
Tip Sheet

# A Guide to Safe and Effective Cleaning and Disinfecting

## Why should we limit our use of disinfectants?

There is a growing belief on the part of the public that all germs (or "microbes") need to be killed because of infectious-disease outbreaks mainly in public places. This belief and limited time for routine cleaning and hand hygiene leads to the indiscriminate use of sanitizers, disinfectants, and antimicrobial hand products that may actually pose a hazard to the public.

Disinfectants are not cleaners but pesticides designed to kill or inactivate microbes. Thus, they are not products that should be used indiscriminately. The overuse and misuse of these products is a growing public health and environmental concern. Overuse of some disinfectant products can potentially create microbes that are resistant to particular disinfectants or that become "superbugs".

Bacteria, fungi, and viruses play important positive roles in human health. Microbes have both beneficial uses and negative impacts. Product manufacturers sometimes design media messages about the proliferation of germs and their potential health affects so as to cause public alarm and increase the desire for antimicrobial products.

## Why is it necessary to clean before disinfecting?

When disinfection is necessary, in order to disinfect properly, you need to clean a surface first. All dirt, debris, and organic matter should be removed from a surface so that the disinfectant can come into contact with the microbes, be absorbed, and kill the microbes. Soil renders disinfectants less effective because it can hide the microbes, absorb the disinfectant ingredients, and change the chemical nature of the disinfectant.

## Can you clean and disinfect at the same time?

Although cleaners do not disinfect and disinfectants do not clean, there are products that are designed and registered by the EPA to clean and disinfect. They contain both a disinfectant and a detergent cleaning agent. All *heavily* soiled surfaces need to be cleaned first using a separate cleaning agent.

*For more information:*

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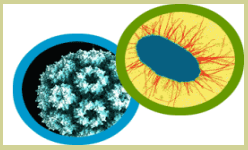
## Health Issues Related to Misuse or Overuse of Disinfectants

- Disinfectants have been linked to acute and chronic health issues.
- Work-related asthma can be triggered by some cleaning products.
- Ingredients such as acids, ammonia, bleach, and disinfectants are asthma irritants.
- Emerging science links certain disinfectants to reproductive issues.

## Environmental Issues Related to Disinfectants

- Residues of disinfectants washed down the drain are triggering the growth of disinfectant-resistant microbes.
- Resistant bacteria created in wastewater treatment sludge can result in antibiotic-resistant diseases.



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## 8 Tips to Staying Safe and Healthy in Cold and Flu Season

1. ***Hand washing***. Washing hands properly (with soap, warm water, and friction for 20 seconds) frequently and after exposure to an infected person or object minimizes the opportunity for pathogenic microbes to enter our body and will reduce their spread to other people, objects, and surfaces.

2. ***Cough and cover***. Cover the nose/mouth with tissue when coughing or sneezing. Coughing into the elbow is an alternative when tissues are not available. Don't forget to wash your hands.
3. ***Use tissues***. Use tissues when possible to capture droplets and dispose of them in a waste receptacle after use, then wash your hands.
4. ***Buffer yourself***. If you are coughing or sneezing, try to step back and leave a 3-foot buffer between yourself and others.
5. ***Clean first***. Frequent and correct cleaning of high-risk and high-touch* areas with proper equipment will remove microbes. Microfiber clothes and mops are recommended for removal of up to 99% of microbes. Steam cleaning machines and spray-and-vac machines are also recommended to remove microbes and their spores.
6. ***Sanitize when needed***. Using a product designed to sanitize a surface will reduce but not necessarily eliminate microorganisms from surfaces. Sanitization is required for food service areas and in childcare centers.
7. ***Disinfect only when needed***. To minimize the use of unnecessary disinfectants and help protect our health and the environment, only disinfect when necessary. Situations that *do require* disinfection include accidents involving vomit, feces, body fluids, or blood; some bathroom surfaces; and for specific legally required activities in food preparation areas and in childcare settings. Disinfectants are *not recommended* for daily use *other than* on high-risk surfaces and where required by regulation. The surface will remain disinfected only until the next person or microbe touches that surface.
8. ***Ventilate the area***. Adequate ventilation can also help reduce the chance of infection by providing fresh air. Facilities are required to meet certain ventilation requirements and homeowners should air out the house and wash linens and other high-touch areas when an illness has been introduced to the house.

* **High-risk areas**: locations where there is a higher risk for bloodborne incidents, skin contact (MRSA risk), or contact with feces and body fluids. **High-touch areas**: surfaces touched frequently and by a variety of hands over the course of the day. High-touch areas include door handles, faucet handles, handrails, shared desks, push bars, drinking fountains, and so forth. Areas touched by only one person, such as a personal computer keyboard, do not pose the same risk.

## Important Definitions

**Antibacterial –** substances that kill or slow the growth of bacteria on human and environmental surfaces, including those that aid in proper hygiene.

**Antimicrobial** – a general term used to describe substances that kill or slow the growth of microbes.

**Bacteria –** microorganisms that are found on our skin, in our digestive tract, in the air, and in the soil. Most are harmless (nonpathogenic).

**Disinfectant** – used to destroy or irreversibly inactivate certain microorganisms, viruses, and infectious fungi and bacteria, but not necessarily their spores.

**Disinfection** – a process that is used to reduce the number of viable microorganisms on a surface but that may not necessarily inactivate all microbial agents (e.g., spores)

**Fungi** – microbes that feed on living organisms or dead organic material. Examples are yeasts, molds, and mushrooms.

**Microbe** – a collective name for microscopic organisms including bacteria, viruses, fungi, and some parasites

**Sanitizer** – used to reduce, but not necessarily eliminate, microorganisms from the inanimate environment to levels considered safe, as determined by public health codes or regulations.

**Virus** – Microorganisms that are smaller than bacteria and cannot grow or reproduce apart from a living cell. Virus infections may be spread by way of the air, by contact with surfaces, and the exchange of bodily fluids.