

Simple Solutions For Indoor Air in Homes and Coronavirus (COVID-19)

Ensuring proper ventilation with outside air can help reduce airborne contaminants, including viruses, indoors. However, by itself, increasing ventilation is not enough to protect people from exposure to the virus that causes COVID-19. When used along with other best practices (such as social distancing, frequent hand washing, and surface disinfection) recommended by the CDC, increasing ventilation can be part of a plan to protect yourself and your family. The major of the solutions outlined below can be found at the Environment Protection Agency site:

<https://www.epa.gov/indoor-air-quality-iaq/improving-indoor-air-quality>.

1. Use your HVAC system and consider upgrading filters

Since running your HVAC system filters the air as it is circulated, it can help reduce airborne contaminants, including viruses, indoors. By itself, running your HVAC system is not enough to protect yourself and your family from the virus that causes COVID-19. When used along with other best practices recommended by CDC, operating the HVAC system can be part of a plan to protect yourself and your family.

If you have an HVAC system:

Run the system fan for longer times, or continuously, as HVAC systems filter the air only when the fan is running. Many systems can be set to run the fan even when no heating or cooling is taking place. San Antonio is unique in its climate that it mirrors more of a semi-arid (desert like) weather during the late spring until mid-November depending on weather patterns. Often during this period, the City of San Antonio sees high temperatures hovering between the mid-90's and low 100's. There are many times when the temperatures are high and high humidity occurs due to brief or extend rain showers. It is during this time mold can be an issue for homeowners and apartment dwellers. This is another reason to run your HVAC system on the fan setting so to keep air moving within your home.

- Check to be sure the filter is correctly in place and consider upgrading the filter to a higher efficiency filter or the highest-rated filter that your system fan and filter slot can accommodate. Helpful Link: <https://ushomefilter.com/understanding-air-filters/>
- Understanding the ratings of air filters: Ratings for filters go from 1-16, meaning the higher the rating for a filter the more the filter catches particulars in the air within our homes. However, home systems are limited to lower rated filters due to the small motors that are commonly use in residential systems. Most homes utilize a filter normally rated at 8 or below. But due to COVID19. there has been recommendations to move to a 13 rated filter, however, many home HVAC systems can not handle this

higher rating due to reduced air flow in the home. So many homeowners are moving up to an 11 rating which the majority of home systems can handle. To be sure what your system is capable handling, have your HVAC Professional out to your home to inspect your system to see if your home HVAC system can handle a higher rated filter.

<https://ushomefilter.com/understanding-air-filters/>

2. Use a portable air cleaner or air purifier if you have one

- When used properly, air purifiers can help reduce airborne contaminants including viruses in a home or confined space. However, by itself, a portable air cleaner is not enough to protect people from COVID-19. When used along with other best practices recommended by the EPA, operating an air cleaner can be part of a plan to protect yourself and your family. <https://www.epa.gov/coronavirus/air-cleaners-hvac-filters-and-coronavirus-covid-19>
- Place the air cleaner in the room you spend the most time in or where vulnerable people spend the most time. To help reduce risks of airborne transmission, direct the airflow of the air cleaner so that it does not blow directly from one person to another. https://www.epa.gov/indoor-air-quality-iaq/improving-indoor-air-quality#Air_Cleaners

3. Improving natural ventilation (As Weather allows in San Antonio)

Even with an open window or door, natural ventilation can be limited if inside and outside temperatures are similar and there is little wind.

To increase natural ventilation:

- a) Open more than one window or door, if possible. **Do not open windows and doors if doing so poses a safety or health risk to children or other family members (e.g., risk of falling or triggering asthma symptoms).** https://www.epa.gov/indoor-air-quality-iaq/improving-indoor-air-quality#Source_Control
 - Ventilation can be further increased through cross-ventilation, by opening windows (or doors) at opposite sides of a home (but preferably not directly opposite of each other), and keeping internal doors open.
 - Opening the highest and lowest windows in a home at the same time (especially on different floors) can also help to increase ventilation.
- b. Consider using indoor fans in combination with open doors or windows to further increase ventilation. In addition to specialized window fans, box fans or tower fans can be placed in front of a window. Fans can face toward the window (blowing air out of the window) or away from the window (blowing air into the room). **(As weather allows in San Antonio)**

For additional ventilation, multiple fans can be used, pushing air out of one window and drawing it in from another. https://www.epa.gov/indoor-air-quality-iaq/improving-indoor-air-quality#Source_Control

- If a single fan is used, it should be facing (and blowing air) in the same direction the air is naturally moving. You can determine the direction the air is naturally moving by observing the movement of drapes, holding a light fabric, or dropping paper clippings and noting which direction they move.
- The direction the air is blowing (in or out of the home) from a particular window or door may change at times, especially on windy days. If these changes are frequent, try moving the fan to another location. Also, you may not need to use a fan on windy days.
- To help reduce risks of airborne transmission, direct the airflow of the fan so that it does not blow directly from one person to another.

Caution: Use caution when operating fans, particularly when children are present. Position fans so they are out of reach of small children and so they are stable and won't fall over easily. Consider using a tower or other fan where the blades are concealed or completely shielded.

Additional Resource

American Society of Heating, Refrigerating and Air Conditioning Engineers Indoor Air Guide: https://ashrae.iwrapper.com/ViewOnline/Guideline_RP-1663