

Selecting an Appropriate Sanitizer

(Reproduced from *Caring for Our Children, 2nd ed.*)

One of the most important steps in reducing the spread of infectious diseases among children and child care providers is cleaning and sanitizing of surfaces that could possibly pose a risk to children or staff. Routine cleaning with detergent and water is the most useful method for removing germs from surfaces in the child care setting. However, some items and surfaces require an additional step after cleaning to reduce the number of germs on a surface to a level that is unlikely to transmit disease. This step is called sanitizing. A household bleach and water mixture, or one of a variety of other industrial products can be used.

Sanitizer solutions can be applied in various ways:

- Spray bottle, for diaper changing surfaces, toilets, and potty chairs.
- Cloths rinsed in sanitizing solution for food preparation areas, large toys, books, and activity centers.
- Dipping the object into a container filled with the sanitizing solution, for smaller toys.

The concentration and duration of contact of the sanitizer varies with the application and anticipated load of germs. More chemical is required when a cloth or objects are dipped into the solution because each dipping releases some germs into the solution, potentially contaminating solution. When you apply the sanitizing solution to a surface, follow the instructions for that solution to determine the dilution and minimum contact time.

In general, it is best not to rinse off the sanitizer or wipe the object dry right away. A sanitizer must be in contact with the germs long enough kill them. For example, when you using a properly prepared solution of bleach water applied from a spray bottle to cleaned and rinsed surfaces, the minimum contact time is 2 minutes. For cleaned and rinsed dishes submerged in a container that is filled with properly prepared bleach solution, the contact time is a minimum of 1 minute. The label on industrial sanitizers specifies the instructions for using the special chemicals. Since chlorine evaporates into the air leaving no residue, surfaces sanitized with bleach may be left to air dry. Some industrial sanitizers require rinsing with fresh water before the object should be used again.

Label spray bottles and containers in which sanitizers have been diluted for direct application with the name of the solution (such as Bleach Sanitizer) and the dilution of the mixture. Although solutions of household bleach and water are merely irritating if accidentally swallowed, some other types of sanitizer solutions are toxic. Keep all spray containers and bottles of diluted and undiluted sanitizer out of the reach of children.

Household Bleach & Water

Household bleach with water is recommended. It is effective, economical, convenient, and readily available. However, it should be used with caution on metal or metallic surfaces. If bleach is found to be corrosive on certain materials, a different sanitizer may be required.

When purchasing household bleach, make sure that the bleach concentration is for household use, and not for industrial application. Household bleach is typically sold in retail stores in one of 2 strengths: 5.25% hypochlorite (regular strength bleach) or 6.00% hypochlorite (ultra strength bleach) solutions.

The solution of bleach and water is easy to mix, non-toxic, safe if handled properly, and kills most infectious agents.

- 1) *Recipe for a spray application on surfaces that have been detergent-cleaned and rinsed in bathrooms, diapering areas, countertops, tables, toys, door knobs and cabinet handles, phone receivers, handwashing sinks, floors, and surface contaminated by body fluids (minimum contact time = 2 minutes):*

1/4 cup bleach + 1 gallon of cool water
OR
1 tablespoon bleach + 1 quart of cool water

- 2) *Recipe for weaker bleach solutions for submerging of eating utensils that have been detergent-cleaned and rinsed (minimum contact time = 1 minute):*

1 tablespoon bleach + 1 gallon of cool water

A solution of bleach and water loses its strength and is weakened by heat and sunlight. Therefore, mix a fresh bleach solution every day for maximum effectiveness. Any leftover bleach solution should be discarded at the end of the day.

Note: Do not mix household bleach with other household chemicals such as toilet cleaners, rust removers, acids or products containing ammonia. Mixing these chemicals with bleach will produce hazardous gases.

Industrial Products

There are a number of industrial products that are available. Industrial products that meet the Environmental Protection Agency's (EPA's) standards for "hospital grade" germicides (solutions that kill germs) may be used for sanitizing.

Be cautious about industrial products that advertise themselves as "disinfectants," having "germicidal action," or "kills germs." While they may have some effect on germs, they may not have the same effectiveness as bleach and water, or EPA approved hospital grade germicides.

Before using anything other than bleach for sanitizing, consult with your local health department or regulatory licensing authority.

If you use an EPA-approved industrial product as a sanitizer, read the label and always follow the manufacturer's instructions exactly.

References: Canadian Paediatric Society. Well Being: A Guide to Promote the Physical Health, Safety and Emotional Well-Being of Children in Child Care Centers and Family Day Care Homes, 2nd ed. Toronto, ON; 1996

Centers for Disease Control and Prevention. The ABC's of Safe and Healthy Child Care; 1996