Chapter 5: Cleaning and Disinfection

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Cleaning

Cleaning is the essential first step in a cleaning and disinfection procedure. Without cleaning, dirt or organic matter can interfere with the disinfectant's ability to kill pathogens (germs) present on surfaces. If you're cleaning multiple surfaces, move from the least- to most-soiled areas to reduce the risk of spreading contamination.

Proper cleaning includes three steps:

1. **Wash all surfaces with soap and water using friction to remove dirt or organics.**
2. **Rinse with clean potable (drinkable) water.**
3. **Air dry or use single-use paper towel.**

Disinfecting

A disinfectant is a chemical product used to reduce the number of pathogens to a safe level. There are many different products available, including some disinfectants that also function as cleaners.

Consider all factors before choosing the product that best suits your centre. Follow the manufacturer's instructions for proper use.

Pre-mixed or concentrated solutions

Pre-mixed: Some disinfectants can be purchased from a supplier in a pre-mixed formula at a desired concentration. These should be used as directed on the product label.

Concentrated: These products are concentrated formulas, that you will need to mix with water at the designated ratio as indicated on the product label.

If you're responsible for mixing and preparing the disinfectant solution, you need to use the appropriate test strips to verify that it contains the correct concentration. The correct concentration is important for safe and proper disinfection. Test strips can be purchased from your centre's chemical supplier.

If a bleach solution is used, the concentration and contact time are to be appropriate for the intended task. The solution should be checked with a test strip or replaced daily.

Concentrations of bleach and water for surface disinfection:	Concentration	Contact Time
Routine disinfection of high-touch surfaces	1:100 or 500ppm	2 minutes
Increased illness (outbreaks), washrooms, changing area	1:50 or 1000ppm	2 minutes
Blood and/or bodily fluid spills	1:10 or 5000ppm	2 minutes

Contact time

The contact time is the amount of time the disinfectant must remain wet on a surface to achieve appropriate disinfection. Failure to reach the required contact time prevents surfaces from being adequately disinfected.

Look for the contact time of a product on its label. It can range from 30 seconds to 10 minutes.

Always select the appropriate contact time for the activity or disinfection level you are intending to carry out. For example, using a disinfectant with a 10-minute contact time may not be suitable for a frequently used diapering change table. This is because you may not have 10 minutes to wait between diaper changes.

In some cases, you may need to wipe, or spray surfaces multiple times to achieve the contact time. For example, surfaces may dry quickly when disinfecting wipes are used on larger areas. As a result, multiple wipes may be necessary to reach the required contact time.

Drug Identification Number (DIN)

The disinfectants you use at your centre should have a Drug Identification Number on the product label (the exception is sodium hypochlorite/chlorine bleach).

A Drug Identification Number indicates that Health Canada has established it to be safe and effective for its intended use as a disinfectant.

Expiry date

When using a disinfectant, check its expiry date. Using a product past its expiry may reduce its effectiveness. Household bleach will not have an expiry date, but bleach-based disinfecting products will.

Storage conditions

Safely store all disinfectants:

- Out of reach of children
- According to the manufacturer's instructions
- Away from direct sunlight
- In a moderate temperature. Avoid very hot or cold conditions.

When you refill chemical bottles, label them properly in accordance with the Workplace Hazardous Materials Information Systems (WHMIS) requirements.

Material Safety Data Sheets (MSDS)

The Ministry of Labour requires you to maintain an on-site copy of Material Safety Data Sheets for all chemicals used in your centre. The sheets have vital information that can help keep your staff and children safe from chemical exposure.

Check with your chemical supplier to ensure proper Material Safety Data Sheets are maintained on-site.

Cleaning and disinfecting toys

- Establish written procedures that specify the frequency methods for cleaning and disinfecting toys, and assign responsibility
- Size plush toys so they can fit inside washing and drying machines
- Adhere to the frequency for cleaning and disinfection:
  - At least weekly
  - Infant toys at least daily
  - Any toy touching a child's mouth must be immediately removed from the play area for cleaning and disinfecting before being used again

Chemical disinfectants

Toys should be thoroughly rinsed after disinfection and allowed to air-dry before storing.

Ensure that the disinfectant being used is safe and suitable for the intended purpose and that the manufacturer's directions for dilution and contact times are followed:

- Quaternary Ammonium (Quats) at 200 ppm for 10 minutes
- Chlorine (bleach) at 1:100 solution (500 ppm) for two minutes
- Other commercial products. Ensure you follow the manufacturer's recommendations.

Design and materials

- Ensure that shared toys can be easily cleaned, disinfected or laundered
- Don't use bath toys that retain water
- Routinely inspect toys for damage or cracks. Discard damaged toys immediately, they may prevent proper cleaning and disinfecting and pose a safety hazard.

Storage

- Provide a container to separate dirty toys from clean toys
- Store clean toys in a manner that prevents contamination

Sensory play

- Ensure policies are in place regarding sensory play activities
- Discourage sensory play for children who have open cuts, sores, colds or runny noses
- Stop sensory play if an outbreak is declared at your centre until the outbreak is declared over

Hand hygiene

- Provide alcohol-based hand rub or a handwashing station near play areas
- Before and after each play session, encourage and assist children in cleaning their hands with an alcohol-based hand rub or soap and water. Supervise children when they use alcohol-based hand rub.

Sensory play tables

- Provide a tight-fitting lid for the play table
- Clean and disinfect the play table and toys when changing materials

Dry play tables

- Change dry play materials weekly or more often if they become soiled
- Change play sand monthly. Avoid use of sand that contains silica. Silica can cause or worsen respiratory issues.
- If a dry food product is used, ensure that it's not eaten or mouthed by children. Discard food products when wet.
- If homemade play dough, or other sensory play materials contain flour as an ingredient, flour is heat-treated before use

Water play tables

- Clean and disinfect the water basin and toys at least once daily for full-day programs, and after each group for half-day programs
- Use municipal potable (drinkable) water

Outdoor sandboxes

- Securely cover outdoor sandboxes when not in use
- Check sandboxes and sand in play areas daily for animal droppings, broken glass, or other hazardous items before children go outside to play. Use a lawn rake to sift through the sand.
- Replace sand as often as necessary, or according to the manufacturer's instructions, to keep sand visibly clean and free of all extraneous matter

Routine cleaning and disinfecting schedule

Scheduled frequencies are the minimum requirements for non-outbreak periods. You should increase them as often as necessary to always maintain clean and sanitary conditions.

Toys

Items	What to do	After each use	Daily	Weekly	Monthly
All toys (toddler, preschool and school aged)	Clean and disinfect			✓	
Items made of absorbent materials (e.g., plush toys, dress-up clothes)	Launder			✓	
Water play toys / table	Clean and disinfect	✓			
Toy / storage areas	Clean and disinfect			✓	

Dry Sensory Play

Items	What to do	After each use	Daily	Weekly	Monthly
Dry sensory play - food	Discard	✓			
Dry sensory play - sand	Clean / discard				✓
Dry sensory play – table and other reusable materials	Clean			✓	
Natural items (e.g., rocks, wood, bird's nest)	Discard			✓	

Sleep and Rest Areas

Items	What to do	After each use	Daily	Weekly	Monthly
Linen / bedding	Launder			✓	
Cots	Clean and disinfect			✓	
Carpets / upholstered furniture	Vacuum (steam clean every six months)			✓	
Floor	Sweep and mop		✓		

Washrooms

Items	What to do	After each use	Daily	Weekly	Monthly
Cloth towels	Launder	✓			
Potty chairs	Clean and disinfect	✓			
Hand wash sink / toilets / floors	Clean and disinfect		✓		
Diaper change mats	Clean and disinfect	✓			

Infant Room

Items	What to do	After each use	Daily	Weekly	Monthly
Mouthed toys	Clean, disinfect and rinse	✓			
Infant toys	Clean and disinfect		✓		
High chairs and trays	Clean and sanitize	✓			
Cloth / plastic bibs	Launder / clean and disinfect	✓			
Soothers	Clean and disinfect (boil one minute or use dishwasher)		✓		

Changing a diaper

Post your centre's procedure at each changing area.

Preparing to diaper

- Wash hands thoroughly before each change
- Assemble supplies within easy reach
- Put on single-use gloves
- Hold child away from your clothes while you place them on the clean change surface

When diapering

- Remove diaper. If using safety pins, close the pins immediately and place them out of a child's reach.
- Clean child's skin with a wet wipe. Remove all visible soil, including skin creases. Discard wet wipe into soiled diaper or directly into a plastic-lined garbage container.

Discarding soiled diapers

- Discard soiled disposable diaper into a plastic-lined garbage receptacle
- Physically remove large clumps into the toilet. Never wash or rinse soiled clothing or soiled diapers, whether disposable or not. The additional handling of the clothing or diaper may result in more hand or environmental contamination.
- Place soiled clothing and reuseable soiled diapers in a plastic bag to be given to parents

Cleaning up after diapering

- If wearing gloves, remove them and discard into the garbage container
- Wash your hands and the child's hands with soap and warm water
- Return child to supervised area
- Clean and disinfect the diapering area, following the manufacturer's instructions on the disinfectant. Ensure you include all equipment and supplies used.
    - When using a household bleach solution (sodium hypochlorite 5.25%), use a disinfecting concentration with a **1:50 solution** (one part bleach to forty-nine parts water) or **1000 ppm**; allow a **minimum of 2 minutes contact time**
- Wash hands thoroughly with soap and warm water, and use paper towels to dry

Potty Chairs

Situating potty chairs

- Provide potty chairs that are made of smooth, non-absorbent, easy-to-clean material (no wood) and have a removable water container
- Keep potty chairs in the washroom, not in playrooms or hallways

Cleaning up after a child

- Empty potty contents into toilet
- Clean and disinfect the potty chair
- Wash your hands with soap and warm water

Toileting

- Supervise children when they use the toilet
- Teach them hygienic wiping procedures (front to rear)
- Wash your hands thoroughly and help children wash their hands
- Clean and disinfect step stools daily. Step stools should be made of non-absorbent material.



Cots

- Napping space and play area may be used interchangeably
- Label each child's cot, mat, and bedding. No sharing.
- Ensure cots, beds, cribs, and mats are in good repair, and always kept clean and sanitary
- Wash liners and cots weekly or more often as needed. Send home blankets and personal belongings that are not washed on-site for weekly laundering.
- Store cots in a manner that is clean and prevents contamination

Laundry

- Ensure that policies and procedures are in place with a schedule for laundering linens
- A risk assessment should be conducted by staff when handling soiled items, and personal protective equipment should be provided
- The laundry area is to be kept in a sanitary condition and routinely cleaned and disinfected
- Separate dirty or soiled laundry from clean items. Soiled clothing to be sent home with parents should be stored in a leak-proof bag and in a manner that prevents contamination.

Enhanced cleaning and disinfecting program for outbreaks

If an outbreak is declared in your child care centre, you must immediately enhance your cleaning and disinfection program:

- Use a broad-spectrum virucide to disinfect toys, change tables and high-contact surfaces. A broad-spectrum virucide is a disinfectant that destroys at least one representative hard-to-kill non-enveloped virus (Poliovirus type 1, or Human adenovirus type 5, or Bovine parvovirus, or Canine parvovirus) and inactivates other enveloped and non-enveloped viruses present on environmental surfaces.
- Follow the manufacturer's instructions regarding intended use, concentration and contact time of the disinfectant
    - When using a household bleach solution (sodium hypochlorite 5.25 per cent), use a disinfecting concentration with a **1:50 solution** (one part bleach to forty-nine parts water) or **1000 ppm**; allow a **minimum of two minutes contact time**

- Be aware that Quaternary Ammonium (Quats) products are not a broad-spectrum virucide
- Clean and disinfect all toys and high contact surfaces daily
- Stop sensory play until Public Health declares the outbreak over
- If applicable, notify the company that provides your cleaning services about the outbreak and the cleaning and disinfection recommendations provided by Public Health. Failure to notify your cleaning company about the outbreak may result in or lead to an inappropriate level of disinfection to be used, and as a result, the outbreak could spread or be extended.

Cleaning and disinfecting areas and items contaminated by blood and body fluids

- Immediately clean and disinfect any areas and items that have been contaminated by spills of blood, bodily fluids and vomit
- Section off the area of concern to prevent people from entering
- Always wear protective rubber gloves and wash your hands after removing gloves
- Physically remove potentially infectious materials with disposable rags or paper towel
- Clean surfaces with soap and water, or other household cleaning products. You can use a quaternary ammonium product but surfaces still need to be disinfected afterward with a high-level disinfectant.
- Disinfect surfaces with a high-level disinfectant
    - When using a household bleach solution (sodium hypochlorite 5.25 per cent), high-level disinfection will be achieved with a **1:10 solution** (one part bleach to nine parts water) or **5000 ppm**; allow a **minimum of two minutes contact time**
- If the accident is on carpet, physically remove as much of the spill as possible with disposable rags or paper towels. Use a steam-cleaning carpet machine to remove the remaining contamination.