

Cleaning and Disinfection During the COVID-19 Pandemic: An Update

AT3 Reuse Community of Practice

March 2, 2021

3:00 PM to 4:00 PM EST

TODAY'S PRESENTERS

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REMINDERS

Click on	To see captions, click on the CC button on the control panel.
Enter	Please enter questions/comments in the chat window. Questions and comments will be addressed at the conclusion of the panel.
Check in	Upcoming events: check in at AT3center.net events page; registration links will be sent out via the AT3 listserv and Reuse CoP listserv.
Complete	Please complete post-webinar surveys when you receive them; we especially want to know your “hot topics”.



TODAY'S WEBINAR

WE NEED YOUR FEEDBACK

At the end of this webinar, please complete the survey to provide us with feedback.

The link to the survey will be available at the end of this webinar session.

OUR LEARNING OBJECTIVES

At the completion of this webinar, participants will be able to:

1. Identify 3 key factors for preventing the spread of COVID-19 in the workplace.
2. Identify 2 sources of guidance for safe and effective cleaning and disinfection practices.
3. Describe how to determine the effectiveness of UVC-spectrum devices.

CDC GUIDANCE FOR INFECTION RISK MITIGATION

What's new?

What's different?

How does it affect AT reuse operations?

METHODS OF VIRUS TRANSMISSION: *WHAT'S NEW?*

- There is growing pressure on CDC to change the description of virus transmission. Significant scientific opinion considers COVID-19 “an airborne virus” versus the current CDC language of “droplets.”^{1, 2} OSHA has been ordered to update guidance by March 15 but needs CDC to make changes first.
- **The primary mode of COVID-19 transmission is inhalation of virus. The source could be infected persons in the immediate area or (more recently acknowledged) ventilation systems transporting virus.**
- **This puts added emphasis on ventilation systems, effective social distancing and the use of proper masks in the workplace.**
- **Transmission from contaminated surfaces is now considered far less likely, but still possible.³ (We can probably stop the obsessive wiping of every package.)**

¹Fallert, Nicole. CDC Urged to Recognize COVID Aerosol Transmission in Petition Signed by 10,000. Newsweek, 2/23/2021.

<https://www.msn.com/en-us/news/us/cdc-urged-to-recognize-covid-aerosol-transmission-in-petition-signed-by-10000/ar-BB1dWWfV?ocid=uxbndlbing>

² MIT Technology Review, July 7, 2020. <https://www.technologyreview.com/2020/07/07/1004841/a-group-of-239-scientists-say-theres-growing-evidence-covid-19-is-airborne/>

³ CDC. *How COVID-19 Spreads*. <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html>

STRATEGIES FOR PREVENTION: *CHANGES*

The CDC recommends prevention of the spread of infection by:

1. Social distancing to prevent airborne contact with the virus.
2. Wearing of masks: This remains extremely important.
 - *New*: Increased emphasis on the quality of the mask. CDC now recommends “two or more layers of washable, breathable fabric.”
 - *New option (not CDC)*: Use commercially-produced masks (e.g., KN95 masks are readily available now and not reserved for healthcare workers).
3. Diligent use of hand hygiene
4. Cleaning and disinfection of contaminated surfaces, but *(new)* deemed a less likely source of infection
 1. Self quarantine when appropriate
 2. Vaccinations: *(new)* available or coming



NEWLY RECOMMENDED PROTECTIVE MEASURES: VENTILATION STRATEGIES

Feb. 9, 2021, CDC suggested these options for improved ventilation: 1

1. Increase outdoor air circulation:
 - Set HVAC fan to “on” and leave it there for increased fresh air circulation.
 - Run bathroom exhaust fans and kitchen vent fans continuously.
 - Allow outdoor air in through doors and windows when practical.
2. Consider portable high-efficiency particulate air (HEPA) fan/filtration systems to help enhance air cleaning, especially in high-risk areas
3. Consider using ultraviolet germicidal irradiation (UVGI) to help inactivate SARS-CoV-2, especially if options for increasing room ventilation are limited. (Check out upper room UVGI systems. More on those later.)

MAINTAINING HEALTHY WORKPLACES

CONSIDER FACTORS THAT IMPACT REUSE OPERATIONS

Factors that impact timelines and the ability to resume or continue "normal" operations include:¹

- The status of any existing stay-at-home orders in the state(s) of operation
- The severity and volume of COVID-19 cases within the locale
- The ability to enforce proper social distancing within the physical location
- The level of contact workers will have with other workers or with customers

¹ Fallon, Nicole. Ready to Reopen: A Playbook for Your Small Business, CO. U.S. Chamber of Commerce. <https://www.uschamber.com/co/start/strategy/small-business-coronavirus-reopening-guide>

PLAN TO OPTIMIZE WORKER SAFETY

Plans for reopening or continuing operations should address preparedness, response and control strategies that:

- Are specific to the workplace: the nature of the jobs, environment
- Identify areas and job tasks with potential exposure to the virus
- Include control measures to eliminate or reduce exposures

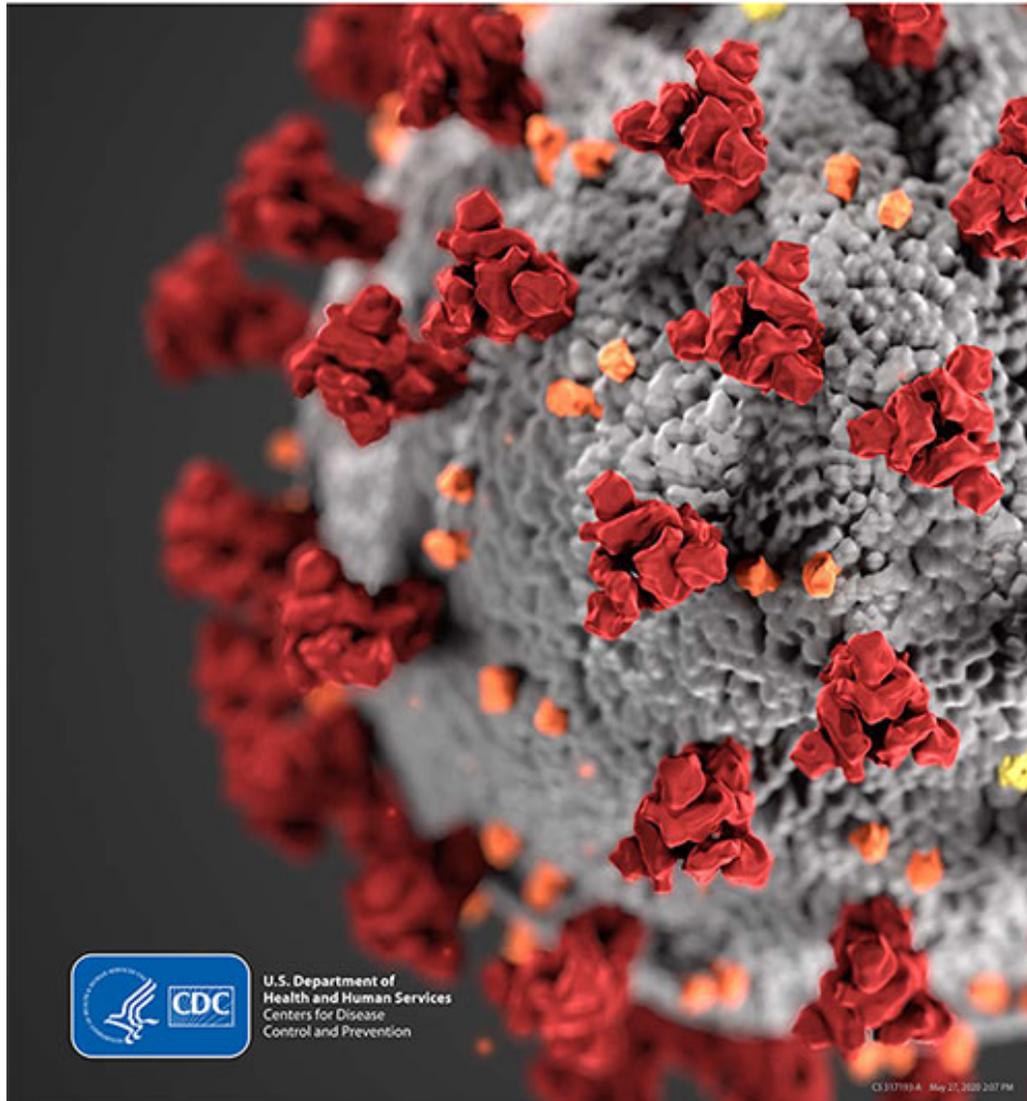
EMPLOY INCLUSIVE LEADERSHIP TO PLAN

- Preview plans for changes to operations with employees, including those with disabilities, to identify potential pitfalls of proposed methods of compliance or changes.
- Meet with individuals with disabilities to ensure that they understand the plans and policies and that needed accommodations are in place.



Resuming Business TOOLKIT

Coronavirus Disease 2019 (COVID-19)



MANAGING FOR A HEALTHY WORKPLACE

- Reuse programs should identify a workplace coordinator who will be responsible for COVID-19 issues and their impact at the workplace.
- If possible, implement flexible sick leave and supportive policies and practices.
- Protect employees at higher risk for severe illness through supportive policies and practices.
- Communicate supportive workplace policies clearly, frequently and via multiple methods.
- Use CDC's *Resuming Business Toolkit* to analyze, plan and communicate about COVID-19 policies and practices.

MAKE THE PHYSICAL WORKPLACE SAFER

- Building ventilation systems can pose a serious risk for virus transmission.¹
 - If possible, increase outdoor air flow to minimize risk.
 - There also are options for improved air filtration.²
- After a prolonged shutdown, confirm the safety and functionality of the water system.¹
- Clean and disinfect the workplace in accordance with CDC guidance (the usual practices for disinfection).¹

¹ <https://www.cdc.gov/coronavirus/2019-ncov/php/building>

² <https://www.epa.gov/coronavirus/air-cleaners-hvac-filters-and-coronavirus-covid-19>

SOCIAL DISTANCING



The CDC recommends 6 feet between individuals. One helpful exercise is to use a floorplan to identify the work location of each individual and the normal movement of each in the area. This will help to identify where spacing is needed.



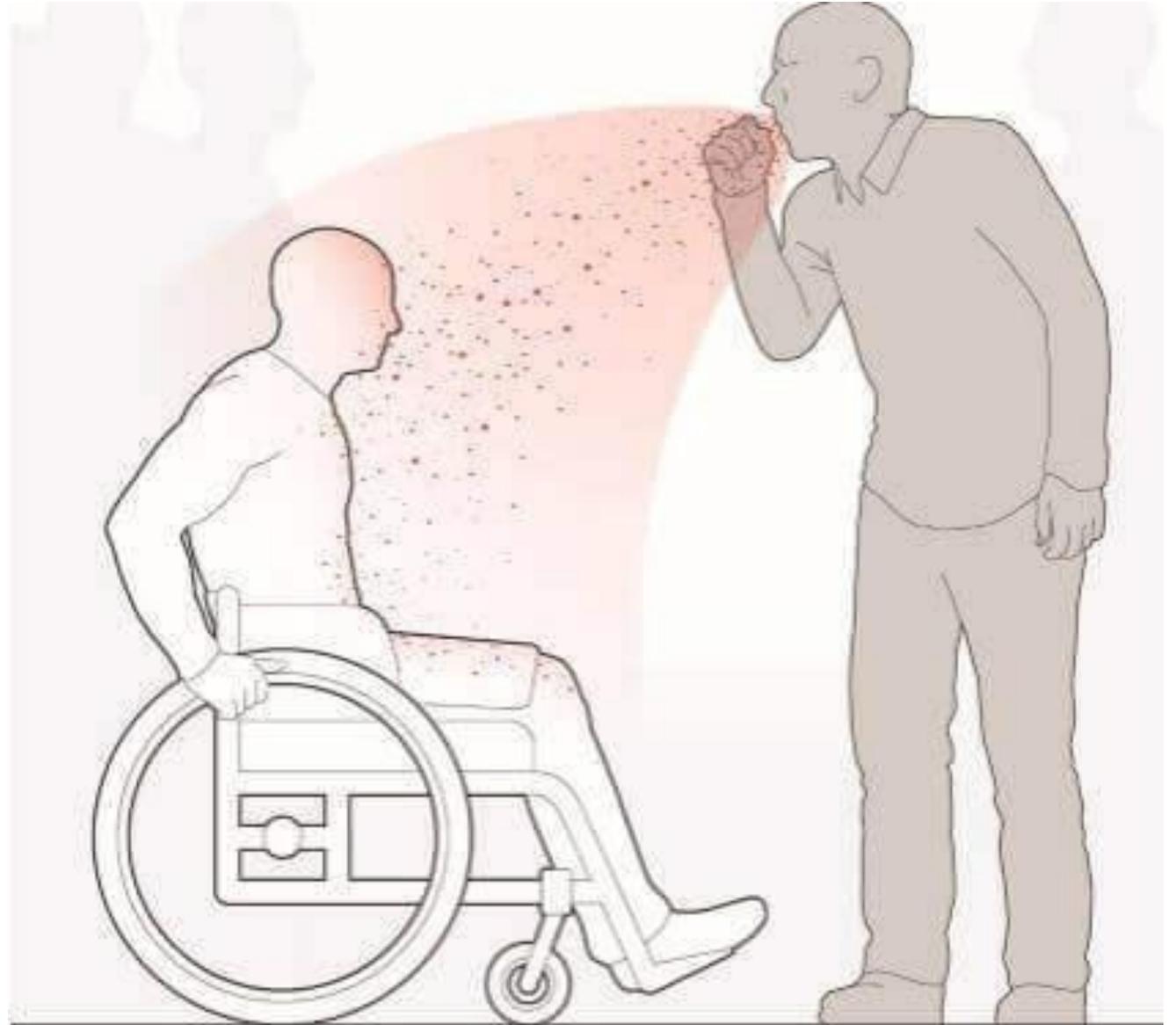
In places where distancing is impossible (e.g., check in/check out locations), it may be necessary create protective barriers (of glass, or see-through plastic) for the benefit of customer and worker.



Distancing for meetings may be accomplished using video conferencing or audio conferencing tools.

IN A MORE VULNERABLE POSITION

- Wheelchair users are always lower in position than people who are standing, leaving them vulnerable to airborne virus from sneezing and coughing.
- Social distancing, especially in a wheelchair, is important for self protection.



OPTIMIZING WORKFLOW FOR SAFETY

Managers, workers and volunteers should discuss together how to create appropriate **social distancing** for workers and customers (space, barriers, people traffic) by discussing workflow and changes that could eliminate or minimize contacts.

Risk analysis should consider:

1. Proximity of exposure (how closely and how long people interact with each other in person) when performing tasks
2. The extent of exposure (how many other people an individual tends to encounter in a typical workday).¹

This analysis of worker risk by task and location will determine which employees are at greatest risk of exposure to the virus and what can be done to minimize it.

¹Rivera, Suzanne, Kate Robu, Virginia Simmons, and Shubham Singhal. Reopening safely: Sample practices from essential businesses. McKinsey & Co., May 29, 2020. <https://www.mckinsey.com/business-functions/risk/our-insights/reopening-safely-sample-practices-from-essential-businesses#>

USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)



All workers and volunteers should have PPE appropriate to roles, place, and potential exposure.

- **Masks** are critical in preventing the transmission of the virus. The current recommendation is a three-layer fabric mask. (Fabric masks should be washed daily.)
<https://www.youtube.com/watch?v=ML3n1c0FHDI>
- **Gloves.** Disposable gloves may be protective in the workplace and for doing public errands, but they can also transfer virus from one object to another. Diligent hand washing may be more effective.

HAND HYGIENE

PURPOSE

- Proper hand hygiene is essential to prevent the spread of disease through surface contact with bacteria, germs or other contaminants followed by contact with the face. There is now lessened concern about transmission through contaminated surfaces.

INDICATION OR FREQUENCY IN THE WORKPLACE

- Before and after having direct contact with individuals
- After contact with potentially contaminated surfaces (AT devices, doorknobs, work surfaces, tools, supply containers, etc.)
- After removing gloves
- After using the restroom

METHODS

- Soap and water for thorough cleaning for 20 seconds see CDC guidance on how to do this properly at <https://www.cdc.gov/handwashing/when-how-handwashing.html> or use hand sanitizer.



MAKE COMMUNICATIONS ACCESSIBLE

Ensure that messages are accessible¹ to workers with:

- Vision disabilities – provide accessible documents or digital or embossed braille
- Hearing disabilities – use American Sign Language (ASL) videos or live interpreters
- Low literacy levels – create messages at appropriate comprehension levels



TRAIN EMPLOYEES IN POLICIES AND PROCEDURES FOR CHANGED OPERATIONS

Employees and volunteers need to know policies to reduce the spread of COVID-19:

- General hygiene
- Cleaning and disinfection procedures
- Use of masks and other PPE as required
- Social distancing
- Symptoms of COVID-19
- What to do if they get sick



CONDUCT VIRTUAL OR IN-PERSON HEALTH CHECKS USING CDC GUIDANCE

- Implement an electronic monitoring system that permits employees to respond to screening questions from home for people with vision or hearing disabilities (and everyone else).
- Provide digital alternatives to respond to the in-person screening at work.
- Train and assign an employee to screen employees on arrival. Screening should be positioned in a contained area outside the main work area.
 - Screen for symptoms.
 - Use contact-free thermometers to take temperatures.
 - Check for a diagnosis of COVID-19 in past 10 days.
 - Ask about close contact with someone who has had the virus during past 14 days.

VACCINE TOOLKIT FOR COMMUNITY-BASED ORGANIZATIONS



**Protect
Against
COVID-19.**

A safe and effective vaccine to protect against COVID-19 is now available.

www.cdc.gov

A special toolkit is available for staff of social service organizations, faith-based organizations, YMCAs/YWCAs, fraternities, school organizations (e.g., PTAs/PTOs), meal delivery services, senior centers, and others.

Inform staff about your state's plan and priorities for vaccinations. If you are part of a large group, you may be able to schedule workplace vaccinations.

COMMUTING TO WORK

- Workers, especially people with disabilities (blind, low vision, mobility issues) may have additional difficulty social distancing if they use public transportation or carpools. Some public transportation systems have limited operations.
- Workers should consider (and employers support, if possible):
 - Alternative methods of transportation
 - Changing working hours to minimize exposure
 - Telework (if feasible)

CLEANING AND DISINFECTION STRATEGIES

THE REUSE
MANTRA:

SAFE,
EFFECTIVE
AND
APPROPRIATE

Safety is the first promise of the AT reuse mantra. That means safe from mechanical and electrical issues, and safe from infectious contamination.

We deliver on this promise by adherence to established healthcare guidance and protocols from the Centers for Disease Control and Prevention (CDC), and the use of approved disinfectants (on List N) and compliance with the Bloodborne Pathogens Standard from the Occupational Safety and Health Administration (OSHA).

For years, we have advocated prevention of infection by:

- ***Proper cleaning and disinfection of donated devices, and***
- ***Diligent hand hygiene.***

Highly contagious diseases require additional steps to protect everyone.

SOURCES OF POTENTIAL INFECTION

Strategies should be considered for protection from COVID-19 and *other* infection threats as standard practice.

Pathogens that pose potential problems can be divided into three broad categories:

- Viruses
- Bacteria
- Fungi

THE IMPORTANCE OF INFECTION PREVENTION

- COVID-19 virus is distinguished by its severity and possible long-term impact. It has caused over 500,000 deaths in one year.
- We still know little about immunity gained from having the disease, how long immunity may last from vaccination, or how effective the vaccinations will be against new strains of the virus.
- Best estimates are that we may have another year of prevention strategies ahead of us.

CDC GUIDELINES FOR DISINFECTION

The Centers for Disease Control and Prevention (CDC) is the source of authoritative guidance for preventing the transmission of disease.

- A piece of home medical equipment is a “noncritical” category (as opposed to surgical instruments that require sterilization) under CDC guidelines.
- That is because the devices should not contact mucous membranes or get used inside the body. DME should not require sterilization, but does need to be cleaned and disinfected, a process called sanitization.
- The cleaning and disinfection of a device should be done in a manner that removes the risk of transmission of disease.

Guidelines for Disinfection and Sterilization in Healthcare Facilities (2008), updated May 2019.

Disinfection and Sterilization Guideline – Print Version

<https://www.cdc.gov/infectioncontrol/guidelines/disinfection/>

USE STANDARD PROCEDURES FOR CLEANING AND DISINFECTION OF DEVICES AND SURFACES

- Cleaning involves the physical removal of contaminant to the degree possible.
- Disinfection requires the use of appropriate chemicals (from OSHA's List N) to destroy the virus. This list has been updated and expanded to include new products on the market.

We will not repeat the basic procedures today, but recommend updates described in the November 2019 webinar, *A Framework for Cleaning and Sanitization: Back to Basics and Quick Tips*, on the AT3 Center site at <https://us.bbcollab.com/collab/ui/session/playback>.



Most devices handled in AT reuse programs are ***not likely*** to pose problems, but that depends on the prior conditions of use and must be considered.



We must consider that devices used by persons infected with viral, bacterial or fungal infections ***may*** pose a threat to workers and subsequent users if the device is contaminated with live pathogens.



The Bloodborne Pathogens Standard (29 CFR 1910.1030) applies to all occupational exposures to blood and other potentially infectious material and the occupational handling of regulated waste.

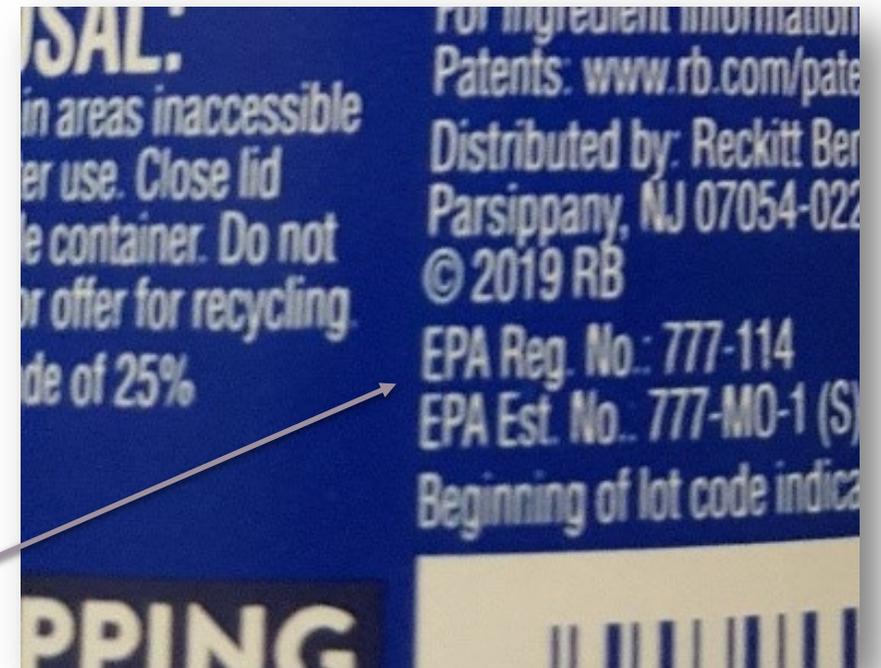


Programs are required to devise a plan *if potential exposure exists*. See https://www.osha.gov/SLTC/bloodborne pathogens/bloodborne_quickref.html

THE OSHA BLOODBORNE PATHOGENS STANDARD

DISINFECTANTS FOR HOME USE

- Disinfectants approved for COVID-19 will be on EPA's List N.
- New products have been added in the course of the pandemic.
- The list is organized by chemical name, not by brand, so it is challenging for most of us.
- TIP: Approved disinfectants have an EPA registration number on the product label. See label.



GUIDANCE IS EVOLVING

It's important to be aware that changes to COVID-19 guidance will continue.

1. New information about COVID-19.

- There is still much to learn about the virus and possible immunity after having it, or the nature of long-term effects.
- We do not know how long immunity is imparted by the vaccines.
- There are new strains of the virus circulating that could change the nature of the medical and business guidance.

2. The new administration just released a comprehensive federal plan to assist states, local government, businesses and individuals.¹

- We must wait to see how much of the proposed plan is funded.
- We may be affected by how it is implemented.

STAY FLEXIBLE!

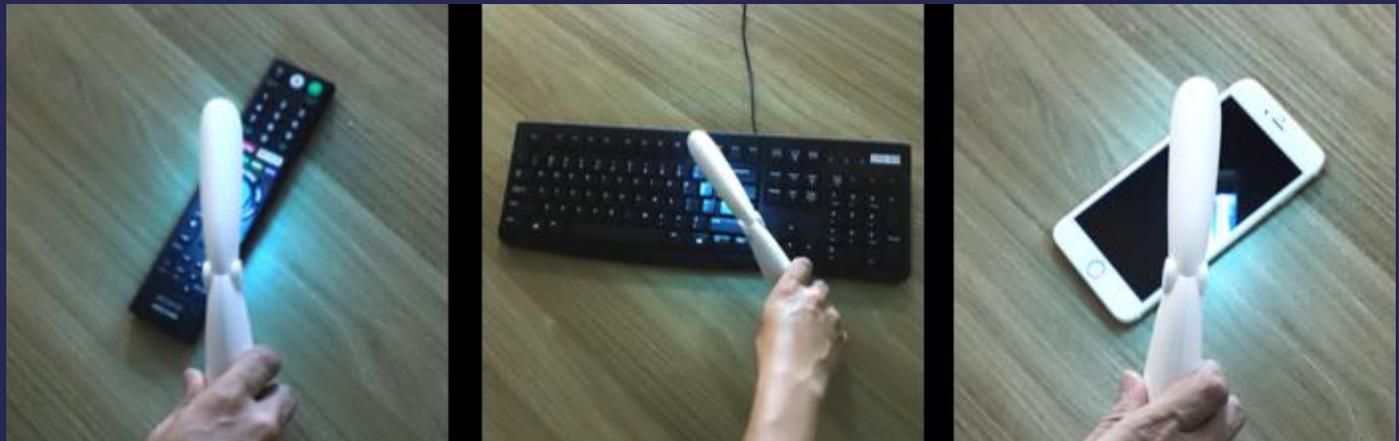
UV-C FOR DISINFECTION

- Ultraviolet light is part of the light spectrum, which is classified into three wavelength ranges:
 - UV-C, from 100 nanometers (nm) to 280 nm
 - UV-B, from 280 nm to 315 nm
 - UV-A, from 315 nm to 400 nm
- **UV-C light is germicidal** – i.e., it deactivates the DNA of bacteria, viruses and other pathogens and thus destroys their ability to multiply and cause disease.
- Ultraviolet technology is a non-chemical approach to disinfection that utilizes germicidal lamps that are designed to produce a certain dosage of ultraviolet (usually at least 16,000 microwatt seconds per square centimeter but many units actually have a much higher dosage.)

CHALLENGES FOR USING UV-C DEVICES FOR DISINFECTION

The challenges for using ultra-violet light in the C range (UV-C) for disinfection of Assistive Technology or medical devices lie in several areas:

- Determining that the device is appropriate and effective for the task
- Reaching the crevices of some devices with the beam
- Exposing the surface for the appropriate amount of time to be effective. The principle of design is based on a product of time and intensity – you must have a certain amount of both for effective disinfection.



WHICH UV-C DEVICES ARE APPROPRIATE?

- Unlike the EPA's List N that identifies specific cleaners that meet the guidelines for safe disinfection, there is no list of UV-C devices that are appropriate for disinfection. The reason lies in regulatory definitions.
- **“Pesticidal products”** must meet registration requirements indicating that they are effective against the organisms (with bacteria and viruses defined as “pests”) specified. When registered, they appear on List N.
- **“Pesticidal devices”** work by physical means (such as electricity, light or mechanics) and do not contain a substance or mixture of substances to perform its intended pesticidal purpose. There is no registration required for these devices, and therefore no list or location to identify which products are effective.
- **So, how can you choose a UV-C product?** It is illegal to make “false or misleading claims” about the effectiveness or safety of devices. If a manufacturer claims that a device is germicidal, they should have scientific data to support the claim.

UV DEVICES FOR AIR DISINFECTION

- Upper-room (or upper-air) germicidal ultraviolet (GUV) irradiation uses specially designed fixtures mounted on walls or ceilings to create a disinfection zone of ultraviolet (UV) energy that is focused up and away from people. These fixtures disinfect air as it circulates from mechanical ventilation, ceiling fans or natural air movement. The advantage of upper-room GUV is that it disinfects the air closer to and above people who are in the room.
- Since the 1980s, GUV systems have been widely used for control of tuberculosis (TB). *The CDC guidance Environmental Control for Tuberculosis: Basic Upper-Room Ultraviolet Germicidal Irradiation Guidelines for Healthcare Settings*¹ provides information on appropriate GUV system design, related safe operation and maintenance. Based on data from other human coronaviruses, a GUV system designed to protect against the spread of TB should be effective at inactivating SARS-CoV-2, the virus that causes COVID-19, and therefore prevent spread.

¹ <https://npin.cdc.gov/publication/environmental-control-tuberculosis-basic-upper-room-ultraviolet-germicidal-irradiation>

OTHER TECHNOLOGIES TO CONSIDER



Improvements to existing ventilation systems:

Add air cleaning accessories that do more than filter particulates but are effective in removing viruses.



Use other proven technologies

HEPA filtration air cleaners, even portable, for areas of higher risk
Leave ON existing air removal (or exchange) devices: bathroom exhaust fans, kitchen/break area exhaust vents
When the weather is appropriate, open doors and windows (with screens) to bring fresh air into the building. Leave open, or open intermittently for fresh air exchange.

ACCESSIBLE CDC GUIDANCE

Georgia Tech's CIDI, the host organization for Tools for Life, is assisting in improving accessibility to CDC's COVID-19 guidance for individuals with disabilities.

The project has developed significant resources for people with vision, hearing and cognitive disabilities.

Please check out the resources at www.cidi.gatech.edu/covid



The screenshot shows a web browser displaying the URL <https://cidi.gatech.edu/covid>. The page header includes the Georgia Tech logo and the text "Center for Inclusive Design and Innovation COLLEGE OF DESIGN". The main heading is "COVID-19 Accessible Resources" in large, bold letters. Below the heading, there is a section titled "COVID-19 Guidance & Resources" with a sub-heading "Resources by Accessibility Type". Under this sub-heading, there are four categories of resources: "Braille Resources" (with an icon of a person at a desk), "Accessible Word Documents & PDFs" (with an icon of a laptop), "ASL Resources" (with an icon of hands), and "Easy to Read" (with an icon of a person reading). The "Easy to Read" category is highlighted with a blue background. The page also includes a search bar and navigation links in the top right corner.



QUESTIONS

WEBINAR
SURVEY
LINK

Please follow this link for a survey and
to provide feedback of today's
webinar.

<https://www.surveymonkey.com/r/LVF3FYZ>



THANK YOU



<https://www.at3center.net/>

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RESOURCES 1

Americans with Disabilities Act (ADA).

Find your regional ADA center at: <https://adata.org/find-your-region>

The Six Signature Traits of Inclusive Leadership. Deloitte Insights, 14 April 2016.

Centers for Disease Control and Prevention

Guidance for Businesses and Employers Responding to Coronavirus Disease 2019 (COVID-19).

Cleaning and Disinfecting Your Facility

https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-buildingfacility.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fcommunity%2Forganizations%2Fcleaning-disinfection.html

COVID-19 Vaccine Communication Toolkit for Community-Based Organizations: Getting Started.

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/toolkits/community-organization.html>

Importance of COVID-19 Vaccination for Essential Workers

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations/essentialworker.htmlorkers>

Prepare your Small Business and Employees for the Effects of COVID-19

<https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-small-business.html>

RESOURCES 2

Environmental Protection Agency

List N: Disinfectants for Coronavirus (COVID-19).

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-coronavirus-covid-19>

Equal Employment Opportunity Commission

Pandemic Preparedness in the Workplace and the Americans with Disabilities Act.

<https://www.eeoc.gov/laws/guidance/pandemic-preparedness-workplace-and-americans-disabilities-act>

What You Should Know About COVID-19 and the ADA, the Rehabilitation Act, and Other EEO Laws.

<https://www.eeoc.gov/wysk/what-you-should-know-about-covid-19-and-ada-rehabilitation-act-and-other-eeo-laws>

Fallon, Nicole. Ready to Reopen: A Playbook for Your Small Business, CO. U.S. Chamber of Commerce.

Occupational Safety and Health Administration

Guidance on Preparing Workplaces for COVID-19. [Guidance on Preparing Workplaces for COVID-19 \(osha.gov\)](https://www.osha.gov)

<https://www.osha.gov/personal-protective-equipment/standards>

Rivera, Suzanne, Kate Robu, Virginia Simmons, and Shubham Singhal. Reopening safely: Sample practices from essential businesses. McKinsey & Co., May 29, 2020.