

# PROPER CLEANING AND DISINFECTION PRACTICES

## Cleaning

- Cleaning must always be the first step to remove dirt and debris from a surface and is necessary for a disinfectant to be effective
- Clean with a detergent, water, and friction and clean from least contaminated to most contaminated areas

## Disinfectants

- Disinfectants are applied to a clean surface in order to kill disease-causing germs
- Disinfectants must have a drug identification number (DIN) if approved for use in Canada (common household bleach and isopropyl alcohol are the only exceptions)
- Always follow manufacturer's instructions for use (MIFU). Read label for direction on: dilution and mixing, personal protective equipment (PPE) needed (e.g., gloves, goggles), surfaces appropriate for use, contact time, efficacy on specific organisms, and rinsing requirements
- There are a variety of disinfectants in the market. Choose a disinfectant that is compatible with your surfaces and with contact times that fit your needs
- Check the expiry date. If a product has expired, do not use. Discard expired product safely or return to manufacturer
- Ensure the concentration of disinfectant is correct before use (i.e. use test strips)
- Toys that will be mouthed should be rinsed thoroughly with water following disinfection
- Do not use antiseptic wipes and other products intended for skin (i.e. alcohol-based hand rubs) on surfaces

## Cleaning and disinfecting wipes

- Follow manufacturer's recommendations
- Wipes may become dry (improper storage or during use) due to fast drying properties before contact time is achieved
- Wipes are not recommended as a routine cleaning/ disinfectant tool, especially for heavily soiled surfaces
- They can be used for items that cannot be soaked and for small items that must be disinfected between uses
- Ensure the surface or item remains wet with the product for the required contact time (additional wipes may be needed)
- Wipes must be kept wet and should be discarded if they become dry

## Blood and body fluid spills

- Wipe spills immediately- use disposable towels to remove most of the organic matter, clean the area and then disinfect the spill area
- See the chart below for examples of disinfectants to use depending on volume of blood/ body fluid spill

When to Clean and Disinfect	Examples of Active Ingredients/ Disinfectant Products	Contact Time (minutes)	Where to Clean and Disinfect
<b>1. Everyday use (non-outbreak)</b> <b>2. Minor blood/ body fluid spill (drops of fluid)</b>  <b>Effective against:</b> <i>Vegetative bacteria and enveloped viruses</i> <ul style="list-style-type: none"> <li>• Staphylococcus aureus (includes MRSA)</li> <li>• Streptococcus</li> <li>• Salmonella</li> <li>• Vancomycin Resistant Enterococcus (VRE)</li> <li>• Human Immunodeficiency Virus (HIV)</li> <li>• Respiratory Syncytial Virus (RSV)</li> <li>• Influenza Virus</li> <li>• Pseudomonas Aeruginosa</li> <li>• Herpes</li> </ul>	<b>100 ppm bleach solution</b> <i>(Everyday use; non-outbreak)</i>	10	<b>Surfaces:</b> <ul style="list-style-type: none"> <li>• Door knobs</li> <li>• Hand rails</li> <li>• Chairs</li> <li>• Tables</li> <li>• Elevator buttons</li> <li>• Telephones</li> <li>• Counter tops</li> <li>• Sink faucet handles</li> <li>• Toys</li> <li>• Commode chairs</li> <li>• Shared play equipment</li> <li>• Vinyl mattress covers</li> <li>• Floor mats</li> <li>• Water fountains</li> <li>• Diaper change stations</li> </ul> <b>Equipment:</b> <ul style="list-style-type: none"> <li>• Blood pressure cuffs</li> <li>• Thermometers</li> <li>• Stethoscope</li> </ul>
	<b>1,000 ppm bleach solution</b> <i>(Minor blood/ body fluid spill)</i>	10	
	<b>Quaternary Ammonium Compounds (QUATS)</b> <i>(i.e. Lysol®, ED- Everyday Disinfectant, Quato 78 Plus™, A-3®, Swish Clean and Green™)</i>	MIFU	
	<b>3% Hydrogen Peroxide</b>	10	
	<b>70-90% Alcohol</b> <i>(Ethyl or Isopropyl)</i> <i>(For soaking)</i>	10	
	<b>Zochlor</b>	MIFU	
	<b>Benefect®</b>	10	
<b>1. Outbreak situation</b> <b>2. Major blood/ body fluid spill</b> <b>3. Confirmed viral or bacterial infection of pathogens listed below (non-outbreak situation)</b>  <b>Effective against:</b> <i>Mycobacteria, enveloped and non-enveloped viruses and fungi</i> <ul style="list-style-type: none"> <li>• Mycobacteria tuberculosis</li> <li>• Norovirus</li> <li>• Hepatitis A Virus</li> <li>• Rotavirus</li> <li>• Coxsackie Virus/ Hand, Foot and Mouth Disease</li> <li>• Rhinovirus/ Common Cold</li> <li>• Candida</li> </ul>	<b>5,000 ppm bleach solution</b> <i>Also a sporicidal</i> <i>(see below for recipe)</i>	10	
	<b>6% Hydrogen Peroxide</b>	30	
	<b>Enhanced Action Formulation Hydrogen Peroxide</b>	MIFU	
	<b>Zochlor</b>	MIFU	

**Note:** York Region Community and Health Services does not endorse any of the examples of brand name products listed above.

## Bleach (Sodium Hypochlorite) Solutions

- Use undiluted household bleach (5.25% or ~50,000 ppm) when making the solutions in the chart below
- When making bleach solutions, add bleach to water- do not add water to bleach
- Store bleach solutions in closed containers, away from heat and light
- Bleach solutions should be properly labelled
- Online dilution calculator available from Public Health Ontario at the following link:  
<https://www.publichealthontario.ca/en/health-topics/environmental-occupational-health/water-quality/chlorine-dilution-calculator>

Parts per million (ppm) Concentration	Recipes (~ = approximately, t = teaspoon, tb = tablespoon)
500 ppm (1:100, 0.05%)	Mix 10 ml (2 t) of bleach with ~1 L (4 cups) of water
1,000 ppm (1:50, 0.1%)	Mix 20 ml (4 t) of bleach with ~1 L (4 cups) of water
5,000 ppm (1:10, 0.5%)	Mix 100 ml (6 ¾ tb) of bleach with ~1 L (4 cups) of water

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