Healthy Homes

Steps to a Clean and Safe Child Care Home

Sources:

Healthy Homes for Family Child Care Educators Boston Healthy Homes and Schools
Caring for Our Children—National Health and Performance Standards
UMass Lowell Toxics Use Reduction Institute—www.turi.org.
Green Cleaning, Sanitizing, and Disinfection Toolkit for Early Care and Education University of California and Berkeley Center for Environmental Research.
Massachusetts Department of Early Education and Care

Common Health Concerns of Home Environment

We all want to provide the safest environment for young children. However, young children sneeze, cough, drool, use diapers, and are just learning to use the toilet. They hug, kiss, touch everything, put things in their mouths, and readily spread germs. For family child care educators, our home child care environments present understandable challenges to maintaining a clean and healthy home!

We think that cleaning is straightforward, but there are many concerns about cleaning that involve everything from allergic reactions to safe infection control. We are bombarded with many cleaning product choices, but are they all safe? The following training will look at cleaning, sanitizing, and disinfecting strategies that will keep and maintain a safe and healthy child care home.

What is the difference between cleaning, sanitizing, and disinfecting?

Sometimes these terms are used interchangeably, but they do not mean the same thing. Each process has a different outcome. These are legal terms defined by the Environmental Protection Agency (EPA).

Clean: The process that physically removes debris from the surface by scrubbing, washing and rinsing. It may be accomplished with soap/detergent and water.

Sanitize: Using a product that kills 99.9% of germs identified on its label. Sanitizing can also be accomplished by using a device, such as a dishwasher, that reduces the germs on surfaces to a level considered safe by public health standards. Sanitizing is the appropriate method to use in food service areas.

Disinfect: Using a product that kills 99.999% of germs on hard, non-porous surfaces or objects. Some germs are very hard to kill, but disinfectants must be used properly to avoid health and environmental concerns. For example, a surface must be clean in order for disinfecting products to work.

<u>What are family child care program EEC responsibilities?</u>

The Massachusetts Department of Early Education and Care (EEC) has developed policy that provides additional information regarding the means, methods, and frequency of cleaning, sanitizing, and disinfecting. Using recommendations from the Massachusetts Department of Public Health (MDPH), there are a number of steps to follow:

Per EEC—steps to follow:

1. Cleaning alone is sufficient for some surfaces. Cleaning is to physically remove dirt, debris, and sticky film from a surface by scrubbing, washing, wiping, and rinsing. Clean is done with regular (<u>not antibacterial</u>) soap or detergent and water. Items that only require cleaning and not sanitizing/disinfecting are:

◊ Towels, washcloths, sheets, pillowcases/coverings, and washable fabric toys are to be washed and dried before use by another child, or at least weekly.

◊ Wash cloths used for multiple purposes are to be washed and dried after every use.

2. Sanitizing or disinfecting must follow cleaning as required. Cleaning first allows the sanitizing or disinfecting product to come into contact with the surface.
3. Sanitizing (after cleaning) is the proper treatment for most equipment and surfaces in early education and care programs. Sanitizing surfaces destroys enough germs to reduce the risk of becoming ill from contact with those surfaces.
4. Disinfecting (after cleaning) is the proper treatment for surfaces or equipment where safe contact requires a more powerful response to germs. Disinfecting is the proper procedure for equipment and surfaces that are involved in toileting and Special Precautions.
5. Special Precautions treatment requires that surfaces exposed to blood or vomit spills be disinfected *while wearing gloves*.
6. Sponges must not be used for sanitizing or disinfecting.
7. Surfaces and equipment must air dry after sanitizing or disinfecting. Do not wipe dry unless it is a product instruction.
8. Small items requiring sanitation (such as pacifiers) may be dipped in a container for that purpose filled with a sanitizing solution and allowed to air dry, or may be washed and dried in a dishwasher.
9. All sanitizing and disinfecting solutions must be properly labeled to identify the contents; kept out of reach of children; and stored separately from food items. Do not store sanitizing and disinfecting solutions in beverage containers.

Frequency of Sanitizing and Disinfecting:

The following items must be cleaned and sanitized daily, <u>*before and after each use*</u>:

- All surfaces used for eating.

The following must be cleaned and sanitized <u>*after each use*</u>:

- Bibs (when used for only one child, use good judgement to determine whether the bib can be reused before washing)
- Thermometers
- Bottles, eating & drinking utensils, dishes, and preparation utensils
- Mops, cloths, or other cleaning equipment when *not used for cleaning bodily fluids*

The following items, equipment, and surfaces must be cleaned and sanitized or disinfected *at least daily*:

Cleaned and Sanitized:

- Sinks and sink faucets (except when used following toileting activities)
- Drinking fountains
- Play tables
- Pacifiers, labeled and reserved for individual use
- Smooth, surfaced, non-porous floors. (Programs operating four or fewer hours per day may wash floors on a weekly basis provided there are no infants or toddlers in care. All spills or accidents must be cleaned immediately.)

Cleaned and Disinfected:

- Toilets and toilet seats
- Containers, including lids, used to hold soiled diapers
- Sinks and faucets used after toileting activities
- Water tables and water play equipment

The following items, equipment, and surfaces must be cleaned and sanitized at least weekly and before use by another child:

- Cribs, cots, mats, and other approved sleeping equipment

Sanitizing and Disinfecting Solutions

Recent research regarding the increasing incidence of asthma among children and adults indicates that bleach used as a sanitizing or disinfecting solution can be an asthma trigger. Both state agencies, MDPH and EEC, recommend that, while bleach and water solutions are still allowed, programs begin using EPA Registered sanitizing and disinfecting products without bleach as soon as such products become available for purchase. As of this training, these newer solutions are not readily available. The EPA Registered products will be labeled as sanitizing products or disinfecting products and it is likely that different products will be required for each purpose.

Sanitizing and Disinfecting with Bleach and Water

Programs using a self-made bleach solution must use the guidelines outlined in EEC policy for the appropriate concentration for each use. The following recommendations are for commercial bleach products with an 8.25% bleach concentration only.

Sanitizing and Disinfection with Bleach and Water (continued)

You will be asked to read labels as we continue in this training. Look for the 8.25% concentration on the bleach label along with the words *Sanitizing* and *Disinfecting*. You will discover that scented bleach is never labeled for sanitizing or disinfecting! Therefore, shop only for regular unscented bleach for these purposes.

All bleach and water dilutions must be freshly mixed every 24 hours:

The recommended SANITIZING dilution:

1/4 teaspoon bleach to 1 Pint of cool water
1/2 teaspoon bleach to 1 Quart of cool water
1 teaspoon bleach to 1/2 Gallon of cool water
2 teaspoons bleach to 1 Gallon of cool water

The recommended DISINFECTING dilution:

1 Tablespoon bleach to 1 Pint of cool water
2 Tablespoons bleach to 1 Quart of cool water
1/4 cup bleach to 1/2 Gallon of cool water
1/2 cup bleach to 1 Gallon of cool water

Adding the correct amount of bleach to the container of water will help avoid splashing the solution. Always use bleach in an appropriate dilution.

Application of Sanitizing/Disinfecting Solutions

- Apply the bleach solution after cleaning the surface.
- It is recommended that bleach solutions be applied with a disposable cloth rinsed in the solution and discarded after each use, or with a non-disposable cloth that is laundered in hot water and dried after each use. Paper towels may also be used. For all methods of applying bleach solutions, surfaces should be visibly wet. Allow surfaces to air dry.
- If using a spray bottle, adjust the setting to produce a heavy spray or stream instead of a fine mist. The fine mist may contain particles of strong chemicals that are easier to inhale which can cause asthma or allergy like symptoms.
- Allow for contact time on the surface as specified on the label of bleach product.
- **Apply when children are not present in the area and allow for fresh air ventilation until the bleach solution has dried.**

What are Health Hazards of Cleaners, Sanitizers, and Disinfectants?

As shown in previous pages, cleaning, sanitizing, and disinfecting are critical processes to maintaining a safe, healthy environment for children. However, some products that accomplish these tasks may also cause health problems for children and educators. They may also cause problems in the environment for our waterways and wildlife. Understanding the health risks of cleaning, sanitizing, or disinfecting products can help you:

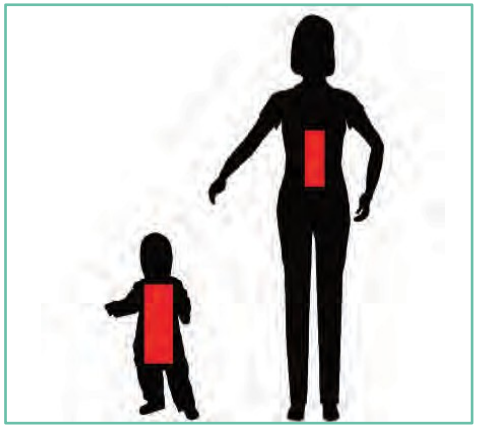
- ✓ Choose them carefully
- ✓ Use them more safely and only when and where needed

Many people think that any product that is sold must be safe. This is not true:

- ♦ The American Poison Control Centers report that household cleaning products and disinfectants are common causes of poisoning in both children and adults.
- ♦ We don't know much about the long-term health effects of many of the products on the market. Health effects may not show up for years. It makes sense to limit children's exposure.

Care of the physical environment is especially important for young children. They are exposed to more germs and toxic chemicals than adults:

- ♦ Children breathe 4 to 6 times more air than adults, and the air they breathe is air close to the ground where pollutants in the air tend to concentrate.
- ♦ Children have more skin covering their bodies relative to their weight than adults.
- ♦ Children have more contact with the floor which may mean that they can absorb more pollutants through their skin.
- ♦ Mouthing objects is more common in young children.
- ♦ Children's hand to mouth behavior means that they ingest more dust than adults. Dust contains many toxic chemicals from cleaning products, pesticides, furnishings, and other sources.



Young children are still developing and have immature bodies. Their bodies are less able to get rid of toxic substances than adults. Children's developing organs, especially their brains, can be affected by exposure to toxic substances. This can affect their growth and ability to learn and function.

Government regulations require only limited labeling of cleaning products. Only the active ingredient chemicals in sanitizers and disinfectants that kill bacteria and viruses have to be listed on the label. Manufacturers are not required to list all of the ingredients on a cleaning product label. Words such as “natural”, “non-toxic”, and “green” that appear on cleaning product labels are poorly regulated and guidelines are rarely enforced. Researchers have found that cleaning products labeled with these terms often have as many hazardous chemicals as conventional cleaning products. It makes it very hard for a consumer to make the wisest choice when purchasing cleaning products.

More than 85,000 commercial chemicals have been developed in the last 60 years. When health testing is done, it’s normally done on a single chemical. However, we are usually exposed to a mixture of chemicals and scientists do not understand the effects of being exposed to mixtures.

Some common chemicals found in cleaning products and their effects:

- ☒ **Ammonia and bleach** cause asthma in people who breathe too much of it in their work. These products are known to trigger asthma attacks in children or educators who already have asthma. These products can also irritate skin, eyes, and respiratory tract when not used properly.
- ☒ **Triclosan** is a suspected endocrine disruptor and may lead to the development of antibiotic resistant bacteria. More on endocrine disruptors to follow.
- ☒ **Phthalates** are used in fragrances that are found in air fresheners and cleaning/ sanitizing products. Research indicates that phthalates increase the risk of allergies and asthma and can affect children’s neurodevelopment and thyroid function.
- ☒ **Volatile organic compounds (VOCs)** are chemicals that vaporize at room temperature. Many VOCs that are released by cleaning supplies have been linked to chronic respiratory problems, allergic reactions, and headaches.
- ☒ **Fragrances** are mixtures of many chemicals, including VOCs. They may contain up to 3,000 separate ingredients and there is no requirement that fragrance ingredients be listed on the product label. Fragrances can trigger asthma and allergies.
- ☒ **Terpenes** are chemicals found in pine, lemon, and orange oils that are used in many cleaning/disinfecting products as well as in fragrances. Terpenes react with ozone forming small particles that can irritate lungs and form formaldehyde. Formaldehyde exposure is associated with numerous health risks.

Extra risk is associated by using any cleaning product dispensed by spray bottles, aerosol cans, and machines such as carpet cleaners that create a fine mist (aerosolization) of the product. The fine mist increases the amount of chemical suspended in the air which can cause problems with breathing. The small particles created by aerosolization can get deeper into lungs. Do not use any of these products around children.

What are endocrine disruptors?

Hormones are substances that are produced by our endocrine system.

- In very, very small amounts hormones control growth, reproduction, metabolism, development, behavior, sleep functions, immune function, and stress. These are all critical life functions.
- These functions are controlled by hormonal messages sent by the endocrine system.
- Hormones also play a role in many diseases, including diabetes and cancer.

Endocrine disruptors are chemicals that interrupt or imitate natural hormonal messages.

- Since hormones work at very small doses, endocrine disrupting chemicals can also affect health in very small amounts.
- According to the National Institute of Environmental Health Sciences, endocrine disruptors may cause reduced fertility in women and men, early puberty in girls, and increases in certain cancers.
- Be especially careful with scented cleaning products. Phthalates are used in cleaning chemicals and air fresheners and are known endocrine disruptors. For this reason, avoid the use of air fresheners. Clean has no smell.
- Triclosan and triclocarbon are antimicrobial chemicals that slow or stop the growth of bacteria and mildew. These chemicals are found in soaps, household cleaners, and in other products. They are suspected endocrine disruptors. Over 1 million pounds of triclosan/triclocarbon are disposed of in the environment every year! **According to the FDA, triclosan is no more effective at killing germs than washing well with regular soap and water.**
- Bisphenol A (BPA) is an example of a chemical endocrine disruptor. You may know that BPA has been used in plastics and has been removed from many items including infant bottles. BPA is still used on the thermal paper that make up receipts that we take from an ATM or gas pump. Whenever possible, decline getting receipts that come out of machines.
- A 2013 report from the World Health Organization reports that evidence linking hormone-mimicking chemicals to human health problems has grown stronger over the past decade, becoming a “global threat”.

Clean isn’t a smell!

Consumers have been led to believe that a cleaning product isn’t working if there is not a scent left after cleaning. Scented products are everywhere in our daily lives. Fragrance is added to personal care and household products we use everyday. Air fresheners are used in early childhood programs because we want the air to smell better, especially after diaper changing. But fragrances do not clean the air. They disguise smells by adding more chemicals to the air. Products listed as “natural” air fresheners are not necessarily any safer. Even essential oils have been found to contain toxic chemicals. Whenever possible use ventilation instead of air fresheners.

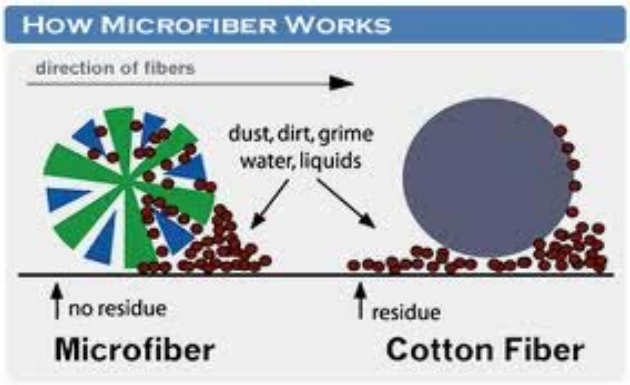
Safer Cleaning

A well thought cleaning procedure can help reduce harmful germs without the over-use of chemical products. Since germs live everywhere, identify high touch areas of your child care for frequent cleaning such as:

- Doorknobs, light switches, and handrails
- Faucet handles, toilet handles, and towel dispensers
- Shared tables, toys, and computer keyboards

<u>Tools for cleaning include:</u>

- **Door mats** or walk-off mats placed at all entryways. These mats will help capture debris and dirt from shoes and reduce wear and tear on floors and carpeting. Many programs have everyone remove shoes at entry. If that works for your child care, all the better. If using door mats, look for good quality multi-level mats with rubber backing that holds water. Vacuum mats daily.
- **Vacuums** come in many styles and shapes. Investing in a good quality HEPA or high filtration vacuum is a good idea. HEPA vacuums filter out more dirt and germs than traditional vacuums. Traditional vacuums can actually blow small particles of dust back into the air! Dust contains all the toxic chemicals that may be present on the surfaces you are cleaning.
- **Use microfiber cleaning cloths and mops.** Microfiber cleaning cloths and mops are more effective for cleaning than with cotton or paper products. Microfiber, a synthetic product not treated with chemicals, allows cleaning using no or smaller amount of cleaning soaps and/or detergents.



- Microfiber is made up of tiny wedge-shaped fibers, up to 100 times finer than a human hair.
- The tiny fibers grab and hold dirt and germs because microfiber has a positive charge allowing it to attract negatively charged dirt.
- Microfiber can absorb seven times its weight in water.
- Microfiber can be washed thousands of times and it dries faster than cotton, making it less likely to grow bacteria.
- Microfiber cloths and mops are not expensive to purchase.

More about microfiber

How to clean using microfiber

- ✓ Surface: Use a microfiber cloth for cleaning any non-porous surface such as tables, counters, and stovetops. Those tiny fibers pick up more dirt and food residue than other cloths/paper towels. Microfiber cloths can be used with any cleaner and/or sanitizer or disinfectant.
- ✓ Floors can be washed with microfiber mops. Microfiber mop heads are lightweight and easy to wring out. Since microfiber is so absorbent, there will be much less water on the floor to dry.
- ✓ Windows: You can clean with only water and microfiber. No more toxic window cleaners. Use one cloth to wash and another to dry.
- ✓ Dusting: Microfiber, as demonstrated on the previous page, traps more dust than cotton or paper cloths.

How to maintain microfiber

- ✓ Wash and dry microfiber separately from all other laundry. Because of microfiber's positive charge, it will attract dirt, hair, and lint from other laundry. This will reduce the effectiveness of the microfiber.
- ✓ Wash heavily soiled microfiber cloths and mop heads in warm or hot water with detergent. Lightly soiled clothes can be washed in cold water.
- ✓ **Do not use fabric softeners when laundering microfiber!** Fabric softeners contain oils that clog microfibers, making them less effective during your next use.
- ✓ **Do not use bleach when laundering microfiber!** Bleach will shorten the life span of microfiber.
- ✓ Microfiber dries very fast reducing the time you need it in the dryer. You can also hang items to dry.
- ✓ Be sure to clean microfiber cleaning cloths after every use. Using color coded cloths for different areas of your child care will ensure that you don't transfer germs from one area to another.

Microfiber cloths are much more widely known and used in Europe than in the United States. Why? The household chemicals market is worth tens of billions of dollars to big chemical companies and the stores that sell them; they have little or no incentive to get behind a simple technology that undermines their costly products. Companies like this have spent a fortune on advertising for several decades, convincing us that we need to blast our homes with industrial-strength cleaners.

Green and Do It Yourself (DYI) Cleaners

Purchasing cleaners that are labeled as “green” are one way of exposing you and your child care to less toxic cleaning chemicals. When purchasing products, look for labels that have either of these symbols: **Green Seal** and **EcoLogo** are organizations that provide independent testing for cleaning products. Currently these seals of approval are found more often on products for commercial use than household use and are often more expensive.

When purchasing household cleaners, check labels and avoid these words when you can:

* Danger or Poison
* Warning Corrosive
* Flammable
* Toxic

You can make all-purpose cleaners from products most of us have in our home already; baking soda, white vinegar, borax, washing soda, liquid castile soap. Some of these items, such as borax, are toxic in large quantities, so all should be stored away from children and handled with care. The recipes listed here do not include any toxic quantities.

- Dissolve 4 Tbsps. baking soda in 1 quart warm water.
- Vinegar and salt, mix together into a paste for a good surface cleaner/scrubber.
- Mix salt and water together with a little vinegar.
- Liquid castile soap (small amount) and baking soda/borax with lots of water for floors, walls or counters.
- Liquid castile soap (medium amount) and baking soda/borax for sinks, cat boxes or anything that can be well rinsed.
- Baking soda and water, make a paste.
- Mix 3 Tbsp. vinegar, ½ tsp washing soda, ½ tsp vegetable oil based liquid soap (Murphy’s), 2 cups hot water and put in spray bottle or bucket. Apply and wipe clean.
- 2 Tbsp. borax, ¼ cup lemon juice, 2 cups hot water. Combine in spray bottle.
- Fill a spray bottle with ½ part vinegar and ½ part water. Add some lemon juice for scent.
- Mix liquid soap with 1 Tbsp. of baking soda. Add lemon juice and water.

For additional recipes: http://www.cleanersolutions.org/downloads/msds/751/TURI%20DIY%20TDS.pdf

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TO:

This is a required training for 2 hours of Child and Adult Care Food Program (CACFP) Training credit.

Successful completion meets your Food Safety/Sanitation training requirement for fiscal year 2016.

Complete all the home study questions and submit to the YFCI office