

1. What are the recommendations when doing physical activity outdoor, like walking at a fast pace, will you recommend wearing the mask?

I do not recommend a mask if you can socially distance, **do your physical activity outdoors** and take advantage of dilution ventilation. Otherwise I would recommend a mask be worn.

2. Is adding a UV device in regular households AC systems worth it?

I do have them in my home units, not for disease control but they help keep the system cleaner. For UV to have any impact on the air (and that is controversial) the unit would have to run all the time. My home unit kicks on and off depending on the outside conditions and cooling and heating season

3. Where is the best place to position an air purifier? Front or back of where I am sitting? On the counter or on the ground?

That is a question with many what if's. In general, you want to pull the pathogens and contaminants away from you. You also might want the unit high then directly on the floor because you are most interested in smaller particle that are higher and tend to stay suspended longer in the air. Also look at the product information and check the size of the room for the air treatment rate and try to get that at least within the space from yourself.

4. Depending on the air handler system, they may not be as effective for hospital settings. What about for public settings, such as churches, restaurants, hotels?

It is all about air exchanges, filtration rates, treatment modalities and fresh air delivery. The ASHRAE requirements for air (which are often part of the building code) in the locations are very minimal. It really is incumbent on each of us to assess the risk based on our knowledge of our own health status and make the best decision. The building air design for these environments are with healthy persons in mind. The best protection today is wearing a mask!

5. We are a large senior community. We have been disinfecting and holding packages for 24 hours. Is this still necessary based on your research?

Both the Centers for Disease Control and Prevention and World Health Organization say the risk of transmission of the novel coronavirus in mail and packages is very low.

CDC Position: There is still a lot that is unknown about COVID-19 and how it spreads. Coronaviruses are thought to be spread most often by respiratory droplets. Although the virus can survive for a short period on some surfaces, it is unlikely to be spread from domestic or international mail, products or packaging. However, it may be possible that

people can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes, but this is not thought to be the main way the virus spreads.

What has been recommended is to open the box, dispose of the box, and **wash your hands!** It has been established that these environmental surfaces are very low risk because most of the virus cannot live in the harsh conditions of a truck or mail sorting facility. That said the risk is not zero. The risk is significantly mitigated if after handling the box the resident and staff washes their hands that reduces the risk even further.

You know your population much better than me, but the person delivering the box to the residents' room, probably is more likely to contaminate the package as much or more than the FED EX or Mail Carrier. I would follow strict hand washing protocols. Boxes in general can have lots of other contaminants (bugs, fungi, bacteria), a policy to reduce or eliminate boxes from sitting in departments or resident rooms in general is safer.

6. What is the recommended exchange rate for an HVAC system?

There are extensive charts in ASHRAE that list the air exchange requirements for most if not all occupancies. We are currently in a pandemic world that has up ended the numbers and people are scrambling for solutions to get people back into their businesses, offices, and schools. Air exchange is only one component. How the air is handled and delivered is also important. The balance to the system (-/+), fresh air vs recirculation, and filtration rates are also very important. All that said controlling hazards at the source is the best protection. An example is a conference room where people gather. Most buildings handle the air exactly the same if one or 10 persons are in the room (this is not always but, in many cases,). The more people the more opportunity for exposure. Wearing masks certainly cut down on the source if there is an exposure event. Having additional controls in the room to treat the source of exposure further reducing the exposure. If you have a specific example of a space, I most likely can tell you the recommended air exchanges in commercial buildings. Homes and residences are very different design.