



**CHILDREN'S
ENVIRONMENTAL
HEALTH
NETWORK**



Dear Reader,

We are often asked about inserting different types of products/devices inside of ventilation ducts that claim to “disinfect the air”. We do not support this in educational facilities due to unintended consequences. Many of these products/devices have the potential to create “indoor chemistry”, or byproducts that can hurt you. Instead, we recommend using filters to remove particles. Filters have been used for many years, are proven to work, and are proven to not hurt you. Filters do not create indoor chemistry.

You can improve particle removal by choosing filters with greater efficiencies. However, before upgrading filters in your ventilation systems at home or work, always check first with your ventilation service technicians to make sure that your system can handle the added strain that many of these filters can put on your system. An ounce of prevention is worth a pound of cure. Note that filters only work when fans in HVAC systems or in portable air cleaners are running.

Marian L. Heyman, Coordinator, Indoor Environmental Quality Unit
Connecticut Department of Public Health

Web/Print	You tube/Video	Notes
Ventilation		
This handout. Contains clickable links for the CEHN Ventilation Basics webinar dated 18 March 2021	Children's Environmental Health Network Webinar: Best Practices for Keeping Child Care Settings Healthy and Safe During the Pandemic. Day 2: Ventilation Basics for Child Care Settings . 18 March 2021. Marian L. Heyman, Connecticut Dept. of Public Health	Webinar plus handout.
Improving Indoor Air Quality in California Schools Lots of great, easy to understand material from the Univ CA- Davis Western Cooling Efficiency Center	Importance of Ventilation in Schools The Path to COVID 19 Recovery: How to Improve Indoor Air Quality when Reopening K-12 Schools May 28, 2020 <ul style="list-style-type: none"> Part 1: the importance of IAQ and ventilation Part 2: implementing IAQ & ventilation solutions 	Univ Calif – Davis. 1st video-Basic overview- 6½ min. Easy to understand 2 nd video- more technical but very good- part 2: hands on, practical info.
Harvard's Healthy Buildings for Health Program- Schools for Health: COVID19: What To Know Harvard's Healthy Buildings for Health		Reports, research, toolkits, and calculators from the Harvard Healthy Buildings Program- very

<p>Program: 36 Expert Tips for a Healthier Home</p> <p>Harvard's Healthy Buildings for Health Program: COVID-19</p> <p>Tip- search the Washington Post for COVID19 related, short, informative articles by Dr. Joseph Allen from the Harvard Healthy Buildings Program</p>		<p>useful, easy to understand language.</p>
<p>Portable Air Cleaners- Background</p>		
<p>Guide to Air Cleaners in the Home: Portable Air Cleaners and Furnace or HVAC Filters in the Home. 2nd Edition, July 2018 [EPA]</p>	<p><i>Dealing with Dust in the Wind: EPA Guidance for Consumers About Air Cleaners</i></p>	<p>Authors of the print guide discuss on You-Tube.</p>
<p>Residential Air Cleaners: A Technical Summary, 3rd edition, August 2018 Portable Air Cleaners, Furnace and HVAC Filters [EPA]</p>	<p><i>The Technical Details: EPA Guidance for Residential Air Cleaners</i></p>	<p>Authors of the print guide discuss on You-Tube.</p>
<p>New Guidance for Residential Air Cleaners [ASHRAE]</p>		<p>These authors also wrote the 2 EPA guides above.</p>
<p>Portable Air Cleaners- How To Choose</p>		
	<p>Children's Environmental Health Network Webinar: Best Practices for Keeping Child Care Settings Healthy and Safe During the Pandemic Day 2: Ventilation Basics for Child Care Settings. 18 March 2021. Marian L. Heyman, Connecticut Dept. of Public Health</p>	
<p>Harvard-CU Boulder Portable Air Cleaner Calculator for Schools.v1.3</p> <p>This is a lot to take in, but it is worth at least reading this NOTES section for basic info including where to place a portable air cleaner in the room, explanation of <i>Air Changes per Hour (ACH)</i> and <i>Clean Air Delivery Rate (CADR)</i></p> <p>*Here is a link to the actual Portable Air Cleaner Calculator . Very Useful!</p>		<p>I discuss these concepts in the CEHN webinar (above), but here it is in writing.</p>
<p>AHAM Verifide® Program</p> <p>Find a certified room air cleaner</p>		<p>Association of Home Appliance Manufacturers . EPA refers readers</p>

		to this material.
https://ww2.arb.ca.gov/our-work/programs/air-cleaners-ozone-products/air-cleaner-information-consumers Lots of information about air cleaners, health, how to choose; links to their pages of certified air cleaners		Calif Air Resources Board (CARB) tests and certifies air cleaners to make sure that they do not produce ozone. Ozone gas can hurt your lungs.
DIY Portable Air Cleaners		
	Neil Comparetto shows viewers how to build the Comparetto Cube air cleaner using a box fan + 4 HEPA filters. Very easy to make.	There is some promising test data for this one.
Box Fan and Filter Instruction Guide To Decreasing Smoke in Your Home Poster Confederated Tribes of the Colville Reservation Air Quality Program poster. DIY air cleaners using a box fan with either one or two HEPA filters.	https://www.cct-enr.com/box-fan-filter Confederated Tribes of the Colville Reservation- Video shows making air cleaners using a box fan with either one or two HEPA filters.	The more filters that are used, the more effective these DIY portable air cleaners are.
Note that filters in portable air cleaners and in building ventilation systems can become plugged up more quickly when used during wildfires. Have extras on hand and be prepared to change them as needed.		
Masks + Ventilation		
Effectiveness of Mask Wearing to Control Community Spread of SARS-CoV-2 . John T. Brooks, MD; Jay C. Butler, MD [CDC] <i>JAMA Insights. Feb 10, 2021</i>		
A room, a bar and a classroom: how the coronavirus is spread through the air . By Mariano Zafra & Javier Salas. El Pais, 29 Oct 2020.		Using pictures to tell the story. Makes the info very understandable.
Other Info for Background		
Lawrence Berkeley Lab, Indoor Environments - Indoor Air Quality Scientific Findings Resource Bank		Lots of valuable information from the nation's top scientists, led by Dr William Fisk
Duct Cleaning		
Should You Have the Air Ducts in Your Home Cleaned? EPA.		There are many scams and misinformation

Companion Hand-out for Marian Heyman's webinar, [Ventilation Basics for Childcare Settings](#). Children's Environmental Health Network. 18 March 2021. Email: marian.heyman@ct.gov.

From Summary: "Duct cleaning has never been shown to actually prevent health problems. Neither do studies conclusively demonstrate that particle (e.g., dust) levels in homes increase because of dirty air ducts."		about duct cleaning. Please read this EPA Guide so you can make informed choices.
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