



GUIDANCE FOR COVID-19 RISK REDUCTION IN RESIDENTIAL BUILDINGS

ASHRAE is a global professional society of over 55,000 members, committed to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration and their allied fields (HVAC&R). Risks of airborne COVID-19 transmission are many times greater indoors than outdoors. Accordingly, ASHRAE recommends following [Core Recommendations](#) including indoor guidance from the Centers for Disease Control ([CDC](#)) for vaccination, masks and social distancing. Because people spend most of their time indoors at home, residential owners and occupants should consider further risk reduction by improving filtration and ventilation beyond the minimums required by standards and codes. Specifically,

- **Improve Small Particle Filtration of Forced-Air Systems:** Upgrade system filtration with high-efficiency filters ([MERV 13](#) or the best the system can accommodate). Adjust the fan setting (usually on the thermostat) for continual operation, even if not currently heating or cooling.
- **Use [Portable HEPA Air Cleaners](#).** Stand-alone HEPA air cleaners help remove small airborne particles that may contain viruses. The most effective units have a high Clean Air Delivery Rate ([CADR](#)). Consider operating more than one unit at low speed, for less noise at the same delivery rate.
- **Provide Increased Outdoor Air Ventilation.** When outdoor conditions allow, increase ventilation using ventilation systems or operable windows.
- **In High-rise Buildings, [Check That Exhaust Inlet Grilles Are Exhausting](#).** Also [review cautions](#) for opening windows in tall buildings to minimize transmission between dwelling units.
- **Minimize Transmission from Bathrooms.** Operate bathroom exhaust fans, preferably continuously. Toilet lids should normally remain closed. Do not allow plumbing traps to become dry.
- **For Infected Household Members, [Create an Isolation Space](#):** The isolation space needs to have barriers and have air flowing into it from the rest of the dwelling, which can be accomplished with a small exhaust fan temporarily installed in a window. Also operate a portable HEPA air cleaner continuously in the space.
- **For High-Risk Household Members, [Create a Protected Space](#):** The protected space must have barriers and have air flowing out to the rest of the dwelling. This can be accomplished with a small supply fan temporarily installed in a window. Also operate a portable HEPA air cleaner in the space.
- **Consult the ASHRAE Website for [Further Guidance](#) and [Answers to Frequently Asked Questions](#).**

The information above is provided as a service to the public. While every effort is made to provide accurate and reliable information, the guidance is provided for informational purposes only.