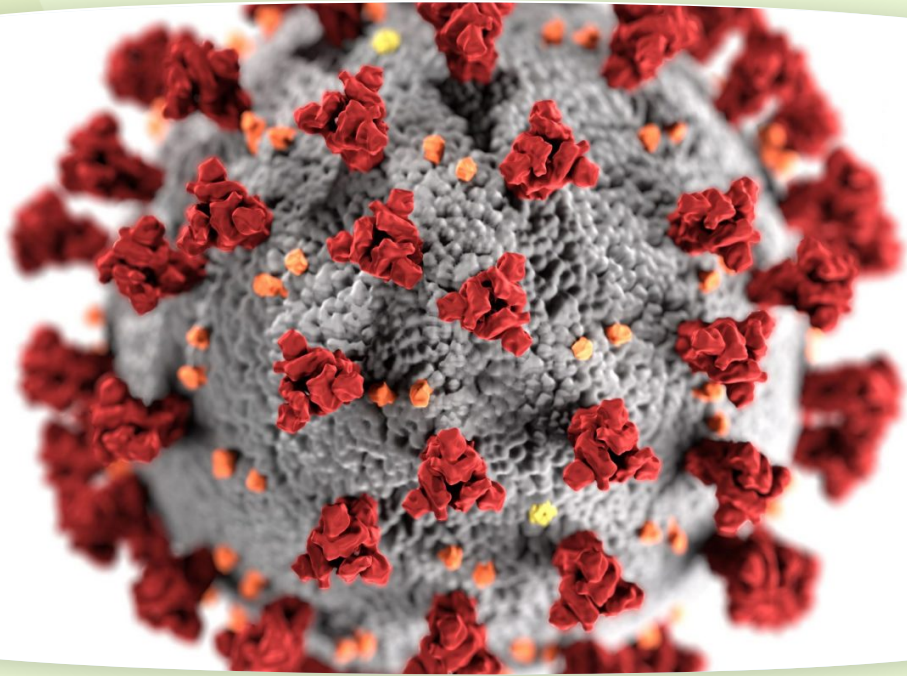


Safer Disinfectant Use in Child Care and Schools During the COVID-19 Pandemic



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Why Should We Be Concerned about Environmental Health in ECE?



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- There are 8 million children in child care centers in the U.S. A child may spend up to 12,500 hours in an ECE facility. A million child care providers work in these centers in the U.S. Half are child-bearing age.
- Many toxicants found in child care facilities are not addressed in state child care health and safety regulations.
- No agency at the state or federal level is charged with ensuring children's health and safety in and around schools and ECE facilities.
- No systematic means exists for collecting data on environmental exposures in these buildings.
- Teachers have more protection in these buildings (unions, OSHA) than children do



Why Should We Be Concerned about Environmental Health in ECE?

- Many people think that adults and children are exposed to, and affected by, toxic chemicals in the same way.
- This is not the case.
- Children
 - have **higher exposures** to toxicants in the environment,
 - are **more vulnerable** to the effects of those toxicants than adults.



Cleaning and Disinfecting Products: A Major Source of Exposure in Child Care and Schools



- Products used to clean, sanitize and disinfect child care facilities and schools are a good example of the pervasive and unregulated use of toxic chemicals that put the health of our children at risk.
- **A Green Cleaning, Sanitizing, and Disinfecting Program**—a great way to reduce everyone’s exposure to toxic chemicals.



Cleaning

- Uses a detergent and water to physically remove dirt, grime and germs from surfaces. This process does not necessarily kill germs, though **SARS-CoV-2's outer lipid layer is dissolved by soap and the virus falls apart.**
- Removes molds and allergens that can trigger asthma symptoms.

Has been found to remove as much as 99% of germs when microfiber cleaning tools are used.



Sanitizing

- Reduces the number of germs on hard surfaces or objects to a safer level - at least a 99.9% reduction.
- For food surfaces the level should be a 99.999% reduction in microorganisms within 30 seconds.
- Sanitizing products should state on their label the surfaces they are intended to be used on.

Sanitizers are used on food preparation and contact surfaces, and mouthed toys and pacifiers.



Disinfecting

- **Inactivates 99.999% of germs** on surfaces or objects if allowed to sit visibly wet or “dwell” on the surface for the recommended amount of “dwell” time.
- For use on:
 - changing tables
 - bathroom sinks and toilets
 - high risk areas that collect lots of germs, such as doorknobs, cabinet handles and drinking fountains.

A disinfectant must stay on the surface for at least the recommended dwell time or it will not ‘kill’ all of the germs. This may lead to the creation of “super bugs”.



How Do We Know What Process to Use?

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Caring for Our Children: National Health and Safety Performance Standards

Guide for Cleaning, Sanitizing, and Disinfecting

Areas	Before Each Use	After Each Use	Daily (At the End of the Day)	Weekly	Monthly	Comments
Food Areas						
• Food preparation surfaces	Clean, Sanitize	Clean, Sanitize				Use a sanitizer safe for food contact
• Eating utensils & dishes		Clean, Sanitize				If washing the dishes and utensils by hand, use a sanitizer safe for food contact as the final step in the process; Use of an automated

Caring for Our Children

National Health and Safety Performance Standards
Guidelines for Early Care and Education Programs

Third Edition



Why Can't We Just Use a Disinfectant/ Cleaner Everywhere?

- Disinfectants don't necessarily clean surfaces. Germs can hide under dirt and grime and are not affected by disinfectants. Some disinfectants are not effective in the presence of dirt.
- The products used to disinfect are more toxic and usually more expensive than products used to just clean.
- Overusing antimicrobial products may also lead to the spread of "super bugs." Superbugs are germs that are resistant to disinfectants and/or antibiotics.
- **NEVER** use disinfecting products, or wipes, on bodies/
hands!



Health Hazards of Cleaners, Sanitizers and Disinfectants

Key Points:

- The words “natural,” “nontoxic,” and “green” that appear on product labels are unregulated by the government.
- Researchers have found that products labeled “green” often have as many toxic chemicals as conventional cleaning products.
- Cleaning products do not have to list ingredients on the label and manufacturers do not have to prove that they are safe before they market them.
- These gaps in ingredient information on product labels make it difficult for the consumer to make wise choices when purchasing cleaning products.



Identifying Safer Products

The only way to know which cleaning products are safer:

Buy products certified as safer for human health and the environment by an independent third party agency



Identifying Safer Cleaning Products

Third-party certified cleaning products

-Green Seal

-EcoLogo

-Design for the Environment



Design for the Environment pilot disinfectant project is the only agency that certifies *disinfectants* as safer for human health and the environment.



Surfaces are only disinfected until someone touches, coughs, or sneezes on them!

REMEMBER:

- COVID 19 is primarily spread by inhaling droplets in the air.
- If you touch a surface contaminated with the COVID 19 virus, you won't get sick if:
 - You don't touch your face
 - You wash your hands for 20 seconds with soap and water. Hand sanitizer is acceptable if handwashing is not possible, but it is not as effective, especially if hands are dirty.
- The virus that causes COVID 19 is encased in a "lipid envelope." This envelope is dissolved by soap and water, so washing hands and surfaces well with soap and water will dissolve the virus's surface, causing it to fall apart.



CDC Recommendations for Schools and Child Care Facilities

- **Indoor areas:**
 - **Clean and disinfect frequently touched (by many people) hard surfaces/objects often.**
- **Soft and porous materials like carpet, rugs, or material:**
 - **Thoroughly clean or launder materials. Consider removing soft and porous materials in high traffic areas. Disinfect materials if appropriate products are available (see List N for products that can be used on porous surfaces).**



CDC Recommendations for Schools and Child Care Facilities

- **Outdoor areas:**
 - Maintain existing cleaning practices. Coronaviruses naturally die in hours to days in typical indoor and outdoor environments.
 - Viruses are killed more quickly by warmer temperatures, higher humidity, and sunlight.
 - High touch surfaces made of plastic or metal, such as grab bars and railings should be cleaned, but not disinfected, routinely.
 - Cleaning and disinfection of wooden surfaces (play structures, benches, tables) or groundcovers (mulch, sand) is not recommended.
 - Remember that children should always wash their hands with soap and water after coming in from outdoor play!

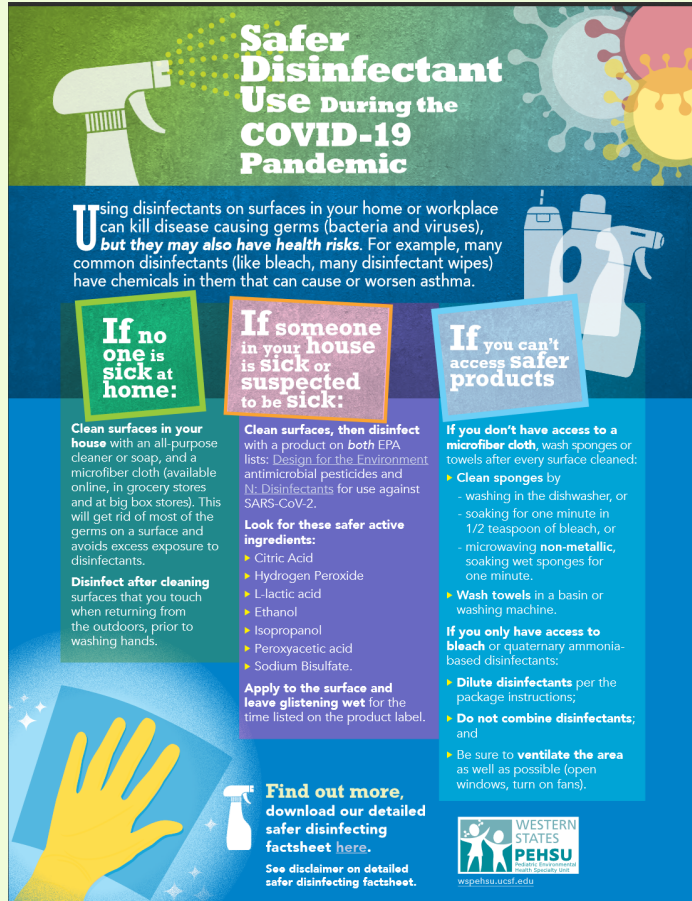


CDC Recommendations for Schools and Child Care Facilities

- **Store and use disinfectants in a responsible manner according to the label.**
- **Do not mix bleach or other cleaning and disinfection products together--this can cause fumes that may be very dangerous to breathe in.**
- **Keep all disinfectants out of the reach of children. Large containers of hand sanitizers are flammable and should be stored as such.**
- **Disinfectants should typically not be applied on items used by children, especially any items that children might put in their mouth. Use a food contact sanitizer.**
- **If your facility has been unoccupied for 7 days or more, it will only need your normal routine cleaning to reopen. This is because the virus that causes COVID-19 has not been shown to survive on surfaces longer than this time.**



Resources



Safer Disinfectant Use During the COVID-19 Pandemic

Using disinfectants on surfaces in your home or workplace 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.

If no one is sick at home:

Clean surfaces in your house with an all-purpose cleaner or soap, and a microfiber cloth (available online, in grocery stores and at big box stores). This will get rid of most of the germs on a surface and avoids excess exposure to disinfectants.

Disinfect after cleaning surfaces that you touch when returning from the outdoors, prior to washing hands.

If someone in your house is sick or suspected to be sick:

Clean surfaces, then disinfect with a product on both EPA lists: Design for the Environment antimicrobial pesticides and N: Disinfectants for use against SARS-CoV-2.

Look for these safer active ingredients:

- ▶ Citric Acid
- ▶ Hydrogen Peroxide
- ▶ L-lactic acid
- ▶ Ethanol
- ▶ Isopropanol
- ▶ Peroxyacetic acid
- ▶ Sodium Bisulfate.

Apply to the surface and leave glistening wet for the time listed on the product label.

If you can't access safer products

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

- ▶ **Clean sponges by**
 - washing in the dishwasher, or
 - soaking for one minute in 1/2 teaspoon of bleach, or
 - microwaving **non-metallic**, soaking wet sponges for one minute.
- ▶ **Wash towels** in a basin or washing machine.

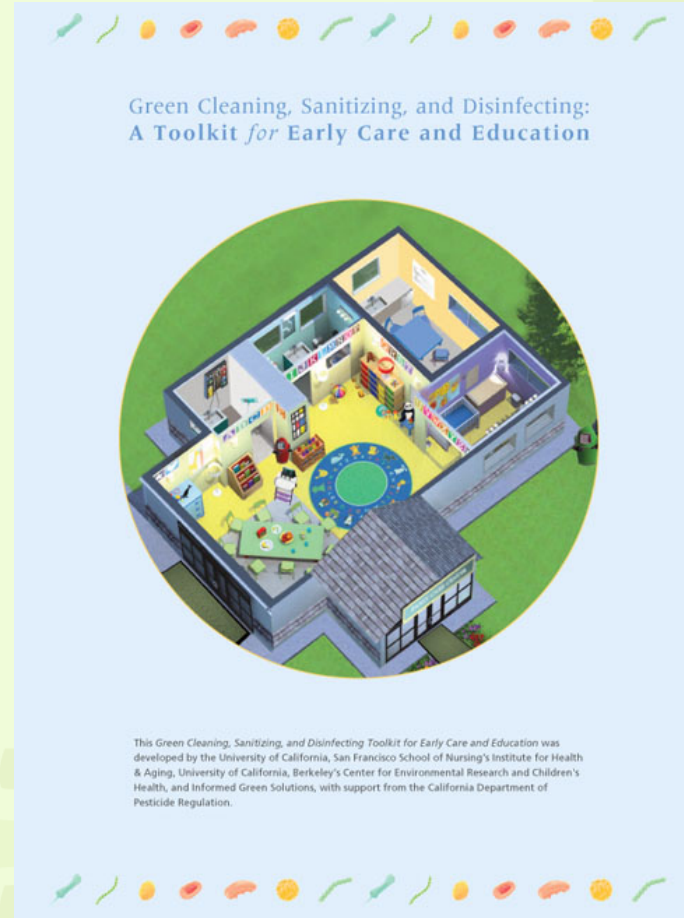
If you only have access to bleach or quaternary ammonia-based disinfectants:

- ▶ **Dilute disinfectants** per the package instructions;
- ▶ **Do not combine disinfectants;** and
- ▶ Be sure to **ventilate the area** as well as possible (open windows, turn on fans).

Find out more, download our detailed safer disinfecting factsheet [here](#). See disclaimer on detailed safer disinfecting factsheet.



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wspelhsu.ucsf.edu



Green Cleaning, Sanitizing, and Disinfecting: A Toolkit for Early Care and Education

This Green Cleaning, Sanitizing, and Disinfecting Toolkit for Early Care and Education was developed by the University of California, San Francisco School of Nursing's Institute for Health & Aging, University of California, Berkeley's Center for Environmental Research and Children's Health, and Informed Green Solutions, with support from the California Department of Pesticide Regulation.



Resources

- Western States Pediatric Environmental Health Specialty Unit (WSPEHSU): [Safer Disinfectant Use During the COVID 19 Pandemic Fact Sheet](#)
- Western States Pediatric Environmental Health Specialty Unit (WSPEHSU): [Safer Disinfectant Use During the COVID 19 Pandemic Infographic](#)
- [Green Cleaning Sanitizing and Disinfecting: A Toolkit for Early Care and Education](#)
- Holm, S. M., et al. (2019). "[Do we know how best to disinfect child care sites in the United States? A review of available disinfectant efficacy data and health risks of the major disinfectant classes.](#)" Am J Infect Control **47**(1): 82-91.
- [EPA Design for The Environment Antimicrobial Pesticide Program Safer Disinfectants List](#)
- [EPA Disinfectants Effective Against SARS-CoV-2 \(List N\)](#)
- [EPA Cleaning and Disinfecting Decision Tool \(PDF\)](#)



Resources

- [EPA: Guidance for Cleaning and Disinfecting Public Spaces, Workplaces, Businesses, Schools and Homes \(PDF\)](#)
- [Green Seal Safer Cleaning Products List](#)
- [EPA Safer Choice Products List](#)
- [SPOT: Ecologo's sustainable product database](#)
- [Envirox: Your Guide to Green Cleaning Product Certifications](#)
- [Disinfection is a Process, Not a Product \(video\)](#)
- [What are the differences between these types of products?](#)
- [Vox: How soap kills the coronavirus](#)



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