

6.0 GUIDANCE ON CLEANING AND DISINFECTION

To minimize transfer of coronavirus at camp, cleaning methods can be employed to reduce risk to campers and camp staff. Cleaning methods should follow the Centers for Disease Control and Prevention (CDC) guidance, such as Interim Guidance for Administrators of U.S. K-12 Schools and Child Care Programs²⁹ and CDC Guidance for Child Care Programs that Remain Open.³⁰ Cleaning products should not be used near children, and staff should ensure that there is adequate ventilation when using cleaning products to prevent children or themselves from inhaling potentially harmful fumes that may be associated with some cleaning products.

Recommended methods for typical cleaning procedures include two-stage cleaning and disinfecting.³¹ “Cleaning” entails washing with a detergent and water to remove soil, organic matter, and some microorganisms from a surface. Following a detergent and water wash, “disinfecting” entails use of a U.S. Environmental Protection Agency (EPA)-approved disinfectant that must be applied in accordance with product manufacturer guidelines. Refer to the EPA List of Disinfectants for Use Against SARS-CoV2: <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>. A dilute bleach solution can be substituted for EPA-approved disinfectants. Avoid use of disinfectants on objects that may go in the mouth, such as toys for young children. See “[Cleaning Solution Selection and Preparation](#)” below for more detail on cleaning products.

INCREASED FREQUENCY OF CLEANING³²

Communal Spaces

- Good practice: Cleaning and disinfecting communal spaces at least daily.
- **Best practice:** Cleaning and disinfecting of communal spaces between groups. Disinfection after cleaning may not be feasible if scheduling of group activities does not allow for disinfectant to remain on treated surfaces for sufficient time to fully disinfect.

Shared Items

- Good practice: Cleaning and disinfecting of shared items between uses.

²⁹ <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/guidance-for-schools.html>

³⁰ <https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html>.

³¹ [Cleaning and Disinfection](#) for Community Facilities: Interim Recommendations for U.S. Community Facilities with Suspected/Confirmed Coronavirus Disease 2019 (COVID-19). <https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html>

³² Cleaning recommendations should follow at a minimum Appendix K of American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education. 2019. *Caring for Our Children (CFOC): National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs*, Fourth Edition. Itasca, IL: American Academy of Pediatrics.

- **Best practice:** Assigning items where possible to reduce the quantity of items shared. Also, cleaning and disinfecting of shared items between uses.

Frequently Touched Surfaces

- Good practice: Cleaning and disinfecting frequently touched surfaces and common spaces at least daily.
- **Best practice:** Cleaning and disinfecting frequently touched surfaces and common spaces multiple times daily.

Examples of frequently touched surfaces include tables, drinking fountains, door handles, hand railings, light switches, countertops, cabinet handles, desks, phones, keyboards, toilets, faucets, and sinks. Any other surfaces frequently touched by campers or staff should be cleaned and disinfected at least daily or, preferably, several times per day.

Cleaning of outdoor structures made of plastic or metal can be carried out according to typical camp cleaning practices. More frequent cleaning of high touch outdoor surfaces, such as grab bars or railings, is recommended. Outdoor wooden surfaces, such as play structures or benches, can be cleaned according to standard camp practices and more frequently if needed to remove obvious soiling.

Changing Areas/Locker Rooms

- Good practice: As with other frequently touched surfaces, changing areas or locker rooms are cleaned and disinfected daily.
- Better practice: High touch surfaces within changing areas or locker rooms are cleaned more than once per day.
- **Best practice:** High touch surfaces in changing areas and locker rooms are cleaned between users.

Toilets, Showers, Restrooms

- Good practice: As with other frequently touched surfaces, toilets, showers, and restrooms are cleaned and disinfected daily.
- Better practice: High touch surfaces including toilets, showers, and restrooms are cleaned and disinfected more than once per day.
- **Best practice:** High touch surfaces including toilets, showers, and restrooms are cleaned and disinfected between users.

PERSONAL PROTECTIVE EQUIPMENT (PPE) FOR CLEANING STAFF

Always refer to the Safety Data Sheet (SDS) of the product or products being used to obtain PPE requirements.

- Good practice: Eye protection and gloves must be worn when preparing cleaning solutions, including dilute bleach solutions.
- Better practice: Eye protection, disposable gloves, and gowns/aprons are worn for all tasks in the cleaning process, including handling trash.
- When finished, all cleaning staff must remove gowns/aprons first, being careful not to contaminate the surrounding area. Next gloves are to be removed by grasping from the inside and peeling inside out. Hands must be thoroughly washed for at least 20 seconds using soap and water. If soap and water are not available and hands are not visibly dirty, an alcohol-based hand sanitizer that contains 60%-95% alcohol may be used. However, if hands are visibly dirty, always wash hands with soap and water.

CLEANING METHODS

Cleaning Solution Selection and Preparation

For cleaning, general purpose residential cleaners that are ready to use or diluted with water per product instructions are sufficient and should be used according to manufacturer’s instructions. For disinfection, products that are specific to coronavirus, that have an “emerging viral pathogen” claim, and that require less than one minute of contact time are preferred. Make sure products have not passed their expiration date. If disinfecting products are not available, a dilute bleach solution can be used, comprising four teaspoons of bleach to a quart of water.³³

Many disinfecting products can be skin and respiratory irritants. Green Seal, a non-profit certification organization, recommends selecting products with the following active ingredients:

- Hydrogen peroxide
- Citric acid
- Lactic acid
- Ethyl alcohol (also called ethanol)
- Isopropyl alcohol (70%)
- Hypochlorous acid

NOTE: Many of the products on the EPA list contain either quaternary ammonium or sodium hypochlorite (also known as bleach). Cleaning products containing these two ingredients should not be used together or even in series, meaning one after the other. Disinfectant products should be kept out of reach of children and used according to the guidelines provided by the manufacturer.

³³See Appendix J, Selecting an Appropriate Sanitizer or Disinfectant in AAP, 2019, *Caring for Our Children (CFOC): National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs*, Fourth Edition. Itasca, IL: American Academy of Pediatrics.

Prepare Detergent Spray Solution

1. Any staff member preparing spray bottles with detergent must wear eye protection/goggles and gloves.
2. Using the manufacturer's instructions, fill spray bottle with the appropriate amount of detergent solution and water, if the manufacturer recommends dilution. A funnel (not to be used for consumables) can be used to reduce spills and splashing.
3. Replace the spray cap and label the detergent bottle with the contents using a permanent marker.
4. The detergent manufacturer's instructions must be provided to all staff carrying out cleaning activities, and applicable Safety Data Sheets must be kept on file.

Prepare Disinfectant Spray Solution

1. Any staff member preparing spray bottles with disinfectant must wear eye protection/goggles and gloves and follow manufacturer's instructions.
2. Using the manufacturer's instructions, fill spray bottle with the appropriate amount of disinfectant solution and water, if the manufacturer recommends dilution. A funnel (not to be used for consumables) can be used to reduce spills and splashing.
3. A dilute bleach (sodium hypochlorite) solution can be used by adding 4 teaspoons of bleach per quart of water.
4. Replace the spray cap and label the disinfectant bottle with the contents using a permanent marker.
5. The disinfectant manufacturer's instructions must be provided to all staff carrying out cleaning activities, and applicable Safety Data Sheets must be kept on file.

Typical Cleaning for Non-Porous Surfaces

1. Cleaning staff should wear eye protection and disposable gloves.
2. Using a detergent cleaning solution, spray 6 to 8 inches from the non-porous surface and wipe with clean paper towels (or according to manufacturer's instructions) to remove visible contamination, if present.
3. Make sure the surface is dry before applying disinfectant.
4. Review the instructions provided by the disinfectant manufacturer to note the concentration, application method, and necessary contact time. This will vary by product and type of cleaning activity.
5. Allow the disinfectant to remain on the surface for the instructed time and wipe with paper towels.
6. After a cleaning task is complete, remove the gown followed by the gloves and dispose, as discussed in the [PPE for Cleaning Staff](#) section above. Carefully wash hands for at least 20 seconds with soap and water as described in the PPE section. Hand sanitizer may be used if water is not available and no visible dirt is observed on hands.
7. Reusable aprons or work clothing may be used, if laundered or washed after use.

Typical Cleaning for Porous Surfaces

CDC recommends removing or limiting use of soft and porous materials, such as area rugs and couches, as they are more difficult to clean and disinfect.

At this time few products for use on porous surfaces are EPA approved. Products identified contain the active ingredients quaternary ammonium and hydrogen peroxide, both of which should be used carefully by trained staff. In addition, some products' manufacturer's instructions note that they are not approved for use in California.

1. Eye protection and gloves should be worn during cleaning activities.
2. First remove visible contamination, if present, and clean with appropriate cleaners indicated for use on porous surfaces.
3. Launder items, if applicable, in accordance with the manufacturer's instructions using the warmest appropriate water setting for the items and then dry items completely. See [Laundry](#) section below.
4. Otherwise, use disinfectant products suitable for porous surfaces. NOTE: If some porous surfaces are not suitable for cleaning with disinfectants, then clean them as much as possible and attach a sign to them saying they are not to be used or touched for three days.

WHAT TO DO IF THERE IS A CONFIRMED OR PROBABLE CASE OF COVID-19

If more than 7 days have passed since the person who is sick visited or used the facility, additional cleaning and disinfection is not necessary. Continue routine cleaning and disinfection. If less than 7 days, close off areas that were used by the person who is sick and carry out the following:

- Open outside doors and windows to increase air circulation in the areas, if possible.
- Wait up to 24 hours or as long as practical before you clean or disinfect the space to allow respiratory droplets to settle before cleaning and disinfecting. Outdoor venues and equipment could be cleaned without delay.
- Clean and disinfect all areas used by the person who is sick. Run ventilation system during cleaning.
- Use dedicated cleaning and disinfecting materials to disinfect a potential source area (e.g., an infected camper's cabin or bunk area). The cleaning equipment should not be used to clean other areas until they are thoroughly cleaned and disinfected.
- Enhanced cleaning is recommended if it is determined that a person with COVID-19 was present in a building (e.g., dining hall, gym, bunk, etc.) or at camp activity areas for at least 15 minutes.

For a suspected or confirmed COVID-19 case, the following enhanced cleaning protocol should be followed:

- First clean visibly dirty surfaces then perform disinfection. For specific cleaning instructions see sections above: [Typical Cleaning for Non-Porous Surfaces](#) and [Typical Cleaning for Porous Surfaces](#). NOTE: Products that are specific to coronavirus, have an “emerging viral pathogen” claim, and require less than 1 minute of contact time are preferred. Make sure products have not passed their expiration date.
- Use disposable wipes/paper towels to clean surfaces if possible, rather than reusable cloth wipes, as the latter can re-contaminate surfaces. All cleaning and disinfecting materials (e.g., paper towels, cloth wipers, sponges, mop heads, etc.) should be disposed in sealed bags or containers after use.
- In each area, pay particular attention to high touch areas, including, but not limited to, handrails, door handles, cabinet and drawer handles, shared sports equipment or craft tools.
- Clean and disinfect an area extending 12 feet in all directions around the camper’s sleeping quarters, focusing on all horizontal surfaces and high touch objects. Clean and disinfect areas identified as locations visited by the individual who is sick or that the individual used or occupied, including the entire bathroom and any common or activities areas. These include high touch objects in common areas including handrails, exterior door entry handles, cabinet handles, and restroom door handles, as well as crafting tools or sports equipment.
- Use dedicated cleaning and disinfecting materials to disinfect a potential source area. These materials should not be used to clean other areas until they are thoroughly cleaned and disinfected.
- Clean a potential source area by progressing from the entrance to the most distant point to avoid re-contaminating surfaces that have been disinfected (i.e., clean your way out).
- Clean soft and porous surfaces such as carpeted floor, rugs, and drapes also using the procedure noted above for [porous surfaces](#). NOTE: If some porous surfaces are not suitable for cleaning with disinfectants, then clean them as much as possible and attach a sign to them saying they are not to be used or touched for three days.

Personal Protective Equipment (PPE)

- Cleaning staff should wear eye protection, disposable gloves, masks, and gowns/aprons for all tasks in the enhanced cleaning process, including handling trash.
- Gloves and gowns/aprons should be compatible with the disinfectant products being used.
- Masks should be disposable.
- Additional PPE might be required based on the cleaning/disinfectant products being used and whether there is a risk of splash, for example a face shield.
- Gloves and gowns/aprons should be removed carefully to avoid contamination of the wearer and the surrounding area. Be sure to clean hands after removing gloves.

- Gloves should be removed after cleaning a room or area occupied by ill persons. Clean hands immediately after gloves are removed.
- Cleaning staff should immediately report breaches in PPE (e.g., tear in gloves) or any potential exposures to their supervisor.
- Cleaning staff and others should clean hands often, including immediately after removing gloves and after contact with an ill person, by washing hands with soap and water for 20 seconds. If soap and water are not available and hands are not visibly dirty, an alcohol-based hand sanitizer that contains at least 60% alcohol may be used. However, if hands are visibly dirty, always wash hands with soap and water.

MISCELLANEOUS CLEANING

Dining Hall/Cafeteria

See guidance for [non-porous surfaces](#) above and in the [Food Service](#) section.

Cleaning of Keyboards, Laptops and Electronic Equipment

- Follow manufacturer guidelines for cleaning electronic equipment.
- Use of covers that can be cleaned and disinfected are recommended.
- Alcohol based wipes or sprays containing at least 70% alcohol can be used to disinfect electronics, including touch screens.

Shared Equipment

- Ensure adequate supplies to minimize sharing of high touch materials to the extent possible (art supplies, equipment, etc. assigned to a single camper) or limit use of supplies and equipment by one group of campers at a time and clean and disinfect between use.
- Good: Shared equipment should be cleaned and disinfected at least daily.
- Better: Shared equipment should be cleaned and disinfected multiple times per day.
- Best: Shared equipment should be cleaned and disinfected between uses.

Playground Equipment

- Good: Playground equipment should be cleaned and disinfected at least daily.
- Better: Playground equipment should be cleaned and disinfected multiple times per day.
- Best: Playground equipment should be cleaned and disinfected between uses.

LAUNDRY

- As with other cleaning activities, gloves and gowns/aprons are recommended when doing laundry. Masks are also recommended.
- Staff should avoid shaking laundry items to minimize potential spreading of virus-laden particles into the air.

- Use of a disinfectant appropriate for porous material is recommended. Follow manufacturer's instructions. Example: Lysol Laundry Sanitizer (see manufacturer's instructions for inactivating viruses, including a 15-minute presoak).
- Wash items as appropriate in accordance with the manufacturer's instructions, opting for the warmest appropriate water setting for the items and dry items completely.
- Clean and disinfect hampers or other carts for transporting laundry according to guidance above for hard or soft surfaces.
- Masks used by staff and/or campers should be laundered regularly. Used masks should be collected in a sealable container (like a trash bag) until laundered.

In general, staff should avoid handling campers' belongings. If handling of campers' belongings is needed, gloves should be worn; disposable gloves are recommended, if available. If gloves are unavailable, staff should perform hand hygiene immediately before and after handling campers' belongings.

TESTING

- Good practice (minimum): Use of EPA approved cleaning and disinfecting products; CDC recommended cleaning protocols; and maintenance of cleaning and supply records to ensure proper cleaning activities have been carried out.
- Better practice: Use of portable ATP surface swab test method to audit cleaning.
- Better practice: Use of environmental surface swab test for laboratory analysis of presence of coronavirus.

Surface swab sampling should only be used with a sampling plan designed to ensure that data collected are sufficient to draw the conclusions needed on the effectiveness of the cleaning.

REFERENCES AND RESOURCES

American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education. 2019. *Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs*, Fourth Edition. Itasca, IL: American Academy of Pediatrics.

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UCSF Institute for Health & Aging, UC Berkeley Center for Environmental Research and Children's Health, Informed Green Solutions, and California Department of Pesticide Regulation. 2013. *Green Cleaning, Sanitizing, and Disinfecting: A Toolkit for Early Care and Education*, San Francisco, CA: University of California, San Francisco School of Nursing.

https://cerch.berkeley.edu/sites/default/files/green_cleaning_toolkit.pdf