



Safer Disinfectant Use During the COVID-19 Pandemic

Guidance from the Western States Pediatric Environmental Health Specialty Unit



wspehsu.ucsf.edu

The new virus that causes COVID-19 can be transmitted through the air or by touching surfaces that someone has recently sneezed or coughed on and then touching your eyes, nose or mouth.



Washing your hands or using hand sanitizer after touching possibly contaminated surfaces, and keeping your hands away from your face are the most effective ways to avoid transmission. To prevent airborne exposures, we suggest following [CDC recommendations](#). This fact sheet focuses on cleaning and disinfecting surfaces.

Using disinfectants on surfaces in your home can kill disease causing germs (bacteria and viruses), but they may also have health risks. For example, many common disinfectants (like bleach, many disinfectant wipes) have chemicals in them that can cause or worsen asthma or have reproductive harms.

Cleaning

Clean surfaces in your house with an all-purpose cleaner or soap, and a microfiber cloth. Many germs are removed if you clean and scrub vigorously, which can avoid the need for disinfectants. If disinfection is needed, cleaning first allows the disinfectants to work better. Cleaning products certified by [Green Seal](#) or [Safer Choice](#) are safer for people and the environment.



What to Disinfect

- ▶ Frequently touched surfaces if someone is sick or suspected to be sick,
- ▶ Potentially contaminated products coming in from outside the household,
- ▶ Any surfaces that are touched with unwashed hands after returning from public places (better yet, use hand sanitizer on your hands before you come in the house and touch anything!).

Safer, Effective Disinfection Choices

Not all disinfecting products are the same. Many disinfectants may have health risks, especially for children, pregnant women and people with respiratory diseases. There are safer choices!

The EPA Design for the Environment Antimicrobial Product Program has a [list](#) of disinfection products that use active ingredients that are safer for human health and the environment. These active ingredients are: citric acid, hydrogen peroxide, L-lactic acid, ethanol, isopropanol, peroxyacetic acid, sodium bisulfate. Choose products with these active ingredients from the [EPA List N](#) which lists disinfectant products that meet EPA's criteria for use against the virus that causes COVID-19.

[continued >](#)

EPA Registration Number	Active Ingredient/s	Product Name	Company	Follow the disinfection directions and preparation for the following virus	Contact Time (in minutes)
	Hydrogen Peroxide				

Example from EPA List N

Safer Disinfectant Use During the COVID-19 Pandemic



> continued

To more safely disinfect

- ▶ **First, clean** the surface as described above.
- ▶ **Second, disinfect** using a disinfectant that contains one of the active ingredients approved by the EPA's Design for the Environment Antimicrobial Product program as safer for people and the environment (see list above).
- ▶ **Third, follow the instructions** on the disinfectant label! One of the most important steps in disinfecting is to make sure you leave the disinfectant **glistening wet** on the surface for the recommended **contact time** listed on the product.

Remember that a surface is only disinfected until the next person touches it, or coughs or sneezes on it!

If you can't access some of these safer products:

If you don't have access to a microfiber cloth: wash sponges or towels after every surface cleaned.

- ▶ Options to clean sponges:
 - wash in the dishwasher
 - soak for one minute in a ½ teaspoon of bleach to one quart of water solution
 - For a **non-metallic** sponge, another option is to microwave soaking wet for one minute.
- ▶ Towels can be washed in a basin or washing machine.
- ▶ If you only have access to bleach or quaternary ammonia-based disinfectants, make sure you use the personal protective equipment recommended by the manufacturer. Be sure to ventilate the area well (open windows, bring in outside air, turn on fans). Make sure to dilute per the package instructions and check the expiration date on the product.



As with any disinfectant, it is also important to ensure that they remain glistening wet on the surface for the recommended contact time. **Do not combine disinfectants.** It is especially dangerous to combine bleach and ammonia. For more information on safer bleach use, see this [resource](#) from Michigan State University.

Conclusion

Clean routinely; disinfect only when needed. Disinfection should be targeted at high-risk surfaces, using the safest disinfection products available to you.

Disinfecting surfaces alone won't stop transmission! Remember to also follow CDC guidance regarding social distancing and hand-washing. ♦

Resources

- ▶ CDC recommendations for airborne exposures: [cdc.gov/coronavirus/2019-ncov/prepare/prevention.html](https://www.cdc.gov/coronavirus/2019-ncov/prepare/prevention.html)
- ▶ California Department of Pesticide Regulation factsheet: *What's So Great About Microfiber?* https://wspehsu.ucsf.edu/wp-content/uploads/2015/10/FactSheet_Microfiber.pdf
- ▶ Green Seal Safer Cleaning Products List: <https://www.greenseal.org/certified-products-services?s=Household+Cleaning+Products>
- ▶ EPA Safer Choice Products List: <https://www.epa.gov/saferchoice/products>
- ▶ EPA Design for The Environment Antimicrobial Pesticide Program: <https://www.epa.gov/pesticide-labels/design-environment-logo-antimicrobial-pesticide-products>
- ▶ EPA Design for the Environment Antimicrobial Product Program [EPA List N: https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2](https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2)
- ▶ EPA List of Products for Use Against SARS-CoV-2: <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>
- ▶ Michigan State University resource on bleach: <https://www.canr.msu.edu/news/covid-19-disinfecting-with-bleach>

This material was supported by the American Academy of Pediatrics (AAP) and funded (in part) by the cooperative agreement award number 1 NU61TS000296-01-00 from the Agency for Toxic Substances and Disease Registry (ATSDR). Acknowledgement: The U.S. Environmental Protection Agency (EPA) supports the PEHSU by providing partial funding to ATSDR under Inter-Agency Agreement number DW-75-95877701. Neither EPA nor ATSDR endorse the purchase of any commercial products or services mentioned in PEHSU publications.