

RISK SIMPLIFIED

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- [CDC Recommendations](#)
- [DPR Online Training](#)
- [Donning/Doffing PPE](#)
- [Respiratory Protection Guide](#)

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Guidelines for Disinfecting Surfaces During a Viral Outbreak

By Eric Lucero

When a viral outbreak occurs, such as norovirus, preventing the spread of infection relies on nonpharmaceutical interventions such as hand washing, social distancing, and disinfecting surfaces in the environment.

Cleaning, Sanitizing, and Disinfecting

Cleaning is the removal of debris, dirt, and dust from a surface. Cleaning helps to remove allergens and microorganisms, including viruses and bacteria; however, the risk of only partially removing microbes and cross-contamination between surfaces creates concern.

Sanitizing and disinfecting are sometimes used interchangeably, but there is a legal, though negligible, difference. Rather than removing germs as when cleaning, sanitizers kill 99.5 percent of microorganisms usually within less than a minute or as indicated on the label. Disinfectants kill viruses, too, but require a contact time of ten minutes before achieving a 99.99% effectiveness rate. Usually, the concentration of the diluted agent will determine whether it is a sanitizer or a disinfectant.

To prevent the spread of infectious disease, first clean using detergent, soap, and water before disinfecting surfaces in the environment. During an outbreak, increase routine cleaning and disinfecting of frequently touched surfaces including doorknobs, light switches, handles, desks, toilets, faucets, sinks, tables, and appliances. It is crucial to ensure that the selected disinfectant agent is appropriate for the intended virus and the intended surface.

The [U.S. Environmental Protection Agency \(EPA\)](#) has published a list of approved disinfectants that are available to treat norovirus. If unsure of which disinfectant agent is appropriate, contact your local public health department for guidance.

Before selecting an agent, consider the health and safety hazards of the available disinfectants. Select one that is registered with the EPA but exposes the least physical and health risks to your employees to lessen the burden on employees and minimize regulatory requirements for your agency. For example, selecting bleach as a disinfectant is an option, but it is suspected to cause asthma, which is of particular concern if used in youth-serving environments.



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Instead, consider a hydrogen peroxide or citric acid-based disinfectant which can achieve the same results but with reduced health risks to employees and building occupants.



Once a disinfectant agent is selected, it is essential to follow the instructions on the product label and safety data sheet to ensure safe use, adequate ventilation, disposal, and to determine if any personal protective equipment is required. When respirators are required due to a confirmed case (as opposed to being voluntary), ensure your agency has a [Cal/OSHA compliant respiratory protection program](#). Schools must also comply with the Healthy Schools Act requiring employees to complete an [approved training course](#) before using sanitizers or disinfectants (including wipes).

When disinfecting during a viral outbreak, the use of additional personal protective equipment (PPE) is necessary to prevent cross-contamination between surfaces, building areas, and employee residences. The safety data sheet may require more stringent equipment (i.e., respiratory protection). Still, minimally employers should provide an N-95 or N-99 respirator, protective coveralls or gowns, shoe covers, safety goggles, and nitrile examination gloves. Before using PPE, employees must be adequately trained, and employers must adhere to applicable Cal/OSHA regulations for each piece of PPE, [including the sequence for donning and doffing personal protective equipment](#).

All PPE should be adequately sanitized, stored, or disposed of after being used to prevent cross-contamination to other surfaces or areas.

Risk Management

During an outbreak, consider different risk management techniques and your agency's risk tolerance for the activity, especially post-cleaning after a confirmed case. Some entities choose to use a third party to disinfect the workplace, transferring the risk away from their staff. When using this technique, preplanning can minimize the downtime of buildings or rooms. Secure a contract with the service provider before the outbreak occurs to ensure that disinfecting occurs promptly.

If your buildings are closed due to state or local directives, consider whether disinfecting is immediately required. If the virus can only survive for a limited time outside a host, avoid the risk all together by delaying this task until the epidemic has subsided or prior to the building becoming occupied. It is advised to still take the same precautions outlined in this article when disinfection is eventually required.

If you have any questions, please reach out to the PRISM [Risk Control](#) department.

