

Hand Hygiene

Why Is Hand Hygiene Important?

Hand hygiene is the most effective means of reducing germs and infections in group care settings. Studies have shown that hands are primary carriers of infections. Lack of hand hygiene and poor hand-hygiene techniques have contributed to many outbreaks of diarrhea among children and staff in group care settings. Conversely, adherence to good hand-hygiene techniques has consistently demonstrated a reduction in disease transmission in child care and school settings.

When to Practice Hand Hygiene

- On arrival for the day, after breaks, when moving from one group to another, whenever hands may have been contaminated by contact with body fluid (eg, by touching the inside of a diaper when checking the need for a change, wiping a child's nose), and when leaving for the day
- Before and after
 - Preparing food or beverages
 - Eating, handling food, or feeding a child
 - Giving medication or applying a medical ointment or cream in which a break in the skin (eg, sores, cuts, scrapes) may be encountered
 - Playing in water (including swimming) that is used by more than one person
- After
 - Checking a diaper for wetness or soiling, or diapering or changing soiled training pants or underwear
 - Using the toilet or helping a child use a toilet
 - Handling body fluid (eg, mucus, blood, vomit) from sneezing, wiping and blowing noses, mouths, or sores
 - Handling uncooked food
 - Handling animals or cleaning up animal waste
 - Playing in sand, on wooden play sets, and outdoors
 - Cleaning or handling the garbage

Making Hand Hygiene Effective

Teachers/caregivers should not wear elaborate jewelry or long or artificial nails because these interfere with effective hand hygiene. Fingernails should be kept short. Using hand lotion after hand hygiene to prevent chapping and cracking of skin also is important. Alcohol-based hand sanitizers have come into common use in

hospitals and many other settings. For children older than 24 months and adults, closely supervised alcohol-based hand sanitizers are an acceptable alternative to hand washing with soap and running water **if there is no visible soil** and soap-and-water washing is not practical. For both hand washing and use of alcohol-based hand sanitizers, the facility should arrange to monitor hand hygiene of adults and children with unannounced and regular direct observation.

Sinks for Routine Hand Washing

A hand-washing sink should be easily accessible to each child care area without barriers such as doors. In areas for infants, toddlers, and preschoolers, the sink should be located so the teacher/caregiver may visually supervise the group of children while carrying out routine hand washing or having children wash their hands. Each sink should be provided with warm running water at least 60°F and no hotter than 120°F, liquid soap, disposable or single-use cloth towels or a heated-air hand-drying device with heat guards, hand lotion, and whatever else is needed to facilitate frequent hand washing (eg, safe step stools with slip-resistant steps for smaller children). The flow of water should be controlled by a foot pedal, electric-eye, open, self-closing, slow-closing, or metering faucet that provides freely flowing water for at least 30 seconds without the need to reactivate the faucet. A hands-free faucet is best. Provide dispensers for liquid or powdered soap and liquid hand lotion that minimize contamination from one user to another. Set up visible lines of sight between the responsible teacher/caregiver and hand-washing areas to encourage monitoring of hand washing for all adults and children at the times and by the methods listed in this chapter.

How to Wash Hands

Children and staff should wash hands using the following method:

- Make sure a clean, disposable paper (or single-use cloth) towel or a safe warm-air hand-drying device is available.
- Turn on water to a comfortable temperature.
- Moisten hands with water and apply liquid or powdered (not antibacterial) soap to hands.

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Hand Hygiene, continued

- With hands out of the water stream, rub hands together vigorously until soapy lather appears and continue for 10 to 20 seconds (as determined by the ability of the child to persist at lathering); rub areas between fingers, around nail beds, under fingernails and jewelry, and on back of hands. (“Happy Birthday” and “Row Row Row Your Boat” each take about 10 seconds to sing. For 20 seconds, sing the song twice, or sing the A-B-C song from beginning to end once.)
- Rinse hands under running water until free of soap and dirt. If the water does not automatically shut off, leave the water running while drying hands.
- Dry hands with a clean, disposable paper towel, single-use cloth towel, or safe warm-air hand-drying device.
- If taps did not turn off automatically, turn taps off with a disposable paper towel or single-use cloth towel.
- If it is necessary to open a door to leave the hand-washing area, use a disposable paper towel to open the door.
- To dispose of towels
 - Throw disposable towel in lined trash container.
 - Place single-use cloth towel in laundry hamper.
 - Hang individually labeled cloth towels to dry.

If desired, use hand lotion from a liquid lotion dispenser to prevent chapping.

- Use a source of clean, running water. Running water will initially rinse off some soil, provide moisture for a good lather, and rinse the skin thoroughly to leave the skin clean.
- Use liquid or powdered soap because while adequately drained bar soap has not been shown to transmit bacteria, bar soaps sitting in water have been shown to be heavily contaminated with *Pseudomonas* and other bacteria. Many children do not have the dexterity to handle a bar of soap, and many adults do not take the time to rinse soil off before putting down the bar of soap.
- Antibacterial soaps are not recommended.

Assisting Children With Hand Washing

Encourage and teach children proper and safe hand-washing practices. Children who are developmentally able to wash their own hands should be supervised to be sure they follow the proper procedure and wash at appropriate times. Teachers/caregivers should provide assistance at a sink for infants who can be safely cradled in one arm. Washing infants’ hands helps reduce the spread of infection. For children who can stand but not wash their hands by themselves, teachers should provide assistance as needed for the children to complete the hand-washing procedure correctly. Washing under running water is best. For the child who is unable to stand and too heavy to hold at the sink to wash hands under running water, use separate disposable paper towels to

- Wipe the child’s hands with a wet paper towel on which there is a drop of liquid soap; lather for as close to 20 seconds as is feasible.
- Wipe the child’s hands with clean, wet paper towels until the child’s hands have no dirt or soap on them.
- Dry the child’s hands with a clean paper towel.

Staff members should wash their own hands after assisting children with hand washing.

Premoistened cleansing towelettes (eg, diaper wipes, individually packaged wipes) do not effectively clean hands and may spread pathogens from one hand to another. However, they may be used to remove visible soil before applying alcohol-based hand sanitizer when running water is not available (eg, during an outing). Another permissible use is while in the middle of diapering or changing soiled disposable training pants or underwear. After removing the soiled diaper and before putting on a clean diaper, the teacher’s/caregiver’s hands (and often the child’s hands too) may come in contact with feces or urine by touching the soiled skin in the diaper area. Stepping away from the diaper table to wash hands at a sink at this point is not practical. Using a wipe to clean the teacher’s/caregiver’s and child’s hands before putting on a clean diaper is a reasonable compromise.

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Hand Hygiene, continued

Using Alcohol-based Hand Sanitizers

Proper use of alcohol-based hand sanitizers requires that the product contain 60% to 95% alcohol and that the amount of product applied to the skin be sufficient to keep the hands wet with the solution for the length of time specified on the manufacturer's label, generally 15 seconds. While alcohol-based hand sanitizers are convenient carry-along products, they are expensive, toxic, and flammable. If children use them, they must be closely supervised. To prevent contamination of the air, avoid aerosol dispensers because of a concern about the possibility that the fumes from these products might be harmful if inhaled.

Precautions that are required to have alcohol-based hand sanitizers in child care and schools include the following specific constraints about how high and far apart dispensers should be mounted and limitations on the volume dispensers should hold in *Caring for Our Children*, 3rd Edition, Standard 3.2.2.5, "Hand Sanitizers":

Where alcohol-based hand sanitizer dispensers are used:

- a. The maximum individual dispenser fluid capacity should be as follows:
 - 0.32 gal (1.2 L) for dispensers in rooms, corridors, and areas open to corridors;
 - 0.53 gal (2.0 L) for dispensers in suites of rooms;
- b. Where aerosol containers are used, the maximum capacity of the aerosol dispenser should be 18 oz. (0.51 kg) and should be limited to Level 1 aerosols as defined in NFPA 30B: Code for the Manufacture and Storage of Aerosol Products;
- c. Wall mounted dispensers should be separated from each other by horizontal spacing of not less than 48 in. (1,220 mm);
- d. Wall mounted dispensers should not be installed above or adjacent to ignition sources such as electrical outlets;
- e. Wall mounted dispensers should not be installed directly above areas where children frequently breathe, such as over a diaper changing table or a cot for napping to avoid exposing children to the alcohol fumes.
- f. Wall mounted dispensers installed directly over carpeted floors should be permitted only in child care facilities protected by automatic sprinklers.

Alcohol-based hand sanitizer products (ie, liquid, gel, or foam with 60% or greater alcohol content) do not substitute for hand washing if there is visible soil on the hands. If the hands look clean, closely supervised alcohol-based hand sanitizers are an acceptable alternative to hand washing for children 24 months or older and adults when no water is available. Although alternative hand sanitizers that do not contain alcohol are available, research that shows these products are as effective as those that contain the required amount of alcohol is lacking. Therefore, use only alcohol-based hand sanitizers. Alcohol-based hand sanitizers are toxic if ingested by children and flammable. Note that state regulations may require hand washing and not allow use of hand sanitizers for hand hygiene. If the facility uses hand sanitizers, teachers/caregivers should

- Be sure that hand hygiene using alcohol-based hand sanitizers conforms to the manufacturer's instructions and that the location of the dispensers does not put people at risk of inhaling fumes.
- Apply the required volume of the product to the palm of one hand and rub together; cover all surfaces of the hands and fingers until the hands are dry. The required volume should keep hand surfaces wet for the time indicated by the manufacturer, usually 15 seconds or longer.
- Check the dispenser systems for hand-hygiene rubs on a regular schedule to be sure they deliver the required volume of the product and do not become clogged or malfunction in some other way.
- Store supplies of alcohol-based hand rubs in cabinets or areas approved for flammable materials.