The following FAQs was developed by the San Francisco Department of Public Health for use by local facilities, and will be posted at [www.sfcdcp.org/COVID-Ventilation](http://www.sfcdcp.org/COVID-Ventilation). This interim guidance may change as knowledge, community transmission, and availability of PPE and testing change.

**AUDIENCE:** Non-healthcare organizations (including businesses, companies, offices, schools, faith-based and similar organizations). Healthcare personnel and first responders need to check with their infection control and safety & health groups for guidance as there are specific hazards or hazardous activities which ventilation systems are set to control. Additional information for healthcare organizations can be found at [www.sfcdcp.org/covid19hcp](http://www.sfcdcp.org/covid19hcp) under Health Care Exposures.

**Frequently asked questions**

1. **If my restaurant, gym, or personal services business has multiple rooms or enclosed spaces, but the only ventilation I have is to open my front door, is this enough to satisfy the requirements of the Health Order?**

   In order to comply with applicable building codes, it is likely your business either has adequate natural ventilation (windows and doors open to outside air) or a mechanical ventilation system that may be adjusted to provide additional outside air. If you are not sure what type of ventilation you have, please consult with your landlord or facilities manager. If you are still unsure whether you have adequate ventilation, SFDPH strongly recommends that you also use appropriate portable air cleaners for each enclosed area and room in your business.

2. **If my personal services business provides services to customers who remove their face covering and I provide those services in a separate room or curtained off area, should I use a Portable Air Cleaner (PAC) in each area?**

   SFDPH strongly recommends that you use a separate PAC in each space where you are providing personal services where the customer removes their face covering.

3. **If my business has doors that open to another interior space, but not to outside fresh air, does that satisfy the requirement to open doors and windows? What if the space is within a mall or gym?**

   No, if your business does not have windows or doors that open to fresh outside air, opening your windows and doors to another interior space does not satisfy your ventilation requirements. However, if your business is in a mall or gym or other fully enclosed space that is building code compliant, it should have a mechanical ventilation system that can be adjusted to satisfy your ventilation requirements. To improve safety, you may also add one or more portable air cleaners to your space. You should generally not open doors and windows to other interior spaces as this may cause cross-contamination, unbalance ventilation systems, and/or compromise the fire/life safety of the building.
4. Using the heat function of our HVAC system during days when the temperature is cold outside. We have read reports that when indoor air is heated, the virus spreads more easily. Is your advice not to use the heater in the cold weather, and to simply bundle up?

We are not familiar with any peer-reviewed literature suggesting changes in virus spread because of temperature. Colder temperatures do, however, tend to increase eye and respiratory tract secretions which an increase the risk of hand-to-mucus membrane (eye, nose, or mouth) contact as you involuntarily touch your eyes or wipe your nose. Unless careful hand hygiene is followed this could increase the risk of COVID-19 exposure.

5. What about air circulation - in the warm months we turned on the AC to filter the air. But in the cold weather do we leave it off or turn on simple fan function with no cooling nor heating?

In basic ventilation systems setting the fan to run continuously will not impact heating or cooling. If the thermostat “identifies” proper room temperature the fan will run without heating or cooling; however, if the temperature goes outside of the set range heating or cooling would be added to the air being circulated.

6. What about ultraviolet light (UV) for disinfecting air?

There are multiple ways in which UV can be used, some more successful than others for COVID-19 protection:

Upper Room UV systems which place high-energy UV lamps irradiating the upper parts of a room, out of the reach of room occupants, and use ceiling fans to draw air up into the irradiation zone. Details such as electrical power, lamp and fan placement, and protective baffles around the lamps to prevent exposures all require experienced professionals for a safe and effective installation. The CDC does recognize Upper Room UV systems as an option for COVID-19 as well as other infectious diseases like TB.

In-Duct UV systems, which place high-energy UV lamps inside of ventilation supply ductwork. Again, these systems require professional sizing, installation, and maintenance but are identified as being effective by the CDC.

In-Room Mobile Systems which at their very basic are one or more high-energy UV lamps mounted on wheels and intended for disinfection of surfaces in unoccupied rooms. These units are intended for disinfection of pre-cleaned surfaces, not air. The CDC has not identified these systems for use for COVID-19, and there is limited peer-reviewed literature on efficacy for surface disinfection against other pathogenic organisms.

UV Lamps in Portable Air Cleaners (PACs) - Some manufacturers equip their PACs with UV lamps. There’s no peer-reviewed literature indicating that such lamps add anything to the air filtration of the PAC and groups such as the Consumer’s Union (Consumer’s Reports) and the Harvard School of Public Health / University of Colorado Boulder COVID-19 schools working group recommend against spending extra to purchase PACs with UV lamps.
UV “Disinfecting Wands” - Sellers including many on the internet sell “disinfection wands” intended to disinfect surfaces and/or the air. There is no evidence that these wands have value for COVID-19 or other pathogenic organisms.

Note: Fluorescent tube-type UV lamps typically contain mercury at much higher concentrations than other types of fluorescent tubes. Caution must be taken in handling and using such lamps. Ultraviolet light emitting LEDs have not been identified to provide any type of disinfection.

For more detailed information see the San Francisco Department of Public Health’s Guidance on Ventilation and Portable Air Cleaners FAQs posted at https://www.sfcdcp.org/COVID-Ventilation