



Safer Disinfectant Use During the COVID-19 Pandemic

Guidance from the Western States Pediatric Environmental Health Specialty Unit

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 very important in order to avoid transmission. To prevent airborne exposures, we suggest following [CDC recommendations](#). This fact sheet focuses on cleaning and disinfecting surfaces, in accordance with [CDC guidelines](#), while minimizing the chance of disinfectant health effects.

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 harm reproductive health.



Cleaning: Removing Dirt and Germs

Clean surfaces in your house with an all-purpose cleaner or soap, and a rag, towel or cloth. If available, the best type of cloth to use is microfiber. Wash microfiber after every use in the sink or washing machine. If you fold the microfiber in half and then half again, you will have 8 disinfecting surfaces to use before you need a new one. Wash separately from other cloth types, without fabric softeners. 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.

Disinfecting: Killing Germs

What to disinfect:

- ▶ Frequently touched surfaces
- ▶ 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!)

Many disinfectants are not safe for use on food contact surfaces. Look for the words "food-contact sanitizer" on the product label which indicates it is safe for food contact surfaces.

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 (DfE) Antimicrobial Product Program has a [list](#) of disinfection products that use ingredients (both active and inactive) that are safer for human health and the environment. The safer active ingredients are: citric acid, hydrogen peroxide, L-lactic acid, ethanol, isopropanol, peroxyacetic acid, sodium bisulfate, and chitosan. The [EPA List N](#) lists disinfectant products that meet EPA's criteria for use against the virus that causes COVID-19. The best option is to filter the [DfE list](#) to show only those that are also on list N. If those products are unavailable, choose products with the safer active ingredients from the N list.

Example from DfE list

#	EPA Registration Number	Active Ingredient	Use Site
		Glutaraldehyde	
		Glycolic acid	
		Hydrochloric acid	
		Hydrogen chloride	
		Hydrogen peroxide	
		Hypochlorous acid	
		Iodine	

Example from EPA List N

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To more safely disinfect

- ▶ **First, clean** the surface as described above.
- ▶ **Second, disinfect** using a disinfectant on EPA's N list 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 label.
- ▶ **Fourth**, make sure the product has an **EPA registration number** and is not expired. Always store disinfectants according to label instructions, in a well-ventilated space out of reach of children.

It is better to use a liquid disinfectant and microfiber cloth instead of disinfecting wipes, because wipes are often not wet enough to achieve the necessary contact time.

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 or dispose of sponge, rag, or towel after every surface cleaned. If you fold a rag/towel in half and then in half again, you will have 8 disinfecting surfaces to use before you need a new one.

- ▶ Options to clean sponges:
 - wash in the dishwasher
 - soak for one minute in a ½ teaspoon of bleach mixed in one quart of water solution
 - For a **non-metallic** sponge, another option is to microwave soaking wet for one minute.
- ▶ Towels can be washed with soap or detergent in a basin or washing machine.
- ▶ If you only have access to bleach or disinfectants with active ingredients

other than those listed as safer, 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).

As with any disinfectant, it is also important to ensure that you follow package instructions, that it remains glistening wet on the surface for the recommended contact time, that the disinfectant has an EPA registration number, is stored safely according to label instructions and is not expired. Bleach has a relatively short shelf-life (less than one year). **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 masks, 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 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>

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