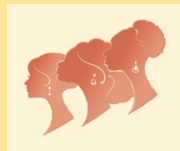


WHA Virtual Series “RealTalk With the Experts”
Protect Your Family’s Health: Keeping the Air Clean in Your Home
Question & Answer Session
Speaker: Neasha Graves, MPA



Question	Answer
<p>1. How long can germs last in the air if a sick person comes in my house or lives in my house? Will antibacterial and/or disinfectant spray really kill the germs? Is COVID-19 any different?</p>	<p>Several public health and research-based sources state that droplets from a person with COVID-19 can last for hours; therefore, they stress the importance of wearing masks.</p> <p>Here are additional resources:</p> <p>Centers for Disease Control: <i>SARS-CoV2 and Potential Airborne Transmission</i></p> <p>EPA: <i>Guidance on cleaning and disinfecting public spaces</i></p> <p>Harvard University: <i>Coronavirus Resource Center</i></p>
<p>2. Do you believe one should utilize a humidifier during this season?</p>	<p>Adding humidity to the home can provide some comfort to the overall home environment. If you follow the manufacturer’s recommendations regarding limits on indoor humidity based on outdoor temperatures, you can be fine. However, a mold remediation professional, I generally like homes as dry as is comfortable for occupants!</p> <p>Researchers at UNC and the National Heart Lung and Biology Institute (NHLBI) do not recommend the use of a humidifier, especially for people with mold allergies and asthma. Furthermore, there’s the concern that people do not sufficiently clean them to ensure that mold is not growing in the humidifiers. We are not advising people to go against the wishes of their medical professionals if they are instructed to use a humidifier. There are times when they’ve been recommended. But overall, they are not recommended by federal health agencies. Please take a look at <i>NHLBI guidelines for asthma management</i> that includes use of humidifiers).</p>

<p>3. There are discussions about leaving a window open to improve air quality. Is this true?</p>	<p>Ventilation can be important to reduce indoor contaminants (including mold) assuming that the outdoor conditions are favorable. There are times for allergy sufferers when outdoor air can be another trigger/irritant when allowed into the home without filtration. Opening windows and maintaining indoor filtration using the central heating fan is often a good balance.</p> <p>Individuals must weigh the costs/benefits of opening your windows. Some outdoor considerations for people with asthma/allergies should be air pollution in communities with heavy traffic, pollen (trees/grass during different times of year), and wildfires.</p>
<p>4. Could the speaker talk about poison in the home that you would not think are poison (i.e. candles, cleaning chemicals or mold)?</p>	<p>During the webinar presentation, it was discussed how many consumer products like candles, cleaners, paints, and personal care products (nail polish) that exist in our everyday lives are made with formaldehyde in them. The Institute of Medicine's 2015 report entails a review of research on indoor environmental asthma triggers, and non-occupational exposure to formaldehyde (like the home setting) is found to have an association with worsening asthma.</p>
<p>5. Many have recommended burning sage and palo alto sticks. Is that recommended?</p>	<p>Any combustion (burning) within the home can lead to harmful chemical production or accumulations of soot or other particulate. In moderation, these things are likely ok and could have some benefits, however, they are unlikely to improve the overall indoor environment, especially when used in excess.</p> <p>We are unfamiliar with burning sage and palo alto sticks (a type of incense called palo santo sticks).</p> <p>Researchers would agree that burning those type of items likely causes the formation of particulate matter, which can be harmful to the lungs.</p> <p>UNC, Chapel Hill researchers have found that burning incense can be dangerous to the lung cells, as noted in this UNC Health article.</p>

	<p>In fact, UNC researchers have found that burning incense can lead to exposure to formaldehyde, carbon monoxide and other contaminants.</p>
<p>6. I change my air filters every three months. Should I do it every two months? How often should we change our air filters?</p>	<p>Generally, you can follow the manufacturer's recommendations, but it does depend on the size of the filter. In general, every 3 months is sufficient. If you notice a reduction in the ability of the homes heating and cooling system to do its job, it is quite possible that the filter needs to be changed. It is recommended that you use an allergen filter, preferably with allergen charcoal impregnated into the filter.</p> <p>Additionally, it is important to insert filters that are the correct size for your HVAC system. Also, don't forget that your HVAC system needs regularly scheduled maintenance.</p>
<p>7. When I do change the filters, I generally purchase the more expensive option that fight against dander and bacteria. Is that necessary? My daughters have two dogs and a cat. Do you recommend anything special for pets?</p>	<p>Allergen level filtration (Merv 9 or better) are good at reducing most indoor airborne allergens. If you are dealing with odors, an odor filter that uses charcoal or carbon as a filtering media, can be helpful with controlling odors.</p>
<p>8. What can "seniors" do to be healthy, especially since we have been in due to the pandemic?</p>	<p>There are many old sayings referring the benefits of keeping your home clean. My experience has been that the more frequently and diligently you clean, the better the air quality within the home. Many allergens and irritants can be controlled quite well with good old-fashioned cleaning. This is NOT the case with gases (like carbon monoxide or even carbon dioxide), those require correction at the source or dilution (ventilation).</p> <p>Research shows the importance of ventilation in indoor spaces. As for the point made above about cleaning, here are a couple of resources related to proper cleaning and disinfecting methods. These resources were created recently as a result of the COVID-19 pandemic. EPA – University of Rochester</p>
<p>9. How would the typical homeowner know what their indoor air quality is?</p>	<p>1. Accumulation of dust, discoloration on walls or household items or the presence of visible mold</p>

	<p>growth are all indications of possible indoor air quality problems.</p> <p>2. There are various tests available to test for indoor air quality. For example, carbon monoxide detectors can be purchased at most departments or hardware stores.</p> <p>3. People’s allergic responses. If allergen-sensitive people experience health symptoms exclusively in your home, there is probably a problem.</p> <p>Healthy homes tip: At least annually, check the systems throughout your home – HVAC, humidity level (should be between 30-50%), smoke/CO alarms installed and working, gas-burning appliances working and ventilated to the outdoors, and radon Visit NC Healthy Homes website to find resources related to indoor air quality.</p> <p>NIEHS also has a considerable list of resources on air quality.</p>
<p>10. Should all homes have a disinfectant spray to kill COVID-19 virus?</p>	<p>Please find CDC’s recommendations regarding the EPA’s approval of certain disinfectants that can be used on surfaces exposed to COVID-19. Pay close attention to the warning on this page that some disinfectants can worsen asthma.</p>
<p>11. What is the best way to entertain guests during COVID-19, or maybe not entertain them at all?</p>	<p>There are state and federal recommendations regarding gatherings in homes during the COVID-19 pandemic. North Carolina recommendations.</p> <p>Recommendations from the CDC regarding gatherings.</p>
<p>12. Which air sprays should we avoid using? Does price reflect level of quality? Are all disinfectant sprays created equal?</p>	<p>Disinfectants can trigger worsening asthma. Here are EPA’s recommendation regarding approved disinfectants.</p>
<p>13. During the winter months during COVID-19, how can I make sure I have good air exchange/ventilation in my home without opening windows for fresh air? Will air purifiers work?</p>	<p>Regardless of the pandemic, healthy homes experts would recommend that you make sure your HVAC system is in proper working condition and that you regularly change out your HVAC filters. Additionally, you should check on any other systems in your home that could hinder</p>

	<p>good air flow throughout your home such as the humidity, gas-burning appliances, etc.</p>
<p>14. How effective are air purifiers? What resources are available to test the air quality in our home?</p>	<p>Air purifiers are designed to remove certain particulates or pollutants from the air. Different technologies work better for different contaminants. In general, air purifiers, if maintained well, help to improve overall indoor air quality. If price/budget gets in the way of buying a purifier, there are probably cheaper alternatives to produce the same results. Always start with what you are trying to accomplish, then come up with a plan to achieve it.</p> <p>Air purifiers may be one good tool for making sure that you're reducing exposure to some contaminants,</p> <p>Research shows using multiple steps to address allergens is most helpful in keeping the air clean. Steps to protect indoor air quality may include:</p> <ul style="list-style-type: none">• using HVAC filters• cleaning around your home• avoiding some consumer products with certain chemicals• using dust mite covers <p>If you decide to purchase an air purifier, make sure you look for one with a HEPA filter and is portable for rooms around the home. According to the CDC and the EPA, <u>you should be aware to avoid air purifiers that have ozone.</u></p>
<p>15. Are there any air quality concerns with gas stoves in the home?</p>	<p>As far as normal use, the amount of moisture and/or combustion gases produced by a typical gas stove are generally not enough to pose any risk or concern. So long as the stove is being used for cooking and not heating, there should be no concern.</p> <p>If your gas appliance has a gas leak, then that is both an inhalation and fire hazard that needs to be corrected right away.</p> <p>Unvented gas stoves/ovens emit carbon monoxide and nitrogen dioxide. If they vent to</p>

	<p>the outdoors and are well-maintained, there should not be a problem.</p> <p>It is highly recommended that people with ANY gas appliance in their home should install a carbon monoxide detector on each floor of their homes, including in the hallway just outside the bedrooms.</p> <p>Note also that nitrogen dioxide is a known environmental asthma trigger.</p> <p>The resource, NC Healthy Homes provides more carbon monoxide information. Please look at the resources for NC Healthy Homes on the NIEHS website.</p>
<p>16. With regards to the upcoming holiday season, are there any issues that could be harmful to our lungs with the burning of Holiday Candles in the home?</p>	<p>Moderate use of candles in homes is unlikely to pose any significant health risk. However, lower cost candles can produce a large amount of soot particulate and there are</p> <p>Better quality candles are generally better than stocking up on the inexpensive ones.</p> <p>Candles should burn clean with no apparent black smoke or other problems.</p> <p>WARNING: Many scented candles have formaldehyde in them. Formaldehyde can worsen asthma. Additionally, some candles have lead in the wicks that can produce elevated levels of lead that are dangerous and cause health effects especially in children.</p> <p>It is important to read the labels on candles and have knowledge of what is in the candle.</p>
<p>17. Does Medicaid pay for dust mite covers, 3M air filters, etc?</p>	<p>We are not aware of a widespread Medicaid payment of dust mite covers, air filters and other tools to help people who are diagnosed with asthma. However, in North Carolina, there are several state and county resources/agencies who may be helpful in getting supplies like those for low income families. Resources are provided on the NC County Healthy Homes Resources Library. Please take a look at the Healthy Homes Resource for additional information</p>

<p>18. A lot of homes now have gas fireplaces.... How should we take care of ourselves? Should the windows be open while it's on or?</p>	<p>Gas fireplaces are usually ventilated to the outdoors. Concern should be given to the production of moisture with this type of heating appliance. If the appliance isn't vented, only use it in moderation</p> <p>Making sure that the gas valves are not leaking (like any other gas appliance) and that the system is clean would be regular maintenance items. An HVAC contractor (heating and cooling guy), chimney sweep, or dealer of these types of appliances can provide you with inspections/ verification of function.</p> <p><u>EVERYONE WITH GAS APPLIANCES should install carbon monoxide detectors on each floor of their homes, including outside the bedrooms.</u></p>
<p>19. Do you recommend UV Lights for HVAC Systems and/or Whole Home Media Filters for the HVAC System?</p>	<p>UV lights may provide some value to reducing certain microbiological components in the air. Generally, they tend to overstate their effectiveness and be overpriced for the added benefits they provide. In general, UV lights help to prevent microbial growth where the light shines. Paper (or similar material) media filters have a long and proven record of reducing particulate counts within the home. HEPA filtration boxes or units are nice, but often create more resistance to air flow than a standard blower can manage.</p> <p>Using allergen filters in the furnace and replacing them regularly is sufficient in most cases.</p>
<p>20. Do those Bamboo Charcoal Air Purifying Bags work to reduce mold? Is there any risk associated with using them?</p>	<p>Bamboo Charcoal Air Purifying Bags may reduce mold spore counts a bit, but probably not enough to justify the cost/usage. There is a lot of surface area there to absorb odors, but it is trapped inside the bag and not in play with the surrounding air.</p> <p>Having a carbon filter that pushes air through it would be much more efficient and effective. So long as the bag is sealed well, there should be little, or no risk involved in their use.</p>

	<p>Quick tip: If you are looking for a low-cost alternative to reduce spore counts, tape an allergen filter to a box fan and turn it on. This makeshift “airscrubber” and would be much more effective than the bag of charcoal. This may be good as a quick fix for vacation rentals if you or family members have mold sensitivity and not sure of the air quality within the rental.</p>
<p>21. Are the filters in the home bactericidal, viricidal, and fungicidal? I’m just curious because I’m a healthcare worker and those are the types of filters we use for certain medical devices, like ventilators.</p>	<p>The answer is no, In general, some filters will have preventative properties designed into them, but the average furnace filter you pick up at the hardware store is not designed with this purpose in mind. Allergen level filters can filter out particulates including mold spores and some bacteria.</p>
<p>22. Does your blood type impact how COVID-19 could affect your body? What is the latest research on COVID-19 and individuals with sickle cell trait and/or beta thalassemia trait?</p>	<p>This is a controversial topic and there has not been enough research on this topic that is conclusive. Two research studies have been conducted focusing on blood type. One study, based out of Europe identified that individuals with Blood Type O displayed reduced susceptibility to the virus, indicating they had slightly lower risk. A second research study conducted in Vancouver, British Columbia found difference in blood types and worst outcomes.</p>
<p>23. Are there protocols for COVID-19 safety in home visits for children with asthma?</p>	<p>The CDC recommends that you follow your asthma action plan. To learn more about how to protect yourself from COVID-19 while having asthma click here.</p>
<p>24. What advice do you suggest we should follow now to protect ourselves and our loved ones from COVID-19, the flu, and colds until a vaccine is available for the general population sometime in 2021?</p>	<p>Learn how to protect yourself from getting sick and protect your home by following CDC recommendations.</p> <p>This season a flu vaccine is more important than ever. Watch this YouTube video provided by the CDC about Protecting Your Health This Season from COVID-19 and the flu.</p>

WHA Virtual Series “RealTalk With the Experts”

Mold, The Unwanted Guest in Our Homes

Question & Answer Session

Speakers: Terrence Collins, PhD and Brian Lester



Question	Answer
1. If I suspect the air in my apartment is toxic what steps should I take to prove or disprove my suspicion?	Mold Remediation companies run tests for mold. Please check out this website for additional information and to ask questions. See this website .
2. Does treated and dead mold have to be scrubbed off surfaces where it has grown? Is it enough to just treat it?	If you can see mold stains, it will be good to treat/scrub further. If there are no remaining stains, you have evidence of effective cleaning. You can paint with a mold resistant paint to delay the return.
3. Can you please explain the health effects of living in a water damaged building? What are the long-term health problems one may have from living in a home with high levels of Aspergillus (155000 Count/m ³ in a bedroom)?	This website offers a range of advice on mold problems, including a shot at answering your specific question assuming you own the home. If this is a rental property, your landlord should address the problem expeditiously.
4. What's the best home air filter for eliminating dust mites, pollen, odor causing germs, mold, etc.? What is your take on the different air filters for the home?	Find the least expensive “allergen” filter and you will probably do well. If you can find a filter with activated charcoal in it, it will filter out some gases that just paper filters will not.
5. How much does it cost to get mold removed? Ballpark figure?	That’s a tough question. Try to prepare a plan based on your budget. The goal is improvement in many cases.
6. What is the difference between mold and mildew?	There is no difference between mold and mildew. When people refer to mildew in their home, they are generally seeing mold growth. Mildew is technically the disease of a plant. Mildew can refer to white powdery type of mold growth. You treat the cleanup in homes the exact same way.
7. How long does it take for mold to begin to form/grow? And do you always smell the musty odor right away?	It can almost begin immediately when water is present. Visible mold growth can take 48 hours or more to grow. If you can’t visibly see it (it could be hidden, yet visible upon discovery). It is much less likely to cause mold health effects in the home.
8. I had wood furniture in storage that had mold growth once moved the furniture into my new home. I cleaned it with	Vinegar is a mild acid, and we are not sure it would have a significant impact on most mold species, but the act of cleaning removed the

<p>vinegar and water per the internet. I have not seen any more mold growth. Did I do the right thing?</p>	<p>majority of mold from the surface. If the furniture has been kept dry since the move, it is unlikely to pose any health risk or develop new mold in the future. In general, you can clean mold from wood furniture by washing with whatever you would normally clean with. Multiple cleaning passes is better than trying to get everything the first go around. For natural cleaning (avoiding chemicals) the use of essential oil-based cleaners with Cinnamon, Thyme, Tea Tree, Clove or other types of natural fungicides could be considered. There are several products now on the market that meet that criteria, some even with EPA registration (especially those containing Thyme oil in the form of Thymol).</p>
<p>9. Can Kilz be used for mold in a bathroom ceiling which previously had a roof leak?</p>	<p>The answer is no. You possibly are referring to “Kilz” which is a shellac-based primer. The original Kilz product was designed to prevent smoke odor from escaping from fire damaged framing materials . It is not designed or labeled to kill or prevent mold growth. If the area is minor and there is only water staining, this solution would work fine. If there is substantial mold growth present, you will need to remove the drywall and replace it. If it is a small amount of mold (less than a few square inches) it is probably fine to wash with soap and water (or a mild bleach solution) followed by treatment/painting with Mold Killing Primer (that’s the brand name) or other primer with a mold preventative additive. Topcoat this with mold resistant ceiling paint.</p>
<p>10. Can you share some literature from credible sources regarding mold illness and the health impact on living in a water damaged building? The health impacts (short -term and long term) on living in a residence with mold throughout your home?</p>	<p>View the WHA webinar</p> <p>Here are additional resources:</p> <p>NIEHS</p> <p>CDC</p> <p>EPA</p> <p>NC Healthy Homes</p>

<p>11. Are you familiar with the HEPA Halo that's installed directly on the HVAC exchanger to remove mold from unit and air?</p>	<p>This is most likely more than what is needed to remove mold spores from the air in your home. The smallest mold spores are 1 micron in size (that's really small) and HEPA filtration is designed to eliminate particles down to 0.3 microns in size (that's 1/3 the size of the smallest mold spores). HEPA filtration works great at reducing mold spores, but it is probably much MORE efficient than is needed.</p> <p>Once mold is established in the air handler (HVAC exchanger), no amount of filtering is going to remove that mold, you must physically remove it or clean it off. Start with what your goals and needs are and then determine the needed equipment, products or techniques required to achieve them.</p>
<p>12. Can your sump pump be the cause of moisture? How often should you replace the sump pump?</p>	<p>This question is difficult to answer without assessing the situation within your home. Please contact a remediation specialist to receive a consultation to assess your situation to provide professional advice.</p>