   Learn more about creating a clean room at home: https://www.epa.gov/indoor-air-quality-iaq/create-clean-room-protect-indoor-air-quality-during-wildfire
*   See a video about how to set up a clean room at home: https://www.youtube.com/watch?v=V8DqzogXcVg
*   Other Wildfire Guide Factsheets: https://www.airnow.gov/wildfire-guide-factsheets/

Ways to Filter Air for Your Clean Room

Use a high-efficiency filter if your central heating, ventilation, and air conditioning (HVAC) system can safely use one.
You may need to consult with an HVAC technician or the manufacturer of your system to find out whether a high-efficiency filter, marked with a minimum efficiency reporting value (MERV) of 13 or higher, will work with your system. Run the system's fan as often as you can.
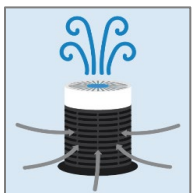
Use a portable air cleaner in your clean room.

Make sure it is the right size for the clean room. One way is to choose a device with a clean air delivery rate (CADR) for tobacco smoke that is at least 2/3 the room area in square feet. Also, make sure that it doesn't generate ozone (List of Air Cleaning Devices certified by the California Air Resources Board: https://ww2.arb.ca.gov/list-carb-certified-air-cleaning-devices). Run it continuously on the highest fan setting.

Use a do-it-yourself (DIY) air cleaner in your clean room.

A DIY air cleaner can be an inexpensive, temporary option to clean the air. See below for instructions on how to make one, including important safety tips.

Filter Graphics from Santa Barbara County Air Pollution Control District

If You Choose to Use a DIY Air Cleaner…

- **If you can, get a portable air cleaner. It is likely to reduce particle concentrations better than a DIY air cleaner,** especially in larger rooms. There is limited evidence on the effectiveness of DIY air cleaners. A DIY air cleaner will be most useful in a smaller room where you spend a significant amount of time and can run it longer, such as a bedroom.

- **To make your own DIY air cleaner, use a newer box fan (made since 2012) with a UL or ETL logo: these fans have thermal safety fuses** that reduce the risk of fires or burns from overheating the fan's motor and outer surfaces. Look for fans that have a listing for electrical safety and have a mark from a certifying organization such as UL or Intertek (the label will show the UL logo or Intertek's ETL logo, for example). Do not use a box fan manufactured before 2012 (unless you know it has a thermal safety fuse) in a DIY air cleaner. If you must use an older fan, never leave the fan running unattended, while you are away or sleeping.

- **When assembling a DIY air cleaner, choose a high-efficiency filter, preferably rated MERV 13 or higher, for better filtration.** Align the arrows on the filter with the direction of the air flow through the fan. Try to get a good seal between the fan and the filter. Change the filter when it appears dirty or starts to release smoke odors.

- There are many ways to put together a DIY air cleaner. Some common designs are:
  - One filter flat against the fan (video from Washington Dept of Ecology): https://www.youtube.com/watch?v=ujUFj2G9_-Y
  - Two filters taped with cardboard to form a triangle against the fan (video from the Confederated Tribes of the Colville Reservation): https://www.youtube.com/watch?v=ukyF2xm8cws

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