

How to Sanitize and Disinfect Surfaces in Childcare Environments

By Linda F. Golodner and Guest Authors Kaitlin Greenberg, MPH, Christine Ortiz Gumina, MPH, Francelli Lugo, MPH, and Michele Samarya-Timm, MA, HO, MCHES, REHS

Childcare environments are notorious for spreading infections. Parents can teach children to wash their hands, cover coughs and sneezes (with a tissue or their elbows, not their hands), and keep hands out of their mouths and eyes to help prevent them from getting or spreading an infectious illness. (See, for example, this [CDC cartoon video](#).) Unfortunately, these lessons cannot be taught to babies and very young toddlers.



Cleaning, Sanitizing, and Disinfecting

Childcare staff have the significant responsibility to appropriately clean, sanitize, and disinfect critical surfaces in their facility. It is important for staff to understand that cleaning, sanitizing, and disinfecting are separate and distinct tasks. The box below describes the differences among these tasks.

Cleaning, Disinfecting, Sanitizing: What Are the Differences?

Cleaning removes germs, dirt, and impurities from surfaces or objects. Cleaning works by using soap (or detergent) and water to physically remove germs from surfaces. This process does not necessarily kill germs, but by removing them, it lowers their numbers and the risk of spreading infection.

Sanitizing lowers the number of germs on surfaces or objects to a safe level, as judged by public health standards or requirements.

Disinfecting kills germs on surfaces or objects. Disinfecting works by using chemicals to kill germs on surfaces or objects. This process does not necessarily clean dirty surfaces or remove germs, but by killing germs on a surface after cleaning, it can further lower the risk of spreading infection.

Based on: <https://www.cdc.gov/flu/school/cleaning.htm>

Not all items and surfaces in childcare environments require sanitizing and disinfecting. The National Association for the Education of Young Children provides a helpful [Cleaning, Sanitizing, and Disinfecting Frequency Table](#). A sampling of information from the table indicates, for example, that:

- Machine washable cloth toys and dress-up clothes should be **cleaned** by laundering **on a weekly basis**
- Tables and highchair trays should be **cleaned and then sanitized both before and after each use**
- Changing tables should be **cleaned and then disinfected after each use**
- Diaper pails should be **cleaned and then disinfected daily, at the end of the day**

Getting the Job Done with Chlorine Bleach

One of the most popular and cost-effective products used for sanitizing and disinfecting surfaces in childcare environments is chlorine bleach. Regular strength chlorine bleach (approximately 6% strength) can be mixed with water in specific ratios to provide all the sanitizing and disinfecting power needed to help destroy pathogens on surfaces in childcare environments. Recognizing that some confusion exists among childcare providers on how to use chlorine

bleach for sanitizing¹ and disinfecting² surfaces, we embarked on a multi-month project with the American Chemistry Council to develop [simple, understandable directions for using this product](#).

The project is now complete, and the results are two freely downloadable “pictogram” posters. One poster addresses surfaces that should be *sanitized* (e.g., crib rails, toys and high chair trays), and the other addresses surfaces that should be *disinfected* (e.g., diaper-changing tables, toilets, bathroom sinks and diaper pails).

Each poster provides specific directions on mixing an appropriate solution of chlorine bleach in water. To be as “language neutral” as possible, –pictograms were used - to illustrate each step, minimizing text to the extent possible, and maximizing images. The posters can be laminated and displayed in childcare settings to remind staff of proper procedures.



The posters reinforce the importance of:

- Cleaning a surface before sanitizing or disinfecting
- Using a new cloth or paper towel for each surface addressed
- Using chlorine test strips to ensure the correct chlorine concentration has been achieved
- Allowing the bleach solution to remain wet on a surface for an appropriate “contact time”
- Washing hands after sanitizing or disinfecting a surface.

According to [ChildCare Aware of America](#), each week, over 11 million children younger than age five are in some kind of childcare arrangement in the U.S. It stands to reason that the sanitary condition of our childcare facilities is a significant factor in the healthy development of this precious population.

Please contribute to healthy childcare environments by sharing these poster resources with childcare facilities!

Linda F. Golodner is President Emeritus of the National Consumers League and Vice Chair of the Water Quality & Health Council. Kaitlin Greenberg and Francelli Lugo are epidemiologists at the City of Albuquerque Environmental Health Department. Christina Ortiz Gumina is a project coordinator at the National Environmental Health Association. Michele Samarya-Timm is a health educator and registered environmental health specialist at the Somerset County (NJ) Department of Health.

www.waterandhealth.org

¹ For a sanitizing solution, we recommend adding 1 tablespoon of 6% chlorine bleach to 1 gallon of water.

² For a disinfecting solution, we recommend adding 2.5 tablespoons of 6% chlorine bleach to 1 gallon of water.