

Cleaning and Disinfecting for the Prevention of Viral Respiratory Illnesses

Sources (April, 2020)

Centers for Disease Control (CDC)

Occupational Safety and Health Administration (OSHA)



Introduction



Spread by Close Contact



Surfaces Can Remain Contaminated for Hours or Days



Clean Visibly Dirty Surfaces, then Disinfect



From what is currently known about coronaviruses, spread from person-to-person happens most frequently among close contacts (within about 6 feet) through respiratory droplets. Transmission to persons from surfaces contaminated with these viruses has not been documented, but current evidence suggests it may remain viable for hours to days on surfaces made from a variety of materials. Cleaning of visibly dirty surfaces followed by disinfection is a best practice measure for prevention of viral respiratory illnesses in community settings.

Introduction



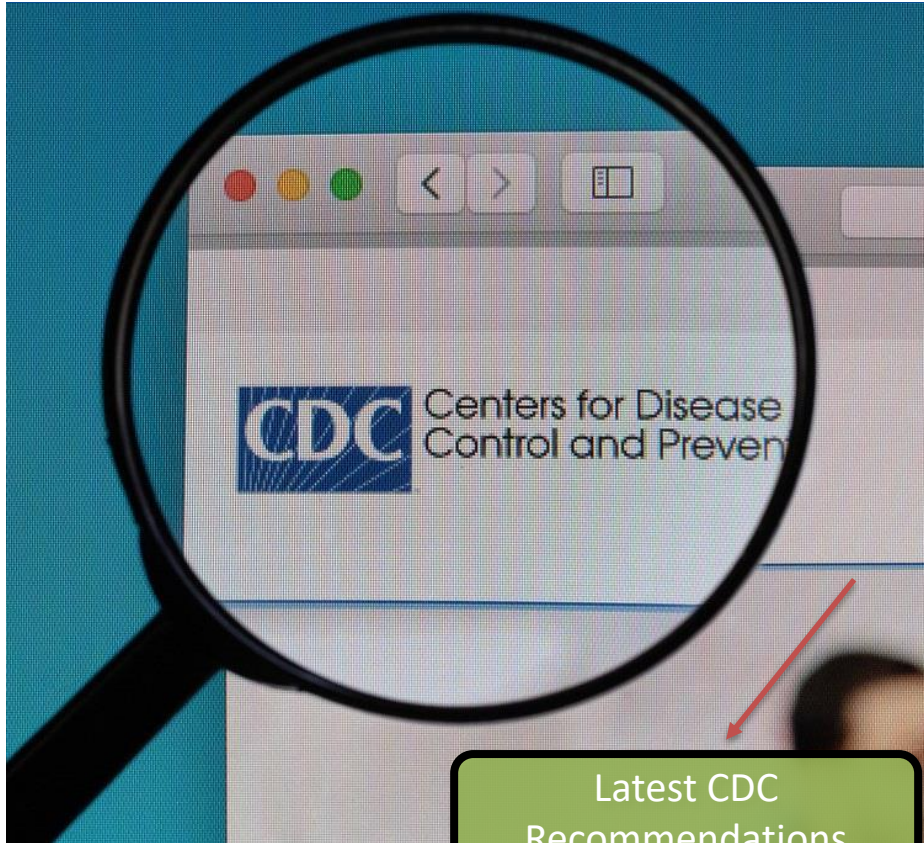
It is unknown how long the air inside a room occupied by someone with a confirmed viral respiratory illness remains potentially infectious. Facilities need to consider factors such as the size of the room and the ventilation system design such as air changes per hour, and location of supply and exhaust vents when deciding how long to close off areas used by ill persons before beginning disinfection. Taking measures to improve ventilation where someone was ill or suspected to be ill will help shorten the time it takes respiratory droplets to be removed from the air.

How Long Air
Remains Infectious
is Unknown

Factors Include: Room Size
and Ventilation System
Design

Improving Ventilation Helps
Shorten the Time to
Remove Respiratory
Droplets from the Air

Purpose



Latest CDC
Recommendations

CDC Guidelines Provide Recommendations for Cleaning and Disinfecting

CDC Updates When New Information is Available

These guidelines from the Centers for Disease Control (CDC) are focused on community, non-healthcare facilities such as schools and provide recommendations for cleaning and disinfecting areas occupied by those with suspected or with a confirmed viral respiratory illness. The CDC will update recommendations if additional information becomes available.

<https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html>





How Long Coronaviruses Can Live on Surfaces

Based on the most recently available studies, this is how long human coronaviruses can remain viable on a given type of material.

	Paper and tissue paper**	3 hours	<div></div>		Stainless steel*	2–3 days	<div></div>
	Copper*	4 hours	<div></div>		Polypropylene plastic*	3 days	<div></div>
	Cardboard*	24 hours	<div></div>		Glass**	4 days	<div></div>
	Wood**	2 days	<div></div>		Paper money**	4 days	<div></div>
	Cloth**	2 days	<div></div>		Outside of surgical mask**	7 days	<div></div>

*At 69.8 – 73.4 degrees F and 40% relative humidity | **At 71 degrees F and 65% relative humidity
Source: New England Journal of Medicine*; the Lancet Microbe**



Timing of Cleaning And Disinfecting Surfaces

Close the Area



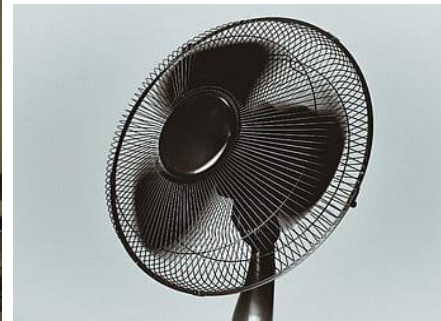
1

Open
Doors/Windows

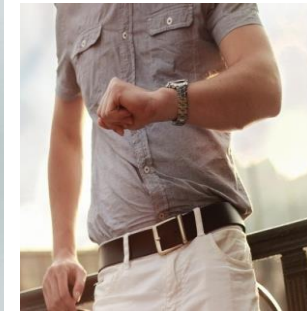


2

Use Fans for
Circulation



3



4

Wait 24
Hours
(or as long
as practical)

At a school or other facility that does not house people overnight, guidelines for the timing and location of cleaning and disinfection of surfaces is as follows:

Close off areas visited by the ill person. Open outside doors and windows and use ventilating fans to increase air circulation. Wait 24 hours or as long as practical before beginning cleaning and disinfection.



Timing of Cleaning And Disinfecting Surfaces

Clean and Disinfect **ALL** Areas Visited and **ALL** Equipment Used by the Ill Person

Offices, Bathrooms, Common Areas



Shared Electronic Equipment
(*touch screens, keyboards, remote controls*)



Additional Cleaning/Disinfection is Not Necessary if **>7 Days** Since the Ill Person Visited



Methods of Cleaning and Disinfection: Hard (*Non-Porous*) Surfaces

For Hard Surfaces

First, Clean Dirty Surfaces with Detergent or Soap and Water



For cleaning hard (non-porous) surfaces:

- If surfaces are dirty, clean using a detergent or soap and water prior to disinfection.
- For disinfection, most common EPA-registered household disinfectants should be effective.

Next, Use an EPA-Registered Household Disinfectant

The screenshot shows the EPA website's navigation bar with links for 'Environmental Topics', 'Laws & Regulations', and 'About EPA'. Below this, the 'Pesticide Registration' section is highlighted. The main heading is 'List N: Disinfectants for Use Against SARS-CoV-2'. A note below the heading states: 'All products on this list meet EPA's criteria for use against SARS-CoV-2, the virus that causes COVID-19.'



Methods of Cleaning and Disinfection: EPA-Registered Disinfectants

Finding a Suitable Disinfectant

EPA Registered
Disinfectants List

Follow Label Directions,
including Contact Time

List N was last updated on April 2, 2020.

Search:

Export to PDF

- Search for First Two Sets of Registration Number
- Otherwise, Check Different Product's Label for EPA Number and Human Coronavirus is a Listed Target Pathogen

EPA Registration Number	Active Ingredient(s)	Product Name	Company	Follow the disinfection directions and preparation for the following virus	Contact Time (in minutes)	Formulation Type	Surface Types for Use	Use Site
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A list of products that are EPA-approved for use against the human coronaviruses is available here. The easiest way to find a product is to enter the first two sets of its EPA registration number into the search bar. If you can't find a product on this list, look at a different product's label to confirm it has an EPA registration number and that human coronavirus is listed as a target pathogen. When using an EPA-registered disinfectant, follow the label directions for safe, effective use. Make sure to follow the contact time, which is the amount of time the surface should be visibly wet.



Methods of Cleaning and Disinfection: Diluted Bleach

Alternative: Diluted Household Bleach Solution (at least 1000 ppm Sodium Hypochlorite)

Follow Manufacturer's
Instructions



Ensure 1 minute+
Contact Time

Ensure Product has not Expired

Allow Proper
Ventilation



Diluted household bleach solutions (at least 1000ppm sodium hypochlorite) can be used if appropriate for the surface. Follow manufacturer's instructions for application, ensuring a contact time of at least 1 minute and allowing proper ventilation during and after application. Ensure the product is not past its expiration date.



Methods of Cleaning and Disinfection: Diluted Bleach

Alternative: Diluted Household Bleach Solution

(at least 1000 ppm Sodium Hypochlorite)

Bleach Solution:

5 Tablespoons ($\frac{1}{3}$ Cup) Bleach/Gallon of Water

or

4 Teaspoons of Bleach/Quart of Water

NEVER Mix Bleach with Ammonia or any Cleaners



Methods of Cleaning and Disinfection: Soft (*Porous*) Surfaces

For Soft Surfaces *Otherwise, Use EPA Product Approved for Use Against Human Coronaviruses



Step 1.
Remove Visible
Contamination

Clean with Suitable
Cleaner



Step 2.
*If Launderable,
Follow
Manufacturer's
Instructions.

Use Warmest Water
Setting

Dry Completely

For soft (porous) surfaces such as carpeted floor, rugs, and drapes, remove visible contamination if present and clean with appropriate cleaners indicated for use on these surfaces. After cleaning, if the items can be laundered, launder items following manufacturer's instructions using the warmest water setting for the items and dry items completely. Otherwise, use products that are EPA-approved for use against the human coronaviruses and that are suitable for porous surfaces.



Methods of Cleaning and Disinfection: Electronics

For Electronics

Remove Visible Contamination

Consider Wipeable Covers

Follow Manufacturer's Instructions OR
Use Alcohol-Based Wipes/Sprays
(70%+ Alcohol) for Touch Screens

Dry Thoroughly to Avoid Liquid Pooling



For electronics such as tablets, touch screens, keyboards, remote controls, and ATM machines, first remove visible contamination if present.

- Consider using wipeable covers for electronics.
- Follow the manufacturer's instructions for cleaning and disinfection products.
- If no manufacturer guidance is available, consider using alcohol-based wipes or sprays containing at least 70% alcohol to disinfect touch screens. Dry surfaces thoroughly to avoid pooling of liquids.

Methods of Cleaning and Disinfection: Laundered Items



For Laundered Items

Do Not Shake Dirty Laundry

Wash According to Manufacturer's Instructions

Launder Using Warmest Water Setting and Dry Completely

Clean and Disinfect Hampers or Other Carts that Transport Laundry



For linens, clothing, and other items that are laundered:

- Do not shake dirty laundry to minimize the potential for dispersing the virus through the air.
- Wash items according with manufacturer's instructions. If possible, launder items using the warmest water setting for the items and dry items completely. Dirty laundry in contact with an ill person can be washed with other people's items.
- Clean and disinfect hampers or other carts for transporting laundry according to guidance for hard or soft surfaces.

Methods of Cleaning and Disinfection



Do **NOT** Use **Compressed Air** or **Water Spray** to Clean Potential Contaminated Surfaces.

These techniques may aerosolize infectious material.



Personal Protective Equipment (PPE) and Hand Hygiene

- ✓ Wear disposable gloves and gowns, compatible with disinfectant
- ✓ Additional PPE may be needed depending on product and risk of splash
- ✓ Remove gloves and gowns to avoid contamination
- ✓ Wash hands after removal



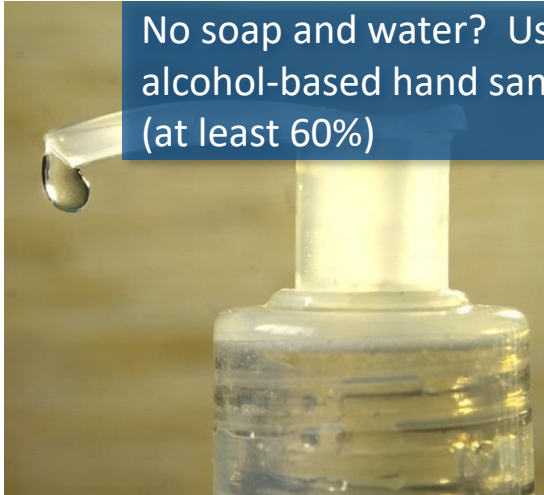
Glove Removal Video

- Cleaning staff should wear disposable gloves and gowns for cleaning tasks, including handling trash. Gloves and gowns should be compatible with the disinfectant product being used.
- Additional PPE may be required based on the products being used and whether there is a risk of splash.
- Gloves and gowns should be removed carefully after cleaning an area occupied by an ill person to avoid contamination of the wearer and the surrounding area. More about the proper way to remove gloves is here: <https://www.youtube.com/watch?v=ATU383IfT8>
- Be sure to wash hands after removing gloves.



Personal Protective Equipment (PPE) and Hand Hygiene

No soap and water? Use alcohol-based hand sanitizer (at least 60%)



If visibly dirty, always wash with soap and water



No gowns? Use coveralls, aprons, or work uniforms – then laundered if reusable



Immediately report breaches in PPE to a supervisor.

- More information about hand washing is here: <https://www.cdc.gov/handwashing/when-how-handwashing.html>

Hand Washing Video



Additional Considerations

Training



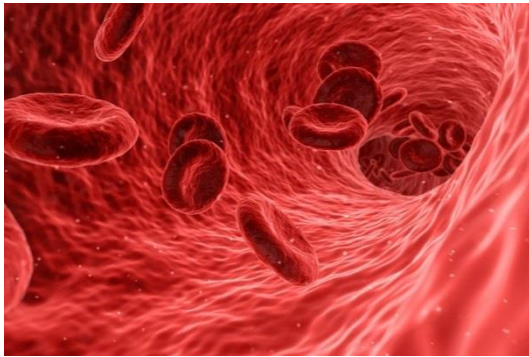
Additional considerations for protecting workers include:

- Employers should educate staff and workers performing cleaning, laundry, and trash pick-up activities to recognize symptoms (<https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>) of the illness and provide instructions on what to do if they develop symptoms within 14 days after their last possible exposure to the virus. At a minimum, any staff should immediately notify their supervisor and the local health department if they develop symptoms. The health department will provide guidance on what actions need to be

Additional Considerations



Protection



Workers Performing Cleaning Tasks: Protection from Exposure to:

- Bloodborne Pathogens
- Hazardous Chemicals

Additional considerations for protecting workers include:

- Workers who conduct cleaning tasks must be protected from exposure to blood, certain body fluids, and other potentially infectious materials covered by OSHA's Bloodborne Pathogens standard and from hazardous chemicals used in these tasks.

References and Resources



[Cleaning and Disinfecting](#)

[Handwashing](#)

[Recognizing Symptoms](#)



[Control and Prevention](#)
[\(COVID-19\)](#)



[EPA-Registered Disinfectants](#)

Cleaning and Disinfecting for the Prevention of Viral Respiratory Illnesses

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