

# The Healthy Homes Guide to Cleaning and Disinfection



**Early Care  
& Education**

COLLABORATIVE

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# The Healthy Homes Guide to Cleaning and Disinfection

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# INTRODUCTION

In 2019, the world learned about COVID-19. COVID-19 is a contagious disease that was first discovered in Wuhan, China. Soon the disease spread, and by March 2020, there were over 50,000 confirmed cases of COVID-19 in the United States. In June 2021, the number of cases in the U.S. is over 33 million, with over 599,000 deaths.

To reduce the spread of COVID-19, avoid close contact, practice social distancing (by staying at least six feet apart from others who do not live with you), wear a mask or face covering while out in public spaces, and adjust ventilation in your home or business.

Federal agencies also recommend cleaning and then disinfecting surfaces to help kill the virus that causes the disease COVID-19. Cleaning and disinfecting can also stop other sicknesses, like the flu, from spreading. Some safety measures like cleaning and disinfecting are more effective against certain types of viruses. Your plan on how to stop the spread of illness will depend on the type of virus you're trying to contain and on how it spreads. You should also check local, state, and federal guidance for specific recommendations.

## About This Resource

You're probably already cleaning and disinfecting to prevent getting sick from COVID-19 because of federal, state, and local recommendations. This guide will help you do that safely and effectively.

*The Healthy Homes Guide to Cleaning and Disinfection* is only about cleaning and disinfection. It does not replace other federal and local public health guidance. It does not have everything you should do to stop from getting sick and stopping the spread of COVID-19.

This resource was made for COVID-19, but many of the strategies and resources here will also help keep us all from getting the flu and other infectious diseases.

The [National Center for Healthy Housing](#) (NCHH) worked with the [National Environmental Health Association](#) (NEHA) to create this guide. This resource provides complete and current information on cleaning and disinfection for COVID-19. It has information and resources from federal agencies, national partners, and state and local agencies and organizations. This resource is meant to serve as a guide for the public to safely and effectively clean and disinfect their homes and in their daily lives.

## Defining Cleaning and Disinfecting

First, you should understand the difference between *cleaning* and *disinfecting*. This will help you complete these tasks safely and make sure they work. It will also help you protect yourself and your home from COVID-19.

- **Cleaning** is when you remove material like dirt and soil and other contaminants from a surface. People usually clean with dish soap and water. Routine cleaning will reduce how much of the virus is on a surface or object. When there are fewer germs on a surface, you reduce your risk of exposure and of spreading infection.
- **Disinfecting** is when you use chemicals to reduce or kill things like bacteria and viruses from a surface. Disinfecting kills many germs or stops them from reproducing.

## How to Decide What Needs Disinfection and When Cleaning is Is Enough

Disinfectants kill germs, but sometimes they are also dangerous for your health. Because disinfectants can be dangerous, it's important to decide when you should disinfect or when cleaning with soap and water is enough.

Disinfectants are made of chemicals that can be toxic if you swallow them. They can also irritate your eyes and your skin. The chemicals in disinfectants can also irritate your lungs, trigger asthma, and can be especially dangerous to people with respiratory problems.

If swallowed, the toxic chemicals in disinfectants are also dangerous to children. In your home, you should not normally apply disinfectants to items that children touch often (like toys). Do not apply disinfectants to things that children like to put in their mouths. Cleaning with soap and water is usually enough for items that children touch often.

Deciding what surfaces to clean and disinfect that children frequently touch is different in child care settings. See the guidance about child care programs in the Facilities section (page 15) of this resource for information on how to

decide what to clean and disinfect in those settings.

If you are in your home, surfaces that are not frequently touched do not need to be disinfected. You can just clean those surfaces. For surfaces that are touched often, you can clean first and then disinfect.

Some examples of things that are touched a lot are:

- Tables and chairs
- Doorknobs
- Light switches
- Electronics
- Countertops
- Handles
- Sinks
- Toilets

See the Homes and Facilities sections (pages 14 and 15) for information on what surfaces you should clean and disinfect that are specific to your needs.

#### READ MORE

[Reopening Guidance for Cleaning and Disinfecting Public Spaces, Workplaces, Businesses, Schools, and Homes](#)

CDC's website will help you plan and decide what surfaces and objects only need normal routine cleaning and which ones need disinfection. It gives you questions to help make these decisions.

## The Two-Step Process

If you've decided that you need to clean and disinfect, it's important to know that they are two separate things. You should clean first, then disinfect. Cleaning takes away dirt and soil. It also means that disinfectants will work better. The cleaner the surface, the more effective the disinfection. Disinfecting and removing the virus that causes COVID-19 only works on surfaces that are not dirty. Disinfecting does not remove soils from surfaces and does not work as well with them on the surface. It is important to remember to clean first and then disinfect because cleaning and disinfecting are two different processes.

#### READ MORE

[Cleaning and Disinfection for Households](#)

These are CDC's recommendations for homes during the COVID-19 pandemic. They include definitions of cleaning and disinfecting and a description of the processes.

[Introduction, Methods, Definition of Terms](#)

This CDC resource gives detailed definitions of cleaning and disinfecting in part of a larger guidance about disinfection and sterilization in healthcare facilities.

[Cleaning vs. Disinfecting: What's the Difference?](#)

The Water Quality and Health Council (WQHC) gives definitions and explains the importance of cleaning and disinfecting in the right order.



Cleaning and disinfecting products can be dangerous.

Call Poison Control at 1-800-222-1222 or go online at <https://www.poison.org/> if you think someone has been accidentally poisoned by a household cleaning or disinfectant product. Poison Control can be reached 24 hours a day, seven days a week. Do this if the person is awake and alert.

Call 911 if you have a poison emergency. Do this if the person has trouble breathing, has collapsed, or is unconscious.

## Reading Labels

It is important to read all the information on product labels. You should always follow the label directions. Label directions are not suggestions. You must follow directions to make sure you use the product safely and the right way.

Product labels will also include an EPA registration number. This number tells you that the EPA reviewed the product. You can use this number to compare to EPA's list of disinfectants that work against COVID-19. See the Products section of this guide for guidance on how to choose the right disinfectant.

It is important to pay attention and follow these rules when reading and following label directions:

- **Contact time** – Contact time is the amount of time the surface should stay wet. You should be able to see that the surface is wet. This makes sure that the product is working effectively. Contact time is also called “dwell time.”
- **Signal words** – Disinfectant products will have one of three signal words on their labels. These words are DANGER, WARNING, or CAUTION. These words tell you the level of risk of using that product.
- **Precautionary statements** – Precautionary statements will tell you what kind of personal protective equipment (PPE) you need to wear when using the product.
- **Surface types and application methods** – These will tell you what kind of surface the product is made for. They also tell you the right way to use the product on the surface.
- **Storage and disposal** – This information on labels will tell you how to safely store and get rid of the product.

### READ MORE

#### List N: Disinfectants for Use Against SARS-CoV-2

EPA's website tells you how to follow label directions. It also shows a full list of EPA-approved products you can use for COVID-19, their EPA registration numbers, and more information you need to know about using them.

#### 6 Steps for Safe and Effective Disinfectant Use

EPA's poster shows you the steps to use disinfectants the safe and right way. This includes information on what to look for and how to read directions on product labels.

#### Cleaning and COVID-19: Read the Label

This article gives guidance on reading product labels. It will help you understand signal words, contact times, and more.

#### Making Sense of Disinfectant Labels: A Step-by-Step Approach

This article reviews the ways to effectively use a disinfectant. It explains how to understand product labels, how to follow the contact time, and more.

## Bleach

The CDC's short-term recommendations say that you can use diluted household bleach to disinfect your house. You should know that you need to use bleach with caution. Here are a few safety measures to think about:

- Bleach causes corrosion and irritation. This means it can harm your skin, eyes, and lungs if you use it incorrectly.
- You should always wear gloves and ventilate the area when you use bleach. Never spray bleach.
- Bleach can make toxic gas when mixed with other chemicals. Never mix bleach with other products.
- Always read the label and always follow all the directions and safety measures.
- Do not use bleach around children or people with respiratory health issues like asthma.

If you plan on using diluted bleach, read the Products section (page 7) of this guide for more information on how to be safe.

# GENERAL INFORMATION AND BEST PRACTICES

These resources will give you general information and explain the best ways to reduce germs and to stop the spread of illness. These best practices will also make cleaning and disinfecting safer and more effective. This general advice is a summary of the more detailed information you'll find on the other sections of this guide.

Some safety measures like cleaning and disinfecting work better against certain types of viruses. Your plan on how to stop the spread of illness will depend on (1) the type of virus you're trying to contain and (2) how the virus spreads. Your plan might need to include some or all of the following general recommendations. You should also check local, state, and federal advice for specific recommendations.

Best practices include:

- The best way to prevent getting sick is avoiding contact with viruses and bacteria. You should wash your hands often, maintain a physical distance between people, wear a face covering in public, and clean regularly.
- You must remove germs and reduce their movement on surfaces to control contamination.
- If a surface is touched often, you should assume it's contaminated.
- It takes longer to disinfect stronger viruses and bacteria. Read the product label and follow the instructions about contact time.
- Disinfectant products must be applied to the entire surface because the product will only kill germs that it directly touches.

Other cleaning and disinfecting recommendations include:

- Clean first, then disinfect. When you cleaning first you remove contaminants like dirt, meaning that there are fewer germs you will need to kill with your disinfectant. This will make your disinfectant more effective.
- Clean surfaces that are touched often at least once each day.
- Always follow all label instructions.
- Be extremely careful when using bleach and follow the label instructions. Bleach should only be used when necessary.
- Wash your hands with soap and water for 20 seconds, and especially after using a disinfectant.
- Alcohol-based hand sanitizer should only be used if you can't wash your hands with soap and water or if it is not available.
- Good ventilation is important to use disinfectants safely. Fresh air and air flow are also important to fight contagious diseases like COVID-19.
- Use gloves when you're cleaning and disinfecting or when taking care of someone who is sick.
- Disinfectants can be dangerous and can splash. You should use eye protection to protect your eyes from this hazard.
- Throw away disposable items like gloves and masks after each use.
- Keep cleaning and disinfecting products where children can't reach them.



## Safety Message:

Hand washing is important at many other times. Some examples are after you have had contact with a surface that is touched often or after you come home from being out in public.

## READ MORE

### Factors Affecting the Efficacy of Disinfection and Sterilization

This CDC resource is meant for disinfection and sterilization in healthcare areas. It has important information about germ reduction and how to make disinfecting more effective that is useful to everyone.

### Cleaning and Disinfecting to Prevent COVID-19

This short resource from the Boston Public Health Commission gives clear and easy to follow tips on general best practices for cleaning.

### Using Disinfectant to Control the COVID-19 Virus

The National Pesticide Information Center's website tells you how to use products effectively. It also shows steps to reduce your risk when using disinfectants.

# HAND HYGIENE AND PERSONAL PROTECTIVE EQUIPMENT (PPE)

Washing your hands properly and wearing the right personal protective equipment (PPE) are safe ways to protect yourself from COVID-19. They're also ways to protect yourself from other contagious illnesses and other daily germs and hazards. It's also important to follow advice from experts about hand washing and using PPE when cleaning and disinfecting. The resources here will guide you through how and when to wash your hands, how to protect yourself when cleaning and disinfecting, and when and how to wear gloves.

This section only discusses hand hygiene and personal protective equipment when you are cleaning and disinfecting. It's not a substitute for expert advice for healthcare workers or frontline staff and doesn't include all the available information. This section doesn't include advice on wearing personal protective equipment out in public or other COVID-19 specific safety measures like wearing a mask or face covering and practicing social distancing.

## When and How to Wash Your Hands

Washing your hands is one way to prevent yourself from getting sick and to prevent the spread of dangerous viruses like the one that causes COVID-19. This CDC webpage provides steps on how to wash your hands correctly and examples of important times to wash your hands.

Tips for how to clean your hands include:

- Rub soap on all parts of your hand including the backs of your hands, wrists, palms, between your fingers, and under your nails.
- Scrub for at least 20 seconds.

Important times to wash your hands include:

- Before and after cleaning and disinfecting.
- After touching frequently touched surfaces in public places. Some examples are door handles, tables, gas pumps, shopping carts, electronic registers, and screens.
- Before and after touching your eyes, nose, or mouth.
- Before, during, and after making food.
- Before eating food.
- After leaving public places.

**READ MORE**

**Wash your hands for 20 seconds, which is how long it takes to hum the "Happy Birthday" song twice.**



## Hand Sanitizer Use Out and About

Here are some important things to keep in mind when using hand sanitizer:

- Washing your hands with soap and water is the best way to clean your hands, especially if you can see dirt on them. You can use alcohol-based hand sanitizer if soap and water are not available.
- Use an alcohol-based hand sanitizer that contains at least 60% alcohol. You can find this information on the hand sanitizer label.
- Sanitizing kills some germs on your skin but does not kill all types of germs or contaminants.
- Sanitizing may not work as well when your hands are dirty or greasy.
- Rub the gel over all parts of your hands and fingers until it is dry.
- Alcohol-based hand sanitizers can cause alcohol poisoning if someone eats or drinks them. Keep hand sanitizer out of reach of young children and watch children when they use it.
- Remember to wash your hands properly with soap and water as soon as you have access to handwashing services.

## READ MORE

### How to Protect Yourself and Others

This website gives tips that everyone should do to prevent the spread of illness and COVID-19. This includes washing your hands often and cleaning frequently touched surfaces daily. When cleaning and disinfecting, you should:

- Wear gloves. You can use either disposable or reusable gloves.
- Wash your hands before you put on gloves and after you take off gloves.
- Consider wearing eye protection for in case of splashing.

### When to Wear Gloves

It is important to wear gloves when you're routinely cleaning and disinfecting your home or when you're taking care of someone who is sick. This webpage gives guidance on when to wear gloves and other ways to protect yourself. You should do these things when cleaning and disinfecting:

- Follow all directions on the product label. Directions might include wearing gloves that you can reuse or throw away.
- Wash your hands before putting on gloves and after you take off gloves.

### Sequence for Donning and Removing Personal Protective Equipment

CDC's poster shows the order for how you should put on and take off PPE. It also includes important instructions to limit the spread of contamination. This resource is meant for healthcare providers, but the public can benefit from this information about safely removing gloves. Some tips include:

- Remember that the outsides of your gloves are contaminated. Remove your gloves the way the poster shows to be safe and to prevent exposing your bare hands.
- Wash your hands or use an alcohol-based sanitizer right before putting on and right after taking off all PPE.

### COVID-19 PPE for Frontline Staff

This Boston Public Health Commission's guidance is for frontline staff to protect themselves and the people they serve. They define frontline staff as anyone who interacts with the public. The sections on hand hygiene and PPE are useful to everyone. This document has many recommendations. Some of these include:

- Wash your hands often.
- Use alcohol-based hand sanitizers with at least 60% alcohol. You should only use hand sanitizer when water and soap are not available. Rub in the sanitizer until it's dry.
- Gloves are not a replacement for washing your hands. Wash your hands before and after using gloves.

Here are some other things to keep in mind if you are taking care of someone who has COVID-19 at your home:

- You should continue to do preventative actions like cleaning your hands often.
- Avoid touching your eyes, nose, and mouth.
- You should wear disposable gloves when handling a sick person's dirty laundry. Throw away your disposable gloves after each use.
- Clean your hands before putting on and after taking off your gloves.

For more guidance on cleaning and disinfecting while taking care of someone who has COVID-19 at your home, see the Homes section (page 14) of this guide.



You should use alcohol-based hand sanitizer only if soap and water are not available.

## PRODUCTS

This section is helpful for when you need to use chemicals to disinfect your home or facility. In some cases, cleaning without disinfecting will be enough. Some safety measures like cleaning and disinfecting are more effective against certain types of viruses. Your plan on how to stop the spread of illness will depend on the type of virus you're trying to contain and on how it spreads.

### READ MORE

#### EPA's List N Tool

To help us use [List N](#), the Environmental Protection Agency (EPA) has made a tool that allows you to search for disinfecting products on the list. Use the tool to look up your product by typing the first two parts of the product's registration number (for example, "12345-67") into the search bar, or sort by one or more of the following things:

- Active ingredient,
- Use site (healthcare, residential, or institutional),
- Contact time (1-30 minutes), or
- Keyword.

#### Using Disinfectants to Control the COVID-19 Virus

This fact sheet from the National Pesticide Information Center lists steps to use products and make you and your family safer. You will need to look at the labels on the products, including contact or dwell time and the use site.

## Common Disinfecting Household Products: Definitions and Key Messages

In this table, we have put some common chemical ingredients, the products they are usually in, and things to know about them. *For all products you might use, first read the product label or look it up on [EPA's List N](#) to make sure you can follow the directions and use it safely.*

Chemical Ingredient	Common Products	Key Message
Sodium hypochlorite	Household bleach	Bleach is dangerous and should be used carefully and only when necessary. Follow the steps listed below and all label and safety information.
Quaternary ammonium compounds	Many non-bleach products, like Clorox disinfecting wipes	"Quats" can be bad for you. Follow all label and safety information.
Isopropyl alcohol	Hand sanitizers, rubbing alcohol	These products are flammable.
Hydrogen peroxide	Peroxide cleaning products and antiseptics	Do not mix with vinegar.



## Cleaning with cloth

Microfiber cloths are very good at removing dirt and grease from surfaces. They can also be washed and reused.

See our Green Cleaning section (page 9) for more information.

### READ MORE

#### Disinfectant Safety During the COVID-19 Pandemic

The National Pesticide Information Center (NPIC) hosts this page about the best ways to use disinfectants to make sure they work and you are safe.

- **Webinar Recording** — NPIC hosted this webinar in June 2020 to answer common questions about disinfectant safety and explain how to use EPA's List N tool.
- **Signal Words** — This page tells you what certain words on pesticide product labels mean.

#### Children and Spray Bottles: A Hazard

This page tells you how to use and store spray bottles when you're using them for cleaning products, and what to do if the product touches your skin or eyes.

#### Can I Use Fogging, Fumigation, or Electrostatic Spraying or Drones to Help Control COVID-19?

EPA says you should not use foggers or products like them for applying disinfectant unless the product label specifically tells you how to use them. [The World Health Organization \(WHO\)](#) also says not to use spraying or fogging to disinfect against COVID-19.

#### Disinfectant Product Label

This resource from Iowa State University is a sample disinfectant label and shows the different parts of a label, including the EPA registration number, usage guidelines, and health hazards.

## Disinfecting with Bleach

*Note that the Centers for Disease Control and Prevention (CDC) recommends using a product from EPA's List N first and only using a bleach solution when you can't use something else.*

[This link](#) includes a step-by-step guide to using bleach to disinfect for COVID-19. When you use bleach, always remember:

*Use bleach properly and follow expert recommendations:*

- Pick a bleach product that has an EPA registration number.
  - » Some brands and formulas of household bleach do not have EPA approval. Don't use these brands and formulas.
- Look at the concentration of the bleach on the label. Household bleach is a sodium hypochlorite solution. Concentrations of sodium hypochlorite in household bleach are usually between 2% and 10%. (The CDC recommends using unscented 5%-6% bleach.) The concentration will determine how much you dilute it (mix with water).
- For disinfection, mix bleach in warm water to a concentration below 1%. The exact amount of water you need to use will be on the product label. [This resource](#) includes a helpful guide to dilution ratios depending on the strength of the bleach, in both teaspoons and milliliters.
- Because COVID-19 is a new virus, it may not be listed on most product labels. EPA's List N will tell you the name of another similar virus which will be on the label. To use the product properly, you should follow the directions on the label for that similar virus.
- When possible, don't use fragrant products (products that have added scents) because they can further irritate respiratory conditions like asthma.
- Look at the expiration date on the bottle. Bleach expires after one year. Don't keep bleach in direct sunlight because this will make it less effective.

- Follow the label directions about how long to leave the bleach on the surface.
- Dilute the bleach (mix with water) when throwing it away.

*Use with caution and protect against health risks:*

- Always wear eye protection and gloves when using bleach products. Move air through the area by opening a nearby window.
- We strongly recommend spreading a bleach product or solution with a sponge, wipe, or cloth and not spraying the product. If you must use a spray bleach product, keep it to as small a surface area as possible and be extra careful to ventilate the area.
- Do not use bleach near children or people with asthma or other respiratory health issues.
- Household bleach can damage surfaces, especially metal surfaces.
- Bleach can create toxic gas when mixed with other chemicals. Never mix bleach with anything besides water.
- Keep undiluted bleach in its original container, clearly marked, and away from children.
- If you dilute the bleach, remember to rinse the storage container thoroughly after you use it, especially if you might use it again to store other liquids.
- Take bleach out of the original container to dilute it, and don't put it back. Once mixed with water, bleach will stop working well after a day. Do not store diluted bleach for more than 24 hours.

**Bleach is harmful to your skin, eyes, and lungs and can trigger an asthma attack. Use products containing bleach only when necessary and as recommended. Check out the “Case Study” on the next page for a step-by-step guide to following the label on a bleach product.**



## GREEN CLEANING

The links on this page will help you choose and use cleaning and disinfecting products that are safer for the environment or human health. When you're picking a product, you should always research the product's ingredients, how it might affect your health, and think about how you will use it. This is also true for products that are marketed as “green” or “natural.” Green products are not always safer for your health and might not always work best for what you need.

You should always follow label and company instructions for all cleaning and disinfecting products. See our Products section (page 7) for more information. The Centers for Disease Control and Prevention (CDC) recommends using products on the U.S. Environmental Protection Agency's (EPA) [List N](#) to disinfect for COVID-19.

### Cleaning Product Standards

#### Safer Choice

The Environmental Protection Agency runs the Safer Choice label. Products with this label must follow the Safer Choice Standard. The label means that a product is safer for both people and the environment. For human health, Safer Choice lists if chemicals cause cancer, birth or development defects, and if they have volatile organic compounds (VOCs).

- [Explore](#) a list of cleaning products that meet this standard. You can sort this list by type of product, fragrance-free products, and products you use outdoors.



<p><b>DIRECTIONS FOR USE:</b> In a concentration of <b>fuller strength</b> (see use of this product in a manner inconsistent with the following).</p>		
<p><b>DISINFECTING</b> Floors, Walls, Sinks, Showers</p>	<p><b>Product</b> 1 Cup</p> <p><b>Gallon</b></p>	<p><b>Instructions</b> Wash with Softener and rinse. Scrub surfaces with bleach solution. Use pre-mesh solution, let stand for 5 minutes. Rinse and dry.</p>
<p><b>SANITIZING</b> Work Surfaces</p>	<p><b>Product</b> 1 Tbsp</p> <p><b>Water</b></p>	<p><b>Instructions</b> Pre-mix water with detergent, rinse wash surface with bleach solution for at least 2 minutes, let stand 5 minutes, let dry.</p>
<p>Other: Dishcloths, Glass, Utensils</p>	<p><b>Product</b> 1 Tbsp</p> <p><b>Water</b></p>	<p><b>Instructions</b> Pre-mix water with detergent, rinse wash surface with bleach solution for at least 2 minutes, let stand 5 minutes, let dry.</p>
<p>Refrigerators, Freezers</p>	<p><b>Product</b> 1 Cup</p> <p><b>Gallon</b></p>	<p><b>Instructions</b> Wash, rinse, apply bleach solution for at least 2 minutes, let stand 5 minutes, let dry.</p>
<p>Mops, Brooms, Brushes &amp; Rags</p>	<p><b>Product</b> 1 Cup</p> <p><b>Gallon</b></p>	<p><b>Instructions</b> Pre-wash items, then soak them in bleach solution for at least 10 minutes. Rinse well.</p>
<p><b>DEODORIZING</b> Garbage can</p>	<p><b>Product</b> 1 Cup</p> <p><b>Gallon</b></p>	<p><b>Instructions</b> After washing and rinsing, brush inside of can with bleach solution. Empty and let drain. Flush drains: Pour water down.</p>
<p><b>DRINK, MILK/ICE &amp; STAIN REMOVAL</b> All Surfaces</p>	<p><b>Product</b> 1 Cup</p> <p><b>Gallon</b></p>	<p><b>Instructions</b> Add bleach to powdered detergent. Pre-mix water with detergent, rinse wash surface with bleach solution for at least 2 minutes. Wipe and rinse.</p>

- **Review** the standard itself. The Safer Choice Standard was last updated in 2015.
- **Read** frequently asked questions about Safer Choice.
- Safer Choice also has a fragrance-free certification and label. **Learn** about the fragrance-free criteria.

### Green Seal

Green Seal certifies products and services and is not associated with the government. They have standards for many products, including household cleaning products. Green Seal also has a **selection of resources** about cleaning and disinfecting for COVID-19. Green Seal follows EPA rules for third-party certification.



- **Explore** a list of household cleaning products that meet this standard.
- **Review** the Green Seal standards. You can find household cleaning products under standard GS-8.
- **Read** frequently asked questions about Green Seal.

#### Decoding the Labels

This page from the Environmental Working Group explains what most common phrases and words on cleaning product labels mean.

#### Green Cleaning, Sanitizing, and Disinfecting: A Toolkit for Early Care and Education

The EPA made this toolkit specifically for child care providers. It has instructions for how to label cleaning products. It also includes ways to reduce the spread of disease without using chemicals.

#### Microfiber

This resource is part of the EPA toolkit for child care providers, but anyone with questions about microfiber cleaning cloths and mops can read it.

Key messages include:

- Microfiber cleans dirt and grease from surfaces.
- Microfiber products are reusable and need to be washed between uses.
- Microfiber can be used with cleaners or disinfectants. Do not use microfiber with fabric softeners or bleach because they will not last as long or work as well.

### READ MORE

Microfiber can work well to clean surfaces, but there are also some concerns that they will wear out as you wash them over and over. Washing the cloths can also put tiny fibers into waterways, causing pollution and affecting the environment.

#### Safer Products and Practices for Disinfecting and Sanitizing Surfaces

The San Francisco Department of the Environment wrote this study of disinfecting products. The report also has a list of disinfectants they recommend (see Appendix A) and the best ways to clean, sanitize, and disinfect surfaces (look at Appendix C).

#### Protecting Yourself Without Toxic Chemicals

Beyond Pesticides has descriptions of how to prevent exposure to COVID-19 without using toxic chemicals. The most important are simple prevention measures where you do not have to disinfect at all, such as staying six feet apart and wearing a mask in public. When you are washing your hands and disinfecting surfaces, they list different types of ingredients in products by “better,” “good,” and “bad” for human health. Beyond Pesticides also has a FAQ about disinfecting for COVID-19 and specific products.

#### Green Household Cleaners and Coronavirus: What You Need to Know

This article from The Washington Post talks about the different options and pros and cons for cleaning and disinfecting using green products to prevent COVID-19. In the end, the article suggests that if you are at risk of exposure to COVID-19 and want to disinfect your home, you should choose products on the EPA’s List N.

# VENTILATION

Fresh air and air movement in your home can help keep COVID-19 and other diseases from spreading. Good ventilation and air flow makes it so that there are fewer virus particles in the air. Ventilation is just as important as cleaning, disinfecting, and social distancing. To stop the spread of disease, you should clean often, disinfect when needed, keep a safe distance from others, and keep fresh air moving through living spaces.

Cleaning products can also put toxic chemicals in the air. Ventilation when you're using those products helps keep you safe from those chemicals. Read our Products section (page 7) to learn more about using products safely.

## Definitions

*Ventilation* means air exchange. You exchange air by bringing new air inside a building and removing old air. There are different ways to do this:

- *Mechanical ventilation* uses fans.
- *Natural ventilation* uses doors and windows instead of fans.
- *Mixed-mode ventilation systems* use both mechanical and natural ventilation.

There are many things that make air exchange work well. For example, the doors and windows you have open and which side of the house they are on will change how air moves through the home. Also, how clean is the air outside your home? If you live somewhere with poor outdoor air quality, you may not want to bring in as much outdoor air to your home. You can use [AirNow](#) to track your outdoor air quality.

## For Homes

A note for renters: Ventilation can be harder to control if you're renting. Depending on how your home or building is set up, you may not have control over an HVAC system. But, even if you can't control the mechanical ventilation, there are many ways that you can use natural ventilation to increase air flow. We've marked the sections of the links below that will be more helpful to renters, homeowners, or property managers.

### Indoor Air in Homes and COVID-19

*For renters and homeowners:* This EPA web page has first steps for better ventilation in your home. Learn more about these topics:

- How to increase ventilation by opening doors and windows or by using fans.
- How to use your heating, ventilation, and air conditioning (HVAC) system the right way.
- Using a portable air cleaner or air purifier.
- When to use evaporative coolers and whole-house fans.

### ASHRAE Resources

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) has resources for residents and property managers:

- **Residential Guidance**

Renters should read pages 5-6; homeowners and property managers should read page 7: These slides say to:

- » Maintain your normal comfortable temperature.
- » Increase air flow.
- » Turn on exhaust fans in the bathroom.
- » Use stand-alone air cleaners if you have one.
- » Increase air movement (by using fans).

There are special suggestions if you have a forced-air system, run a multifamily building, or need a separate space for people who are sick or high-risk.

## READ MORE

For the full online version of this guide, visit ... <https://bit.ly/NCHHinfoSafeClean>



## Tips to improve ventilation in your home:

- Clean vent entry and exit points (such as HVAC registers and air return vents), filters, and ducts.
- Replace filters when necessary. Consider installing a higher-efficiency filter.
- Open doors and windows.
- Run window fans.
- Install and run exhaust fans in the kitchen and bathrooms.
- Use reversable window fans (can be used to exhaust or bring in new air).
- If your home has a whole-house fan, it is an excellent method for air exchange.

View the resources below for more details.

### READ MORE

- **Residences FAQ**

*For everyone:* This page answers questions about many topics, like how to use and adjust different forced-air systems and how to reduce risks. Questions about specific kinds of machines have pictures to go with them. There is also a glossary of ventilation terms.

- **Filtration FAQ**

*For homeowners and property owners:* This page covers questions about HVAC systems, like how to use filters and if you should disinfect them.

## For Workplaces and Schools

### READ MORE

- **REHVA COVID-19 Guidance**

This resource is from the Federation of European Heating, Ventilation and Air Conditioning Associations (REHVA). It tells you how to use building services to make workplaces safer. It says to:

- Increase air supply and exhaust ventilation.
- Open more windows.
- Adjust use of heat recovery sections.
- Do not use recirculation.
- Room air cleaners can be useful in specific situations.
- Close the lid when flushing the toilet.
- Cleaning ducts and changing outdoor air filters is not necessary.
- Monitor indoor air quality.

- **Reoccupying**

This section of the ASHRAE page talks about how to go back into a building that has been shut down, with specific information for schools and universities.

- **EPA: Healthy Indoor Environments in Schools**

This page from EPA includes a link to an **Indoor Air Quality Tools for Schools Action Kit**, which has reference guides, fact sheets, and checklists. The page also links to specific guidance from EPA and others on COVID-19.

# HOMES

This section and its resources include information on how to keep your home clean and minimize infection. We encourage you visit the resources for more detail, but the key messages are:

1. *Cleaning and disinfecting are two separate processes.* Sometimes, cleaning is enough and you don't need to disinfect. For more about how cleaning and disinfecting are different, see our Introduction section (page 1).
2. *If no one is sick, clean your home regularly.* If someone is sick in your home, you should both clean and disinfect.
3. *Focus on frequently touched surfaces.* Especially if you are short on time or juggling other priorities, you should focus on cleaning surfaces that you and your family touch often during the day. This includes tables and chairs, doorknobs, light switches, electronics, handles, sinks, and toilets.
4. *Wash hands frequently.* Everyone in the house should wash their hands with soap and water often. See our Hand Hygiene and PPE section (page 5) within this guide for more information.
5. *Increase air movement in your home.* Bringing fresh, clean air from outside helps to remove a virus from the air in your home. You can do this by opening windows, running window fans, and making sure fire dampers are working. See our Ventilation section (page 12) within this guide for more information.



Focus on cleaning and disinfecting frequently touched surfaces in your home.

Follow these steps when someone is sick in your home:

- Keep a separate bedroom and bathroom for the sick person, if you can.
- Limit your contact with the person who is sick and wear disposable gloves when cleaning areas they have used. See our Hand Hygiene and PPE section (page 5) within this resource for more advice.
- Open windows and bring in outside air if you can. See our Ventilation section (page 12) for more information.
- Keep a trash can just for the person who is sick.
- If you're sharing a bathroom, clean the bathroom after each time the sick person uses it.

## READ MORE

### CDC: Cleaning and Disinfecting for Households

This page covers keeping your hands clean and how to clean hard and soft surfaces, electronics, and laundry.

### CDC: Cleaning and Disinfecting Your Home

Read this page for clear and simple things you can do to clean hard and soft surfaces, laundry, and deal with the bedroom, bathroom, food, and trash when someone is sick.

### CDC: Improving Ventilation in Your Home

This CDC page talks about using air movement to reduce the risk of COVID-19 in your home if you have visitors. Note that it is also important to stay six feet apart and wear masks if you have visitors in your home. Visit our Ventilation section (page 12) for more information.

- Bring fresh air into your home by opening doors and windows or using fans. If you're running fans, point them away from people.
- If you can control your heating and air conditioning through a thermostat, turn the fan setting to *on* instead of *auto* when you have visitors over.
- Run kitchen and bathroom exhaust fans.
- Limit the amount of time spent with visitors inside, as well as the number of visitors.

### Safer Disinfectant Use During the COVID-19 Pandemic

This guide includes steps to disinfect safely, including how to wash sponges and towels after using them to clean surfaces.

## READ MORE

### Safely Cleaning Your Home

This website includes a “frequently asked questions” (FAQ) section and includes steps to keep your living space healthy by addressing mold, pests, and indoor air quality.

### 12 Places to Clean in Your Home to Prevent the Spread of Illness

This resource lists 12 areas to clean in your home that are touched often: doorknobs, light switches, handles, hard-backed chairs, desks, tables, countertops, toilets, faucets, sinks, remote controls, and toiletries and makeup.

## FACILITIES

This section is mainly for people who are managers or operators of community facilities that are not healthcare settings. This includes places like schools, early care and education (ECE) facilities, offices, and businesses.

If you manage staff:

- Tell staff that they should stay home if they are sick. If a member of your team has been around someone who is sick, they should tell a supervisor and talk about the need to stay home.
- Teach workers how to clean and disinfect correctly and when they should be doing so. If your facility is using new cleaning products, you should train the people who will use the products to use them safely.
- Generally, all staff should use personal protective equipment (PPE) and wash hands often. Cleaning staff should wear disposable gloves when cleaning, including when taking out the trash, and should follow label directions for any chemical products they are using, which might include wearing more PPE. Everyone in the facility should wash their hands often. Read our Hand Hygiene and PPE section for more information and follow local, state, and federal guidance for your field or sector.

## Signs and Posters

You can use these posters in workplaces or common spaces:

- Stop the Spread of Germs  
[English](#) | [Español](#)
- Stay Home from Work  
[English](#) | [Español](#)

Depending on the type of virus you’re trying to contain, your plan might include some or all of the following. You should also check local, state, and federal guidelines.

- **Social distancing.** Set up the space so that staff, customers, and/or clients can be at least six feet apart from each other.
- **Ventilation.** If the weather is good and you can control your heat or air conditioning systems, set up the facility to have more new air coming in and less old air recirculating. See our Ventilation section (page 12) for specific resources and steps to take.
- **Cleaning and disinfecting surfaces.** Develop a [schedule to clean](#) hard and soft surfaces based on guidance for that surface and manufacturer’s instructions. For more detailed information about the difference between cleaning and disinfecting and how to use cleaning products appropriately, see our Introduction and Products sections (pages 1 and 7). Generally, cleaning should be done at least once a day, but you should also check with your local public health department or other authority for further instructions about how often you should clean and disinfect. See the section below for specific places to clean and disinfect depending on where you work.
  - » You might want to put a wipeable cover on electronics to make cleaning easier.
  - » If you are doing laundry, you should clean and disinfect clothes hampers.
  - » Tell residents and/or staff with sensory or respiratory issues to stay away from areas during and right after cleaning.



You should follow safety precautions and manufacturer instructions if you’re using cleaning and disinfecting products with chemicals in them.

- *If someone is sick and has been in the facility, close off the areas they visited and open windows or use fans to increase air movement.* Clean and disinfect things that the sick person used and the places where they were. If you can, wait 24 hours to begin cleaning and disinfecting. If you must vacuum the room, use a vacuum with a HEPA filter and vacuum when there is no one in the room. If it has been a week or longer since a sick person was in the area, you do not have to do any of this additional cleaning.
- *If people sleep in your building overnight,* read the CDC's interim guidance for higher education and view our Homes section or the [CDC guidance](#) for information on cleaning and disinfecting bedrooms and bathrooms if someone is sick.

## Location-Specific Guidance

### Schools

Key messages:

- Focus on locations and surfaces like health offices, lunchrooms, and athletic rooms. If multiple different groups of people use the same space during the day, you should clean and disinfect after one group leaves and before another enters.

### Playgrounds

Key messages:

- Continue whatever you were already doing to clean outdoor areas.
- Do not clean and disinfect wooden surfaces or groundcover.
- Do not spray disinfectant on outdoor playgrounds.

#### READ MORE

[Massachusetts Coalition of Occupational Health and Safety](#)

[New York State Department of Health](#)

Centers for Disease Control and Prevention:

- [Schools](#)
- [Parks](#)

### Child Care Programs

Key messages:

- Before doing anything else, check with your state, city, and/or county child care licensing programs and follow their instructions.
- You can view an example [cleaning schedule here](#). Surfaces that should be cleaned and disinfected before and/or after each use include surfaces for making food, tables and highchairs, countertops, computer keyboards, changing tables, and potty chairs.
- Keep all cleaning materials out of the reach of children.
- If you can't clean a toy, do not use it. Toys that have been put in a child's mouth or otherwise contaminated should be set aside and cleaned in soapy water.
- Use bedding that you can wash. Keep each child's bedding separate and wash it weekly. Cloth toys should be machine washed before being used by a different child.

#### READ MORE

[Centers for Disease Control and Prevention](#)

Children's Environmental Health Network and Eco-Healthy Child Care®:

- Safer Cleaning and Disinfecting in Child Care Facilities: [Part 1](#) | [Part 2](#)
- [Other Resources](#)

### Retirement and Independent Living Facilities

Key messages:

- Clean and disinfect common spaces at least daily depending on how often they are used.
- Prioritize frequently touched surfaces.

- Encourage residents to wash their hands often, including after using shared equipment or being in common spaces, and clean and disinfect their homes. Visit our Products section for more guidance.

**READ MORE** | [Centers for Disease Control and Prevention](#)

## Multifamily or Congregate Housing

Key messages:

- If you can, limit the number of people using shared objects (like computer equipment) and clean and disinfect after someone uses them.
- Make sure that people can stay six feet apart from each other in common spaces, including by staggering use of rooms and equipment.
- Install barriers (like sneeze guards) where it makes sense.
- Clean and disinfect shared bathrooms at least twice a day.
- Offer to help clean and disinfect homes or rooms for residents who need it.

**READ MORE**

[CDC: Shared or Congregate Housing](#)  
[CDC: Multifamily Housing](#)  
[HUD Office of Multifamily Housing Stakeholders](#)  
[National Multifamily Housing Council](#)

## Other Locations

Find additional resources for other location types:

**READ MORE**

[Office buildings](#)  
[Retail stores](#)  
[Correction and detention facilities](#)  
[Park and recreational facilities](#)  
[Food industry](#)

## REOPENING

Businesses and public places are opening again, but it's still important to clean and disinfect safely to lessen the chance of getting sick and keep illness from spreading. We can help keep everyone safe by cleaning regularly, disinfecting when we need to, and having a flexible plan. In addition to the information here, you should follow advice from federal, state, tribal, territorial, and local authorities for reopening.

The information here about cleaning and disinfection is only one part of stopping the spread of COVID-19 as we continue to re-open buildings. It's also important to control COVID-19 by social distancing and wearing a mask in public places. Social distancing means staying at least six feet away from people who do not live with you.

This information doesn't include everything you should do to be safe when going back to buildings that have been closed for a long time or that had their open hours reduced. These buildings might have additional hazards including legionella, mold, or lead and copper. See the "Bonus Resource" below and the Ventilation section ([page x](#)) of this guide for more information on this.

Important things to keep in mind:

- Find out what kinds of surfaces and materials are in the place you're going to clean and disinfect. Most surfaces only need normal routine cleaning, not disinfecting.
- If an area has been empty for a week or longer, it only needs routine cleaning.
- If the area is outside, stick to your usual cleaning practices.
- It's important to clean surfaces or objects that are touched often by many people at least once each day.

Here are some examples of surfaces and objects that are touched often:

- » Tables and chairs
  - » Doorknobs
  - » Light switches
  - » Cell phones
  - » Keyboards
  - » Copy machines
  - » Touch screens
  - » Countertops
  - » Handles
  - » Sinks
  - » Toilets
- You can remove some items so they will not be touched as frequently or by as many people—that way, you won't have to clean them. Think about removing soft and porous materials like carpet, rugs, or material in sitting areas.
  - You should stay flexible because your needs might change. Keep checking federal, state, tribal, and local recommendations for updates.

See the Homes or Facilities sections (pages 14 and 15) of this guide for information about cleaning and disinfecting households or public places.

#### READ MORE

##### Reopening Guidance for Cleaning and Disinfecting Public Spaces, Workplaces, Businesses, Schools, and Homes

CDC's webpage has advice for the public to stay safe and stop the spread of COVID-19 as public places reopen. This page will help you make, carry out, and keep up your plan on what to clean and disinfect.

##### Guidance for Cleaning and Disinfecting: Public Spaces, Workplaces, Businesses, Schools, and Homes

This CDC resource walks you through questions that will help you decide and plan what to clean and disinfect.

##### *Bonus Resource:*

##### Guidance for Reopening Buildings After Prolonged Shutdown or Reduced Operation

There are other safety issues to think about when you go back into a building that has been closed for long periods or has had its open hours reduced. Some issues you might run into are legionella, mold, and lead and copper. This CDC resource tells you how to deal with them.

For the full online version of this guide, visit ...

***<https://bit.ly/NCHHinfoSafeClean>***



# National Center for **HEALTHY HOUSING**

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