



Health & Safety Notes

Healthy Air in Your Child Care Facility



KEY MESSAGES:

- Spend Time Outdoors
- Safely Open Windows and Doors
- Maximize Ventilation and Filtration

What is Healthy Air?

We breathe so often, it's easy to forget the air we breathe is important to our health. Breathing in provides the body with oxygen, and breathing out rids the body of waste like carbon dioxide.

The quality of the air we breathe affects the health and well-being of both children and adults. As we learned from the COVID-19 pandemic, viruses can spread through the air and make us sick. In addition, smoke and chemicals from cleaning products, furnishings, pesticides, air fresheners, and cosmetics can linger in the air and trigger breathing problems, allergies, and asthma. Poor air quality can also affect children's learning and behavior.

The easiest and most affordable way to increase fresh air is to go outside. You can adapt many activities to the outside environment. A sheltered space, like under a pergola, a shade sail, or a pop-up shelter offers protection from sun and weather so you can spend more time outdoors.

What Is Ventilation?

Ventilation moves fresh air from outside to replace stale or stuffy air inside. Ventilation clears odors, germs, and other harmful particles from the air. There are several ways to provide ventilation. Some are simple and low-cost. Others require big investments.

Simple Steps to Improve the Air in Your Facility

Safely open your windows: Opening windows is a simple and low-cost way to bring fresh outside air in and move stale inside air out. Open windows and doors on opposite sides of the rooms to create cross ventilation. Windows accessible to children should only open four inches or have a properly installed window guard.

Turn on a fan so it blows air away from people:

- Place a fan next to an open window, or use a fan designed to be safely secured in an open window, to blow the inside air out.
- Set ceiling fans to draw air upward. You may need to change the direction the blades turn.
- Use bathroom fans and kitchen fans that vent air to the outdoors.
- Address safety concerns for portable fans including tripping on cords, tipping, collisions, and other possible injuries.

Identify and manage sources of odors and unhealthy air: For example, use safer cleaning products; consider a policy for fragrance-free personal care products and perfumes; take out garbage daily; stay home when sick so you don't add germs to the air; and wear face masks according to public health advice.

What Is Filtered Air?

Air filters block and catch small particles and make the air healthier to breathe. Many buildings filter outdoor air through a heating, ventilation, air conditioning (HVAC) system. A new HVAC system is costly but may be a good long-term investment. If your building already has a HVAC system, make sure it works properly and gets regular upkeep. Refer to your HVAC system service manual for:

- What type of filter the system uses (use the highest rated filter possible);
- When to change the filter and how to check the fit of the filter;

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- How to adjust the settings to maximize outdoor air intake;
- How to adjust the settings to circulate and filter the air without heating or cooling;
- How to disable demand-control so the system doesn't turn on and off according to room temperature;
- How to adjust the settings or keep outdoor air out (if the outdoor air is unhealthy).

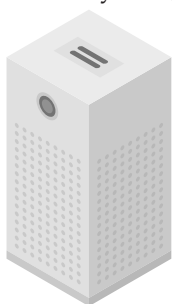
Filter Rating: A filter's Minimum Efficiency Reporting Values (MERV) rating reflects the size of the particles it can trap. Filters with higher MERV ratings block out smaller particles and clean the air better than those with lower ratings. A filter with a MERV rating of 13 or above is designed to block viruses that cling to exhaled droplets in the air. High efficiency particulate air (HEPA) filters trap even smaller particles.

How Can I Learn More about My Building's HVAC System?

Consult a qualified engineer or HVAC professional to check if your HVAC system is functioning properly. A licensed HVAC professional can check the air change per hour (ACH), advise on settings to maximize outdoor air intake or close the outdoor air intake, and make recommendations for regular upkeep.

Can I Use a Portable Air Cleaner?

Many homes and buildings do not have an adequate HVAC system, and some child care rooms do not have windows that open or can be safely opened. In this case, a portable air filtering device can be used to remove harmful particles in the air. There are many types of air cleaning devices. Check product information for the room size it can clean, the particle size that the filter traps, and its clean air delivery rate (CADR).



Some electronic air cleaners (ionizers) create ozone as a byproduct. Breathing ozone poses serious health risks. A mechanical air cleaning device that pulls air through a filter is a safer choice.

Will My Window Air Conditioner Clean the Air?

No. A window air conditioner is designed to cool the air. Most window units do not draw in outdoor air or

have an adequate filter (MERV 13 or higher) to clean the air of viruses and other particles. Check your window air conditioner's operating manual to learn how it works and what kind of filter it uses.

Will Spraying Air Freshener Clean the Air?

No. Spraying air freshener adds chemicals to the air rather than clearing them. Air freshener sprays do not ventilate, do not take away the source of the odor, and do not filter the air.

Safety Tips

- Do not open windows if the outside air is unhealthy to breathe. For example, if the air outside is polluted with smoke from fires or with pesticides from agricultural spraying it could trigger asthma or have other adverse health effects.
- If portable fans are not safe to use when children are present, consider using them before children arrive, when children are playing outside, and at the end of the day after children are gone.
- Keep portable air cleaners out of children's reach by using barriers or protective screens.

Resources and References

Caring for Our Children Standard 5.2.1 *Ventilation, Heating, Cooling, and Hot Water*, and Standard 5.1.3.2 *Possibility of Exit from Windows*, American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education. CFOC Standards Online Database. <https://nrckids.org/CFOC/Database/5.2.1> Accessed 12/17/2020.

Ventilation Key to Reducing Risk, Yale School of Public Health. https://publichealth.yale.edu/research_practice/interdepartmental/covid/schools/ventilation/

Interim Guidance: *Ventilation During the COVID-19 Pandemic*, October 20, 2020, San Francisco Department of Public Health <https://www.sfdph.org/dph/files/ig/COVID-19-Ventilation-Guidance.pdf>

Air Cleaners, HVAC Filters, and Coronavirus (COVID-19), US Environmental Protection Agency. <https://www.epa.gov/indoorair-quality-iaq/air-cleaners-and-air-filters-home>

Air Cleaning Devices for the Home, California Air Resources Board. <https://ww2.arb.ca.gov/resources/fact-sheets/air-cleaning-devices-home>

American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) www.ashrae.org

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