



## Tips for Working with a Ventilation Consultant

### Who are ventilation consultants?

Ventilation consultants have education and training in air flow, air exchange, and the equipment needed to provide healthy ventilation in a building. They can help early care and education programs assess their ventilation systems and can recommend improvements in center-based facilities and family child care homes.

Ventilation consultants are certified by government agencies or organizations and follow [American Society of Heating, Refrigerating and Air-Conditioning Engineers \(ASHRAE\)](#) guidelines and state or local regulations.



### How can a consultant help us provide healthy ventilation in our buildings?

- Consulting with an expert can make it easier to know what to do. Although ventilation is a simple idea, it can be complicated to assess, upgrade, or change.
- A ventilation consultant can explain how to increase the flow of fresh air into your building(s) and move indoor air outside. Healthy indoor air reduces the risk of spreading COVID-19.
- A ventilation consultant can assess a building's current natural or mechanical ventilation systems. The consultant will check if the system is functioning properly, meets applicable technical standards, or needs maintenance.
- The ventilation consultant can also explain how to improve the ventilation systems if needed.



National Center on

Health, Behavioral Health, and Safety

## What key questions should we ask about our ventilation systems?

Consider asking these questions if you have a heating, ventilation, and air conditioning (HVAC) system:

- Can we look at the system together so you can explain all the parts, including the power switches, the temperature and humidity settings, and location of filters? What parts of the system can we control?
- Does the HVAC system have a filter with a Minimum Efficiency Reporting Value (MERV) rating of 13 or higher to filter pollutants (e.g., pesticides, wildfire smoke) or harmful particles (e.g., COVID-19) from the air? If not, can this system accommodate such a filter?
- Does our HVAC system meet the goal of exchanging the air in the room at least five times an hour? If not, are there ways to improve the air exchange?
- Do we need to move any furniture to ensure the free flow of air?
- Can we open windows if our HVAC system is on?
- Is the HVAC controlled by an “auto” or “on” switch? If we keep the switch “on,” will that improve indoor air quality? If so, can you explain how it does that?

Consider asking these questions if you do not have an HVAC system or want to supplement your HVAC system:

- What types of natural and supplemental ventilation are best to use in each room?

- Which windows and doors do you suggest we open in each room?
- Do you recommend that we use fans? If yes, let's review the ventilation needs in each room:
  - What type of fan(s) would work best?
  - How many and what size do we need?
  - How much will they cost?
  - What is the best place to put the fans to safely move air in and out of the room(s)?
  - Are exhaust fans installed in the ceiling (e.g., of the bathroom, kitchen) or window that move the inside air to the outside? Can you show us where they are and how they work?
  - When do we turn the exhaust fans on and off?
  - When do we turn the portable fans on and off?
- Do you recommend that we use portable air cleaners with a high-efficiency particulate absorbing (HEPA) filter to reduce the amount of pollutants (e.g., pesticides, wildfire smoke) or harmful particles (e.g., COVID-19) in the air? If yes, review the needs for each room:
  - What type of unit(s) do you recommend?
  - How many and what size do we need?
  - How much will they cost?
  - What is the best place to put the unit(s)?
  - How do we maintain these units? Do we clean them? How often should we change the HEPA filters?
  - When do we turn the portable air cleaners on and off?





## What key questions should we ask about maintaining or improving our ventilation systems?

- What is the recommended maintenance plan?
  - What supplies or skills are needed to maintain the system?
  - Who maintains the system?
  - What is the maintenance schedule?
  - What is the cost of the maintenance plan and supplies?
- Do we need to improve our mechanical or natural HVAC ventilation systems?
  - Do we need to change or supplement our ventilation systems with exhaust fans, portable fans, portable air cleaners, or new filters?
  - Why is this needed? What problems will this address?
  - What are the short-term (i.e., labor and materials) and long-term (i.e., upgrades, new system) costs?
  - What do you recommend that we do first (if cost is a consideration)?

## Resources

Caring for Our Children (CFOC) Standard 5.2.1.1: Ensuring Access to Fresh Air Indoors  
<https://nrckids.org/CFOC/Database/5.2.1.1>

CFOC Standard 5.2.1.3: Heating and Ventilation Equipment Inspection and Maintenance  
<https://nrckids.org/CFOC/Database/5.2.1.3>

CFOC Standard 5.2.1.8: Maintenance of Air Filters  
<https://nrckids.org/CFOC/Database/5.2.1.8>

Environmental Protection Agency's Ventilation Checklist and Background Information for Ventilation Checklist for Schools  
<https://www.epa.gov/iaq-schools/ventilation-checklist-indoor-air-quality-tools-schools>

Harvard University's Healthy Buildings for Health: 5-Step Guide to Checking Ventilation Rates in Classrooms  
<https://schools.forhealth.org/ventilation-guide/>

Harvard University's Schools for Health: Risk Reduction Strategies for Reopening Schools  
<https://schools.forhealth.org/risk-reduction-strategies-for-reopening-schools/>



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August 2021