

COVID-19 Update: Cleaning Practices May Trigger Asthma

May is Asthma Awareness Month!



This article was included in the *ITEP Native Voices* newsletter and was pulled from that resource.

With the arrival of the COVID-19 pandemic, there has been increasing interest in cleaning, especially with disinfectants (regulated by the EPA as pesticides). However, increased use of disinfectants may pose a problem for many tribal members with asthma. Many disinfectants can trigger asthma episodes.

A recent report by the Centers for Disease Control and Prevention found that tribal communities are disproportionately impacted by asthma. (See URL #1 below.) Asthma affects almost 12% of tribal members, nearly double the national average of 7%. One of the key approaches to reducing the impact of asthma is to reduce exposure to asthma triggers. (See URL #2 below.) Many chemicals used as disinfectants are known asthmagens (substances that cause or exacerbate asthma symptoms). Increased use of disinfectant products may result in higher rates of asthma episodes, which result in increased use of asthma medications and even visits to medical providers.

According to the CDC, SARS-CoV-2, the novel coronavirus that causes the disease COVID-19, is believed to spread primarily person to person through airborne respiratory droplets. However, they suspect that the virus may spread via surfaces as well. Once the virus is transferred from surfaces via your hands to your face, you may become infected. The primary defense against surface contamination recommended by CDC is washing your hands regularly with soap and water. Another way to address the risk of SARS-CoV-2 on surfaces is cleaning. The EPA recently released a list of antimicrobial products for use against SARS-CoV-2. (See URL #4 below.) This list has been created under an EPA emerging viral pathogens program. The list is not based on actual specific scientific investigations but is based on the ability of the cleaning product to kill similar viruses. A key limitation of the list is that it does not consider which products are asthmagens.

The Environmental Working Group (EWG) has identified 16 products from the EPA antimicrobial list that are safer for use in your home and safer for use around people with asthma. (See URL #6 below.) Several of the safer cleaning products recommended by EWG include hydrogen peroxide as the active ingredient. The advantage of using hydrogen peroxide is that there are fewer residual chemicals since hydrogen peroxide (H₂O₂) breaks down into water (H₂O) and oxygen (O₂). In addition to using safer products, you need to ventilate the area that you are cleaning. Even with products that are identified as safer, you should always read and follow label instructions.

As mentioned previously, soap and water are also effective against the SARS-CoV-2. Enveloped viruses like SARS-CoV-2 are the easiest type to deactivate because of their flimsy shell. In contrast with many gastrointestinal viruses like norovirus which have a tough protein shell called a capsid, viruses like SARS-CoV-2, with their fatty wrapping, are relatively vulnerable. There are a few ways to burst this flimsy shell. **Soap and water are one of the effective ways to not only wash away the virus, but to kill it. Combining soap and water with microfiber cloths to target surfaces and high-touch points (door knobs, light switches, appliance handles), has been shown to be an effective approach to healthy cleaning.** The California work-related asthma prevention program provides fact sheets on using microfiber for cleaning. (See URL #5 below.)

If you decide that you still must use something “stronger” to clean surfaces that may be contaminated with SARS-CoV-2, then it is important to read and follow label instructions. **Additionally, if anyone in the home has asthma, vigorous ventilation is particularly important while using the cleaning products. Vigorous ventilation should continue until there are no residual odors from the cleaning product.** The Texas A&M Extension Service and the University of Arizona Extension Service have provided extensive guidance on the proper and safe use of disinfectants. (See URL #8 below.) Improper use of disinfectants can be harmful to everyone, but people with asthma will be impacted even more.

We recommend that everyone continue to watch for updates on all aspects of COVID-19, since the science regarding COVID-19 is still evolving. Scientists will need a lot more data in order to provide more guidance on the risks and to make specific recommendations on all aspects of COVID-19.

If you have questions about the information in this article, contact mansel.nelson@nau.edu.

For more information:

1. <https://www.cdc.gov/asthma/> This website provides information to help Americans with asthma achieve better health and improved quality of life.
2. <https://www.epa.gov/asthma> Information on managing asthma triggers. Asthma publications and other resources are also available.
3. <https://bit.ly/www-cdph-ca-gov> This guide helps school districts transition to asthma-safer products and practices. The guide outlines products and methods that help prevent asthma or asthma symptoms.
4. <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>
List N includes products that meet EPA’s criteria for use against SARS-CoV-2, the novel coronavirus that causes the disease COVID-19.
5. <https://bit.ly/CA-microfiber> The fact sheet explains how microfiber is a highly effective cleaning tool that is also safer for asthma as well as how to use and take care of the microfiber cloths.
6. <https://bit.ly/EWG-COVID-19> The EWG screened hundreds of disinfectants and sanitizers approved and recommended by the Environmental Protection Agency and the Centers for Disease Control and Prevention, and checked them against their “Guide to Healthy Cleaning”. They identified 16 safer products.
7. <https://bit.ly/TAMU-disinfectants-are-pesticides-so-use-safely> Texas A&M Extension Service emphasizes that disinfectants are pesticides, so use them safely.
8. <https://bit.ly/UofA-Extension-COVID-19> The University of Arizona Extension staff provide a useful summary of SARS-CoV-2 and COVID19 as well as appropriate cleaning guidance.