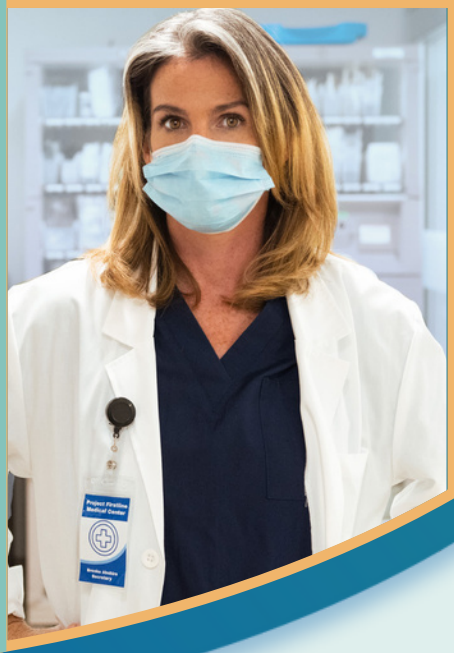
PROJECT FIRSTLINE

INFECTION CONTROL RESOURCES

FOR HEALTHCARE WORKERS

THE POWER TO
STOP INFECTIONS.
TOGETHER.



Updated 7/2025

NJHealth New Jersey Department of Health
Communicable Disease Service

CDC

BACKGROUND

This toolkit was created by the New Jersey Department of Health (NJDOH) Project Firstline (PFL) Team and serves as a non-exhaustive resource for healthcare workers to improve their basic infection prevention and control knowledge.

This toolkit covers 4 topics - "Pathogen Basics and Risk Recognition," "Hand Hygiene," "Personal Protective Equipment," and "Cleaning and Disinfection."

These resources and information have been compiled from materials developed by the Centers for Disease Control and Prevention (CDC), Environmental Protection Agency (EPA), and materials created by the NJDOH Project Firstline team.

We hope you find this toolkit helpful for your facility staff.

- The NJDOH Project Firstline Team

Disclaimer: Please consider this guide as non-exhaustive and supplemental to your existing resources and instructions. Additionally, evidence-based practices are constantly evolving in the field of infection prevention, therefore this document can only be considered current as of print date.

If you notice any hyperlinked resources no longer work or have changed, please notify the Project Firstline team at your earliest convenience so we can continue to keep this guide updated. We aim to improve upon this toolkit with time, so please do not hesitate to contact us with any issues or concerns at CDS.IC.PFL@doh.nj.gov.

NJDOH INFECTION CONTROL PROGRAMS

Infection Control Assessment & Response (ICAR)

The ICAR Unit is part of the Infection Control, Healthcare, & Environmental Epidemiology Section within the Communicable Disease Service at the New Jersey Department of Health. The team comprises subject matter experts specializing in the prevention and containment of healthcare-associated infections with an emphasis on patient/resident and healthcare personnel safety and quality improvement. This team provides infection prevention and control-focused assessments and consultation to various healthcare facilities, including acute care, long-term care, hemodialysis, and other outpatient settings. For more information, click here.

Healthcare-Associated Infections/ Antimicrobial Resistance (HAI/AR)

The HAI/AR Unit consists of subject matter experts in various disciplines to contain and prevent novel and emerging multi-drug resistant organisms (MDROs), healthcare-associated infections, and breaches of infection prevention and control. The HAI/AR unit conducts healthcare-associated infection surveillance through CDC's National Healthcare Safety Network (NHSN). The team also looks to prevent novel and emerging resistant pathogens through antimicrobial stewardship efforts. The focus of the HAI/AR Unit is to respond to outbreaks of MDROs, consulting with healthcare facilities both in-person and virtually, and partnering with the Antimicrobial Resistance Laboratory Network (ARLN) to test for acquisition and resistance. For more information, click here.

Project Firstline (PFL)

Project Firstline is a national initiative designed to provide infection prevention and control trainings and educational resources to frontline healthcare workers. The aim of the New Jersey Project Firstline team is to provide foundational knowledge of infection prevention and control principles and protocols, emphasizing the importance of implementing them throughout the workday to ensure best practice in healthcare settings. For more information, click here.

Are you interested in a Project Firstline training?
Please complete the intake form by clicking the link below:
NJDOH Project Firstline Intake Form

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Section 1: Pathogen Basics and Risk Recognition

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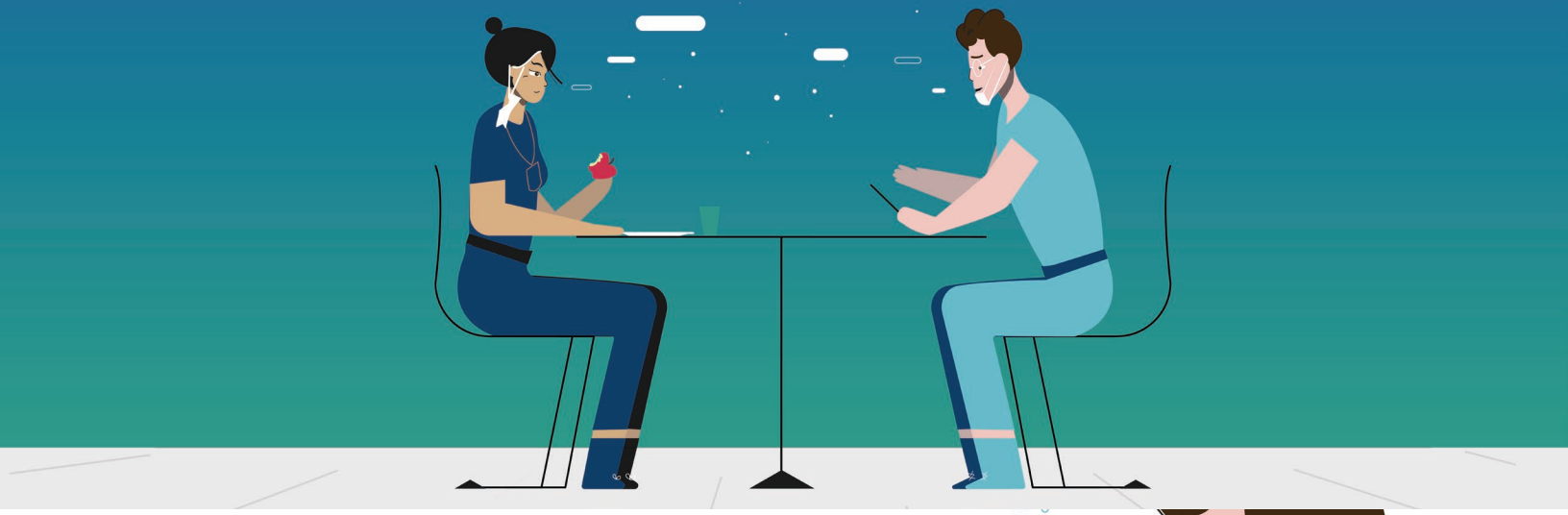
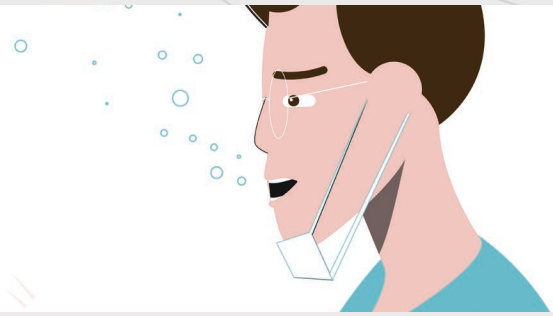
The main way that **SARS-CoV-2**, **the virus that causes the disease COVID-19**, travels between people is through

RESPIRATORY DROPLETS



Every time you breathe out of your nose or mouth, you don't breathe out just air.

You are also breathing out water.

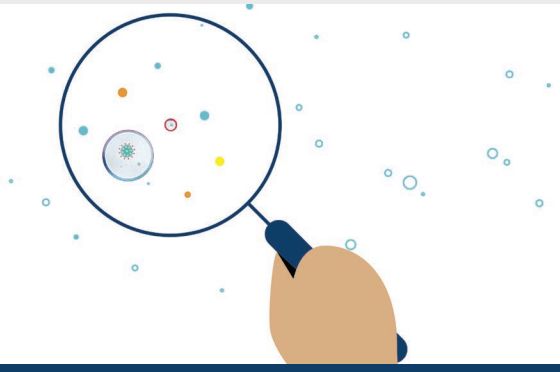


The water in your breath is what makes your glasses fog up when you are wearing a mask and why you can see your breath on a cold day.

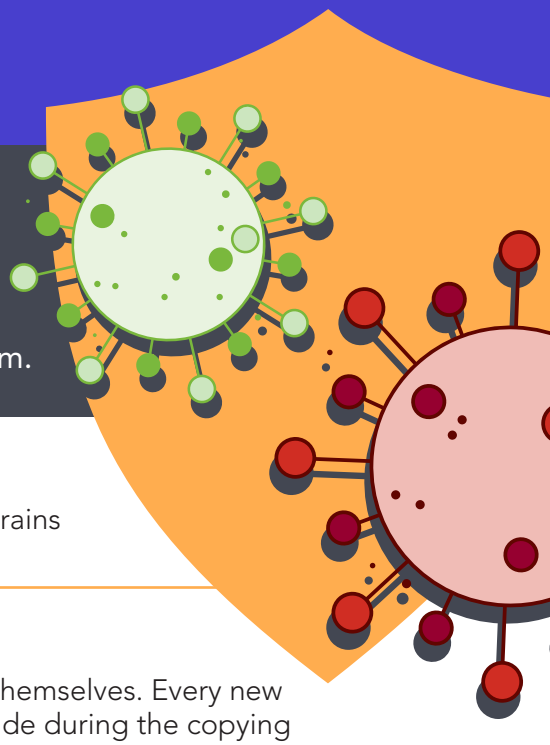
That water is respiratory droplets of different sizes that travel different distances in the air.

Most droplets are so tiny, you usually can't see them. When someone is infected with SARS-CoV-2, the droplets that they breathe out have virus particles in them.

As a healthcare worker, you can better protect your patients, coworkers, and yourself from COVID-19 when you understand what respiratory droplets are.



VIRUS STRAINS



Viruses constantly change through mutation, and new variants, or strains, of a virus are expected to occur over time. The following frequently asked questions and answers can help you understand more about virus strains, including what they mean for infection control and whether you should be doing things differently for them.

Q Are strains common with viruses?

A Viruses have new strains all the time. That's why there are different strains of influenza every year, and why you can get a cold more than once.

Q How are strains created?

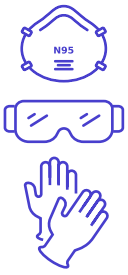
A Viruses have genes that carry instructions for making new copies of themselves. Every new copy contains those instructions as well. Sometimes mistakes are made during the copying process. When the instructions are copied wrong, the new viruses come out slightly different, with the mistake included in the instruction genes. Some mistakes make the virus not work anymore, so it's a dead end. When the new virus is still able to function even with the mistake, that's how a new strain is created, since all of the copies from that virus will carry that mistake.

Q What about the new strains of SARS-CoV-2? Do they spread more easily?

A Researchers are working hard to understand how these new strains of SARS-CoV-2 are different. Some of the new strains of SARS-CoV-2 allow the virus to spread more easily or make it resistant to treatments or vaccines, so it is even more important to continue using the recommended infection control actions.

Q What can we do to protect ourselves and our patients from the new strains?

A Even though new strains of SARS-CoV-2 are around, the basic pieces of the virus are still the same. This means that the recommended infection control actions for healthcare still work and are still needed to help stop the spread of COVID-19. This includes the following:



Using PPE. An N95 respirator will prevent you from breathing in virus that's in respiratory droplets, and eye protection keeps respiratory droplets from landing on your eyes. Using gloves and gowns protects you and also keeps you from spreading germs into your work environment.

Source control. Masking keeps respiratory droplets out of the air, so the germs in them can't spread to other people or the environment.

Physical distance. Maintaining physical distance helps people avoid breathing in each other's respiratory droplets.

Cleaning your hands. Soap and water and alcohol-based hand sanitizer break apart the envelope that holds the virus together, so it can't spread.

Ventilation. Good indoor ventilation is important for clearing air that might have respiratory droplets in it.

Cleaning and disinfection. Disinfecting products on the EPA's list N are known to kill SARS-CoV-2, including the new strains.

GERMS CAN LIVE IN BLOOD.

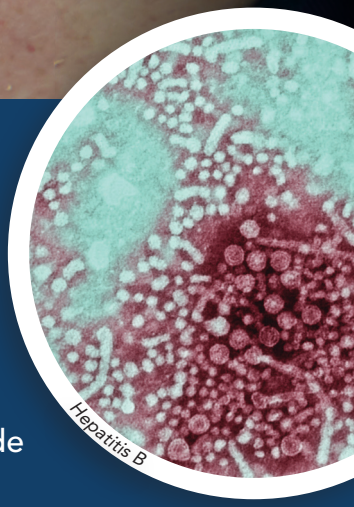
WHERE IS THE RISK?

Know where germs live to stop spread and protect patients

- Viruses like HIV, hepatitis B, and hepatitis C can spread in healthcare when contaminated blood is on a sharp item.
- If that item causes a cut or break in someone else's skin (e.g., an accidental needlestick), germs can spread to that person and cause a new infection.
- Reusing needles or syringes is especially risky because germs in the blood can spread from one person to another.
- Blood in the environment – like on linens or a device – grows bacteria and spreads via touch or devices.

Germs That Can Live in Blood

- HIV
- Hepatitis B
- Hepatitis C
- Bacteria (when outside the body)



Healthcare Tasks Involving Blood

- Putting in an IV
- Giving an injection
- Surgery and procedures
- Changing soiled laundry

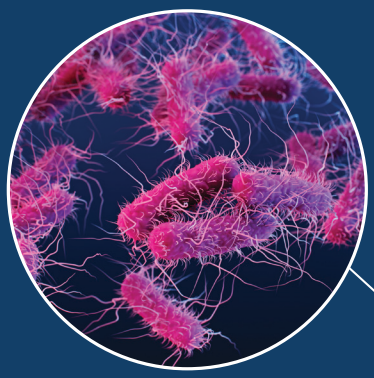
Infection Control Actions to Reduce Risk

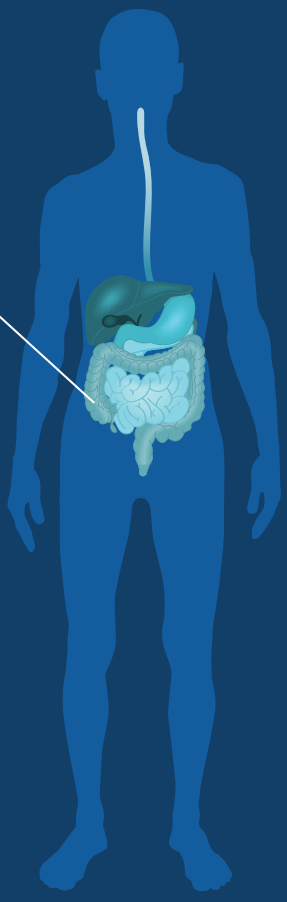
- Hand hygiene
- Use of personal protective equipment (gloves, gowns, eye protection)
- Safe injections
- Cleaning and disinfection
- Textile management

GERMS LIVE IN "THE GUT."

WHERE IS THE RISK?

Know where germs live to stop spread and protect patients

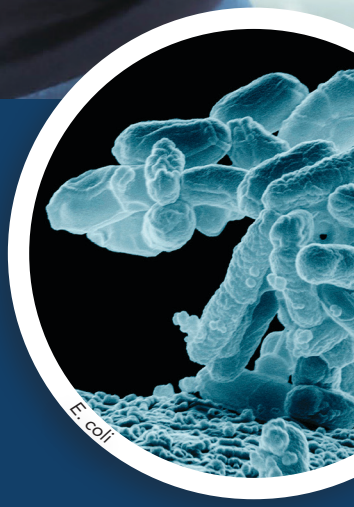




- The gut is filled with bacteria and some yeasts, which are part of a healthy immune system.
- Most gut germs don't cause problems in healthy people, but they can cause infection when they spread.
- Germs in stool can spread onto hands and skin when wiping or changing a diaper.

Germs That Live in the Gut

- *E. coli*
- *Klebsiella*
- *Candida*
- *Clostridiodes difficile* (*C. diff*)



Healthcare Tasks Involving the Gut

- Toileting/changing diapers
- Bathing a patient
- Laundry

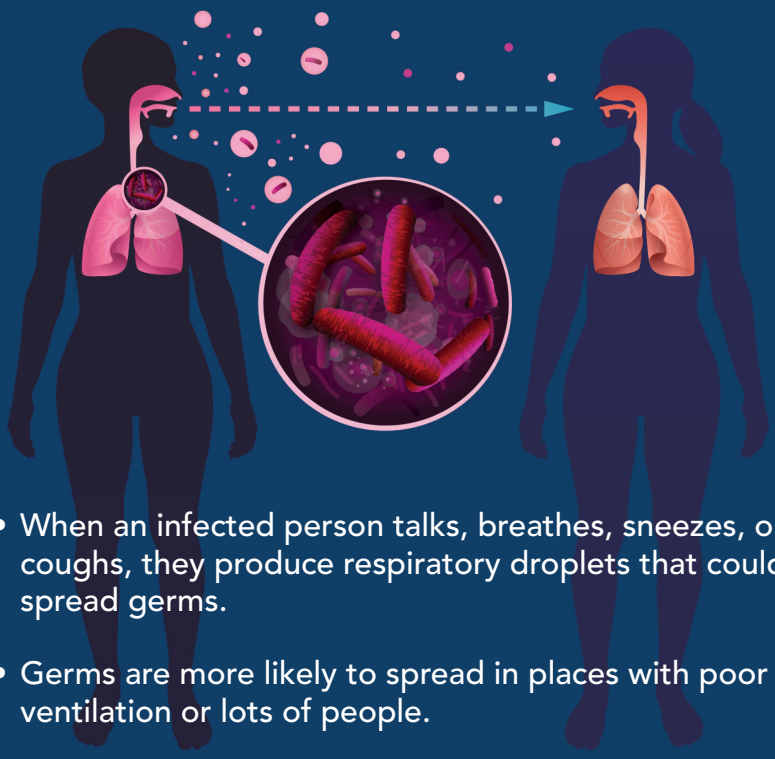
Infection Control Actions to Reduce Risk

- Hand hygiene
- Use of personal protective equipment (gloves and gowns)
- Cleaning and disinfection
- Textile management
- Waste management

GERMS CAN LIVE IN THE RESPIRATORY SYSTEM.

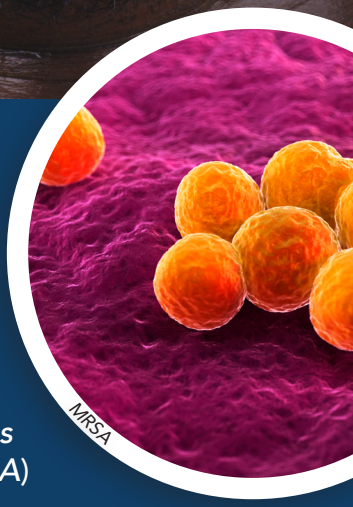
WHERE IS THE RISK?

Know where germs live to stop spread and protect patients



- When an infected person talks, breathes, sneezes, or coughs, they produce respiratory droplets that could spread germs.
- Germs are more likely to spread in places with poor ventilation or lots of people.
- Germs in the nose and mouth can be spread to the skin and hands when people touch their faces, which can then spread to surfaces or other people.

Germs That Can Live in the Respiratory System



- *Pseudomonas*
- *Staphylococcus aureus* (staph, including *MRSA*) (tip of the nose)
- Viruses, like influenza and SARS-CoV-2

Healthcare Tasks Involving the Respiratory System

- Oral care (e.g., toothbrushing)
- CPAP use for sleep apnea
- Intubation
- Giving nebulized medication

Infection Control Actions to Reduce Risk

- Hand hygiene
- Use of personal protective equipment (respirators, eye protection)
- Source control (masking)
- Cleaning and disinfection
- Respiratory hygiene/cough etiquette
- Ventilation

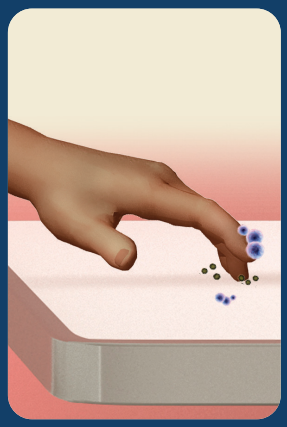
GERMS LIVE ON THE SKIN.

WHERE IS THE RISK?

Know where germs live to stop spread and protect patients

Germs spread through touch.

- Many germs grow on healthy skin.
- Germs on skin can get onto surfaces, other people, and things that will touch other people.
- Skin – especially hands – carries many germs and spreads them easily.
- When one's hands touch surfaces, germs can spread from those surfaces to that person and to others.

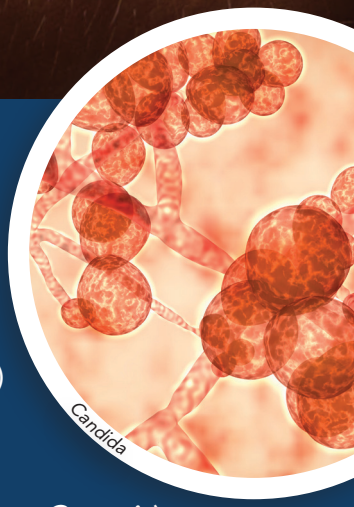


Germs spread by bypassing or breaking down the body's defenses.

- Healthcare tasks often involve breaking the skin.
- Breaking the skin – from putting in an IV, drawing blood, surgery, or trauma – creates a pathway for germs to spread into the body.

Germs That Live on Skin

- *Staphylococcus aureus* (staph, including *MRSA*)
- *Streptococcus* (strep)
- *Candida* (including *C. auris*)



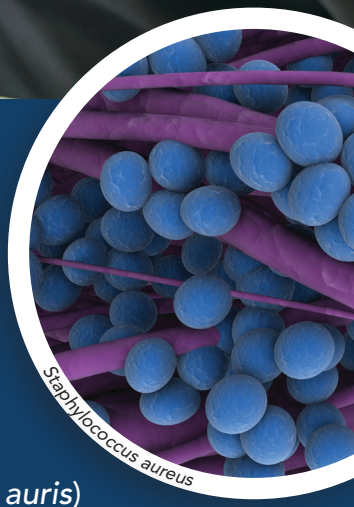
Healthcare Tasks Involving Skin

- Anything that involves touch
- Needlesticks
- Surgery

Infection Control Actions to Reduce Risk

- Hand hygiene
- Appropriate glove use
- Injection safety
- Cleaning and disinfection
- Source control (covering cuts and wounds)

GERMS CAN LIVE ON DEVICES.



WHERE IS THE RISK?

Know where germs live to stop spread and protect patients

- When a device, like a pulse oximeter, is used on a patient's body to provide care, any germs on that device can be spread to places in or on the patient's body.
- When a device is put *into* a patient's body, like an IV needle, endoscope, or artificial hip, any germs on the device can spread into the body.
- If not handled correctly, shared medical devices can spread germs from one patient to another.

Germs That Can Live on Devices

- *Staphylococcus aureus* (staph, including *MRSA*)
- *Streptococcus* (strep)
- *Candida* (including *C. auris*)
- Gut bacteria like *E. coli*, *Klebsiella*, and *C. difficile* (*C. diff*)

Healthcare Tasks Involving Devices

- Surgery and procedures like colonoscopies
- Starting IVs
- Taking vital signs

Infection Control Actions to Reduce Risk

- Cleaning and disinfection
- Device sterilization
- Hand hygiene
- Use of personal protective equipment (gloves)

GERMS CAN LIVE IN DIRT.

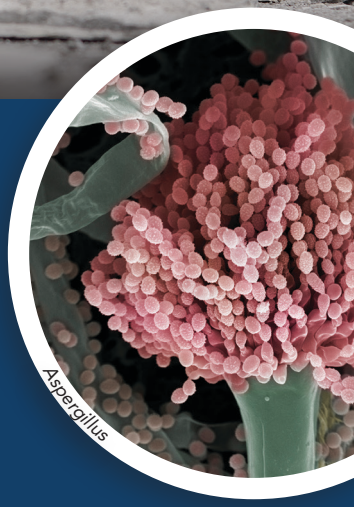
WHERE IS THE RISK?

Know where germs live to stop spread and protect patients

- Germs live in dirt and soil. The fungus *Aspergillus*, a common germ that can live in dirt, can cause serious illness in some patients who don't have strong immune systems or whose lungs are damaged.
- Building construction can send dirt and the germs in it into the air, which can then get inside a healthcare facility.
- Smaller construction and maintenance projects inside a building – like taking out parts of a wall, removing ceiling tiles, or renovating a room – can also create dust that has germs in it.

Germs That Live in Dirt

- *Aspergillus*
- *Cryptococcus*



Healthcare Tasks Involving Dirt

- Construction
- Renovation

Infection Control Actions to Reduce Risk

- Cleaning and disinfection
- Ventilation
- Using barriers and other types of construction containment
- Hand hygiene

GERMS CAN LIVE ON DRY SURFACES.

WHERE IS THE RISK?

Know where germs live to stop spread and protect patients

- Germs found on the body, in the air, and in stool can often be found on dry surfaces, and some can live for a long time.
- Dry surfaces include "high-touch" surfaces like bed rails, door handles, and light switches. They also include countertops, bed curtains, floors, and things that might not be touched as often.
- Hands can pick up germs from dry surfaces and move them to other surfaces and people.
- Germs from dry surfaces can also get onto devices that are used on or in patients.

Germs That Live on Dry Surfaces

- *Clostridioides difficile* (*C. diff*)
- Norovirus
- *Candida* (including *C. auris*)
- Rotavirus

Healthcare Tasks Involving Dry Surfaces

- Anything involving touch
- Using devices
- Patient transport

Infection Control Actions to Reduce Risk

- Cleaning and disinfection
- Device sterilization
- Hand hygiene
- Use of personal protective equipment (gloves and gowns)

GERMS LIVE IN WATER AND ON WET SURFACES.

WHERE IS THE RISK?

Know where germs live to stop spread and protect patients

- Tap water is safe to drink, but it is not sterile. It always has some germs in it.
- Most of the time, the germs in tap water aren't a problem for healthy people, but they can cause illness in patients with very weak immune systems.
- Germs in water can spread to surfaces and people and cause harm.
- If medical instruments and equipment (e.g., devices and central lines) get wet, bacteria can grow. When those devices are used, that bacteria can then get into a patient's body or blood and cause infection.

Germs That Live in Water

- *Acinetobacter*
- *Serratia*
- *Pseudomonas*
- *Legionella*

Pseudomonas aeruginosa

Healthcare Tasks Involving Water

- Toileting
- Cleaning
- Handwashing

Infection Control Actions to Reduce Risk

- Cleaning and disinfection
- Device sterilization
- Hand hygiene
- Use of personal protective equipment (gloves, gowns, eye protection)

FIGHT ANTIMICROBIAL RESISTANCE WITH INFECTION CONTROL

Antimicrobial resistance happens when germs like bacteria and fungi develop the ability to defeat the drugs designed to kill them. That means the germs are not killed and continue to grow and spread.

As a frontline healthcare worker, you play an important role in fighting antimicrobial resistance.

When you practice infection control, you stop resistant germs from:

Entering the body and causing infections through procedures and medical devices

Spreading to people from surfaces like bedrails or the hands of healthcare workers

Moving with patients when they are transferred between facilities

Spreading into the community, making them harder to control

Infection control fights resistance by:

Infection control also protects you from getting sick and decreases the risk of spreading germs to patients.

Check out Project Firstline resources to learn more about how you can protect your patients, yourself, and your community from antimicrobial resistance.

www.cdc.gov/ProjectFirstline

WE HAVE THE POWER TO STOP RESISTANT INFECTIONS. TOGETHER

CDC

PROJECT FIRSTLINE
CDC's National Training Collaborative for Healthcare Infection Prevention & Control

Section 2: Hand Hygiene

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Communicable Disease Service

CDC

HOW TO ENGAGE YOUR PATIENTS:

Make hand hygiene a topic of conversation with your patients.

ADDRESS HAND HYGIENE BEFORE YOU BEGIN CARE

Explain how and why you clean your hands before, after, and sometimes during patient care.

DISCUSS AND ACT

Let your patients know it's OK to ask you about hand hygiene. They might request that you clean your hands. Put them at ease and clean your hands for them!

Discuss how and why patients should also clean their hands.

THANK THEM FOR BEING ENGAGED IN THEIR CARE

Hand hygiene works better when patients and healthcare providers work together.

Contact CDC:

www.cdc.gov/info
800-CDC-INFO
(800-232-4636)
TTY 888-232-6348

CLEAN HANDS COUNT

Learn more at:
www.cdc.gov/HandHygiene

CLEAN HANDS COUNT

FOR HEALTHCARE PROVIDERS

Protect yourself and your patients from potentially deadly germs.

CLEAN HANDS COUNT

No matter where you treat patients, clean hands count.

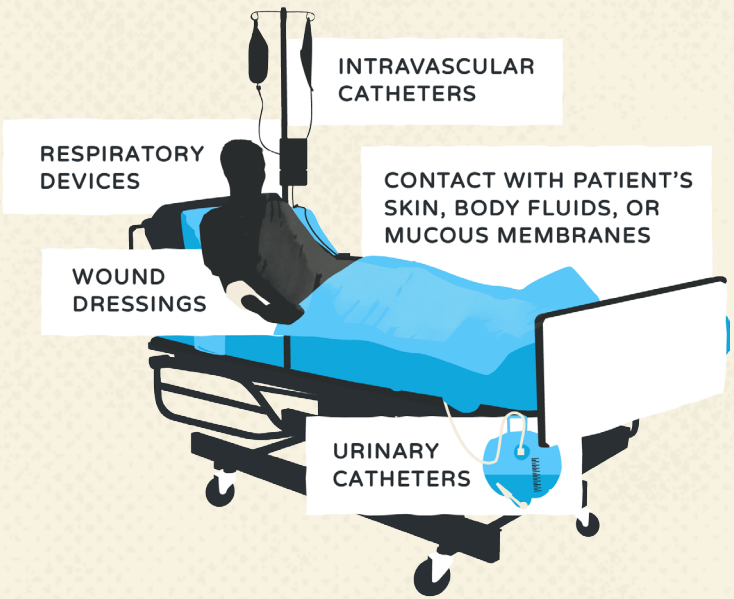
Your hand hygiene affects patients wherever they go...

Did you know...?

- Studies show that some healthcare providers practice hand hygiene **less than half of the times they should.**
- Healthcare providers might need to clean their hands as many as **100 times per 12-hour shift,** depending on the number of patients and intensity of care. Know what it could take to keep your patients safe.

Practice hand hygiene before and after every patient contact.

Clean hands count in the **Patient Zone:**



When using alcohol-based hand sanitizer:

Did you know...?

- **Always use gloves when caring for patients with *C. difficile*.** In addition, when there is an outbreak of *C. difficile* in your facility, wash your hands with soap and water after removing your gloves.
- **For alcohol-based hand sanitizer,** your hands should stay wet for around 20 seconds if you used the right amount.
- When washing your hands with **soap and water,** avoid hot water, to prevent drying of skin, and use disposable towels to dry.

Wearing gloves is not a substitute for hand hygiene.

Dirty gloves can soil your hands. **Always clean your hands** after removing gloves.

It's also important to **remove or change your gloves if:**

- Gloves are damaged
- Moving from a contaminated body site to a clean body site
- Gloves look dirty, or have blood or bodily fluids on them after completing a task

Areas you might miss:

These areas are most often missed by healthcare providers when using alcohol-based hand sanitizer.

CLEAN HANDS COUNT

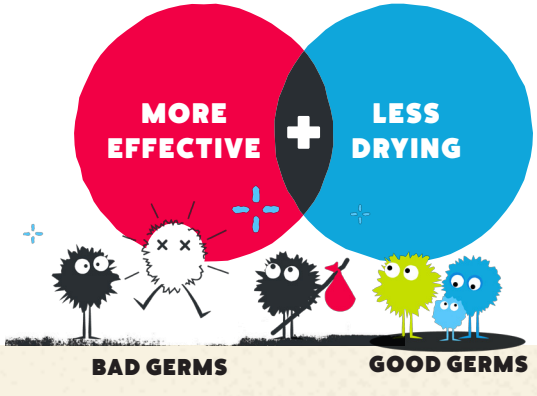
FOR HEALTHCARE PROVIDERS

KNOW THE TRUTH TO PROTECT YOURSELF AND PROTECT YOUR PATIENTS

TRUTH:

Alcohol-based hand sanitizer is more effective and less drying than using soap and water.

THE NITTY GRITTY:
Compared to soap and water, alcohol-based hand sanitizers are better at reducing bacterial counts on hands and are effective against multidrug-resistant organisms (e.g., MRSA). Additionally, alcohol-based hand sanitizers cause less skin irritation than frequent use of soap and water.



TRUTH:

Using alcohol-based hand sanitizer does NOT cause antibiotic resistance.

THE NITTY GRITTY:
Alcohol-based hand sanitizers kill germs quickly and in a different way than antibiotics. There is no chance for the germs to adapt or develop resistance.

TRUTH:

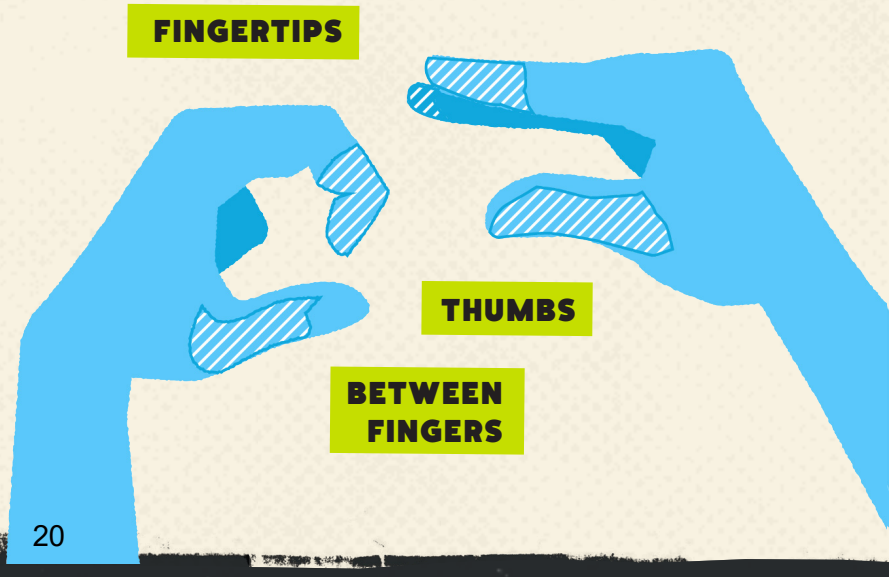
Alcohol-based hand sanitizer does not kill *C. difficile*, but it is still the overall recommended method for hand hygiene practice.

THE NITTY GRITTY:
Always use gloves when caring for patients with *C. difficile*. In addition, when there is an outbreak of *C. difficile* in your facility, wash your hands with soap and water after removing your gloves.

TRUTH:

Some healthcare providers miss certain areas when cleaning their hands.

THE NITTY GRITTY:
Using alcohol-based hand sanitizer becomes a habit and sometimes healthcare providers miss certain areas:



PROTECT YOURSELF AND PROTECT YOUR PATIENTS FROM POTENTIALLY DEADLY GERMS

TRUTH:

The amount of product you use matters.

THE NITTY GRITTY:
Use enough alcohol-based hand sanitizer to cover all surfaces of your hands. Rub your hands together until they are dry. Your hands should stay wet for around 20 seconds if you used the right amount.

TRUTH:

Glove use is not a substitute for cleaning your hands. Dirty gloves can soil your hands.

THE NITTY GRITTY:
Clean your hands after removing gloves to protect yourself and your patients from infection.

TRUTH:

On average, healthcare providers perform hand hygiene less than half of the times they should.

THE NITTY GRITTY:
When healthcare providers do not perform hand hygiene 100% of the times they should, they put themselves and their patients at risk for serious infections.

CLEAN HANDS COUNT

www.cdc.gov/HandHygiene

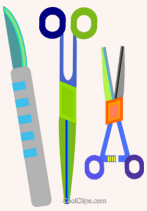
This material was developed by CDC. The Clean Hands Count Campaign is made possible by a partnership between the CDC Foundation and GOJO.

When Do I Practice Hand Hygiene?

BEFORE touching a patient

BEFORE handling dressings or touching open wounds

BEFORE performing invasive procedures



AFTER contact with blood, bodily fluids, non-intact skin or mucous membranes

AFTER contact with potentially contaminated items

AFTER glove removal

Hand hygiene prevents carrying germs in and out of the patient's environment.

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Hand Hygiene Methods

Soap and Water

1. Lather with soap and water and rub hands vigorously for 20 seconds, covering all surfaces.
2. Rinse throughly.
3. Dry with a clean towel and use towel to turn off faucet.

Alcohol-based Hand Sanitizer

1. Put hand sanitizer on the palm of one hand.
2. Rub hands, covering all surfaces of hands and fingers with hand sanitizer.
3. Rub until dry.

PROJECT FIRSTLINE

NJHealth New Jersey Department of Health Communicable Disease Service

Hand Hygiene in Healthcare Settings

Healthcare Providers

Clean Hands Count for Healthcare Providers

Protect yourself and your patients from potentially deadly germs by cleaning your hands. Be sure you clean your hands the right way at the right times.

Hand Hygiene Guidance

Education Courses

Show Me The Science

Introduction to Hand Hygiene

What is Hand Hygiene?

Hand Hygiene means cleaning your hands by using either handwashing (washing hands with soap and water), antiseptic hand wash, antiseptic hand rub (i.e. alcohol-based hand sanitizer including foam or gel), or surgical hand antisepsis

Why Practice Hand Hygiene?

Cleaning your hands reduces:

- The spread of potentially deadly germs to patients
- The risk of healthcare provider colonization or infection caused by germs acquired from the patient

Two Methods for Hand Hygiene: Alcohol-Based Hand Sanitizer vs. Washing with Soap and Water

- Alcohol-based hand sanitizers are the most effective products for reducing the number of germs on the hands of healthcare providers.
- Alcohol-based hand sanitizers are the preferred method for cleaning your hands in most clinical situations.
- Wash your hands with soap and water whenever they are visibly dirty, before eating, and after using the restroom.

During Routine Patient Care:

Use an Alcohol-Based Hand Sanitizer

- Immediately before touching a patient
- Before performing an aseptic task (e.g., placing an indwelling device) or handling invasive medical devices
- Before moving from work on a soiled body site to a clean body site on the same patient
- After touching a patient or the patient's immediate environment
- After contact with blood, body fluids or contaminated surfaces
- Immediately after glove removal

Wash with Soap and Water

- When hands are **visibly soiled**
- After caring for a person with known or suspected infectious diarrhea
- After known or suspected exposure to spores (e.g. *B. anthracis, C difficile* outbreaks)

When to Perform Hand Hygiene?

Multiple opportunities for hand hygiene may occur during a single care episode. Following are the clinical indications for hand hygiene:

Use an Alcohol-Based Hand Sanitizer

Immediately before touching a patient

Before performing an aseptic task (e.g., placing an indwelling device) or handling invasive medical devices

Before moving from work on a soiled body site to a clean body site on the same patient

After touching a patient or the patient's immediate environment

After contact with blood, body fluids or contaminated surfaces

Immediately after glove removal

Wash with Soap and Water

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Section 3: Personal Protective Equipment

NJHealth New Jersey Department of Health
Communicable Disease Service

CDC

Types of PPE in Health Care

Gloves – protect hands and allow efficient removal of organisms from hands

Gowns and Aprons – protect skin and clothing

Face masks– protect mucous membranes of mouth and nose

Respirators- prevent inhalation of infectious material

Goggles – protect eyes

Face shields – protect mucous membranes of face, mouth, nose and eyes





CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

HOW TO USE YOUR N95 RESPIRATOR | COVID-19 |

Wear your N95 properly so it is effective

N95s must form a seal to the face to work properly. This is especially important for people at increased risk for severe disease. Wearing an N95 can make it harder to breathe. If you have heart or lung problems, talk to your doctor before using an N95.

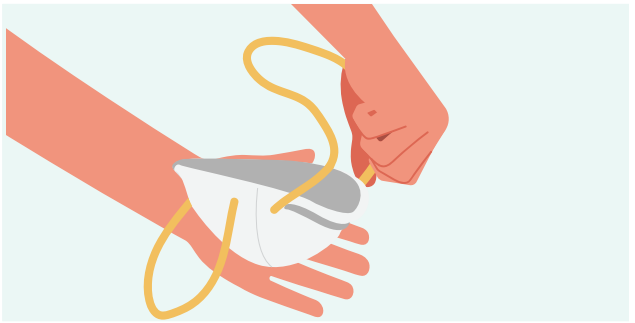
Some N95s may contain latex in the straps. If you have natural rubber latex allergies, see the manufacturers' website for information about your specific model.

Your N95 may look different than the one in these pictures. As long as your N95 has two head straps (not ear loops), these basic instructions apply.

1 Wash Your Hands

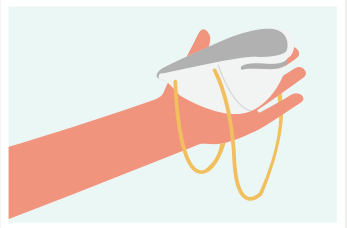
It is best to put on your N95 with clean, dry hands.

2 Check Your N95

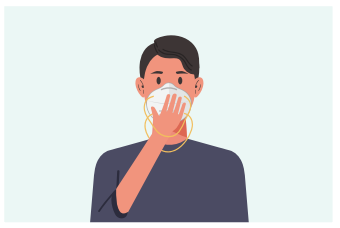


Always inspect the N95 for damage before use. If it appears damaged, dirty, or damp, do not use it.

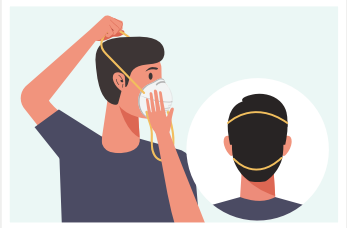
3 Put on the N95



Hold the N95 in your hand with the nose piece bar (or foam) at your fingertips. If yours does not have a nose piece, use the text written on it to be sure the top end is at your fingertips.



Place the N95 under your chin with the nose piece bar at the top.



Pull the top strap over your head, placing it near the crown. Then, pull the bottom strap over and place it at the back of your neck, below your ears. Do not crisscross the straps. Make sure the straps lay flat and are not twisted.

Place your fingertips from both hands at the top of the nose piece. Press down on both sides of the nose piece to mold it to the shape of your nose.

cdc.gov/coronavirus

CS329186-C | January 28, 2022 12:39 PM

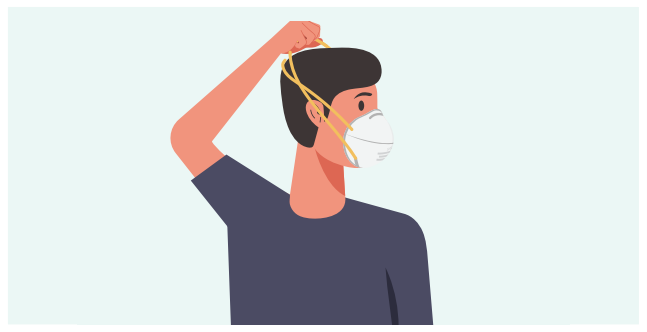
4 Keep Your N95 Snug

Your N95 must form a seal to your face to work properly. Your breath must pass through the N95 and not around its edges. Jewelry, glasses, and facial hair can cause gaps between your face and the edge of the mask. The N95 works better if you are clean shaven. Gaps can also occur if your N95 is too big, too small, or it was not put on correctly.

To check for gaps, gently place your hands on the N95, covering as much of it as possible, then breathe out. If you feel air leaking out from the edges of the N95, or if you are wearing glasses and they fog up, it is not snug. Adjust the N95 and try again.

If you cannot get a tight seal, try a different size or style. Even if you cannot get the N95 sealed against your face, it will provide protection that is likely better than a cloth mask. Check for gaps every time you put on your N95.

5 Remove the N95



After you remove your N95, wash your hands with soap and water, or hand sanitizer containing at least 60% alcohol if soap is not available.

When to Replace Your N95

Do not wash your N95 or put it in the oven or microwave to try to sterilize it.
Replace the N95 when the straps are stretched out and it no longer fits snugly against your face or when it becomes wet, dirty, or damaged. Throw it in the trash.

You can find specific manufacturer's instructions for your N95 model at the manufacturer's website or on the CDC COVID-19 website.

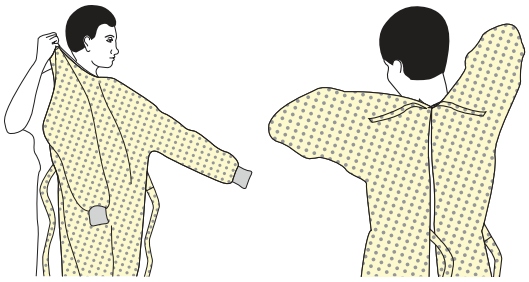
This information is also available at: **https://bit.ly/3rL7tpC**

SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

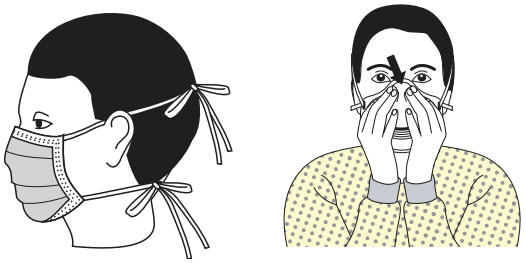
1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator

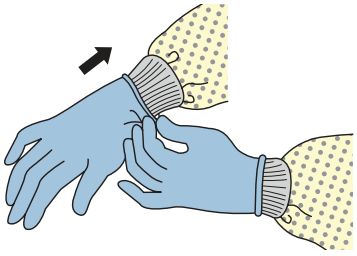


3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit

4. GLOVES

- Extend to cover wrist of isolation gown



USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

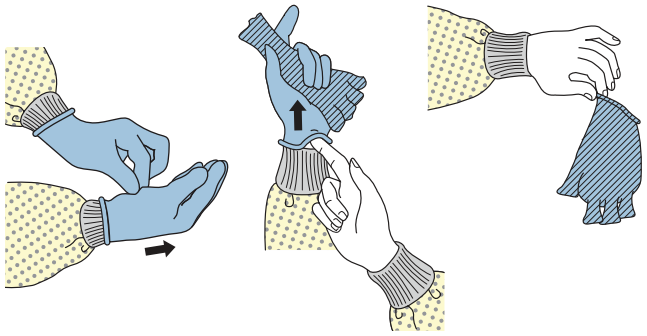
- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container

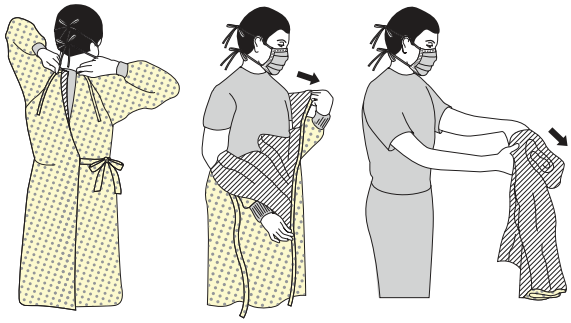


2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container

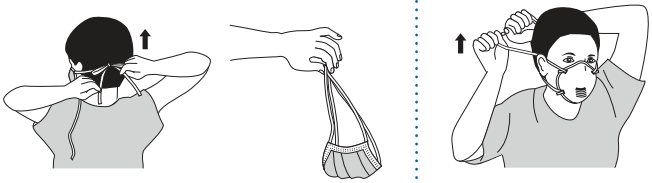
3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in a waste container

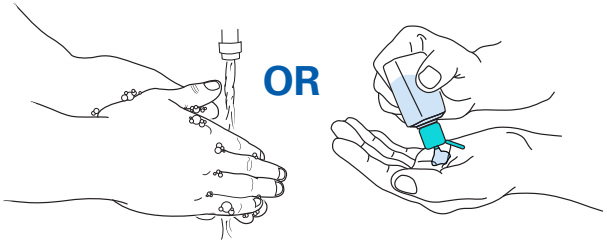


4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



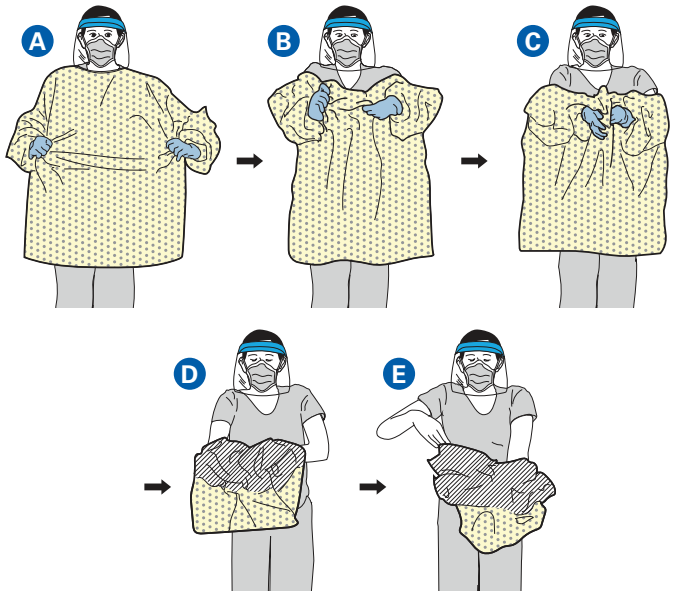
PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 2

Here is another way to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GOWN AND GLOVES

- Gown front and sleeves and the outside of gloves are contaminated!
- If your hands get contaminated during gown or glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands
- While removing the gown, fold or roll the gown inside-out into a bundle
- As you are removing the gown, peel off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands. Place the gown and gloves into a waste container

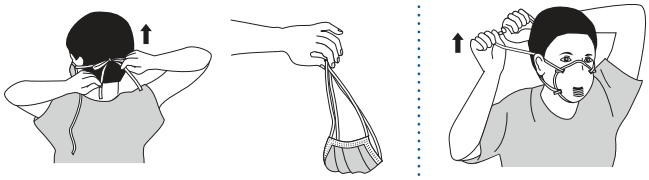


2. GOGGLES OR FACE SHIELD

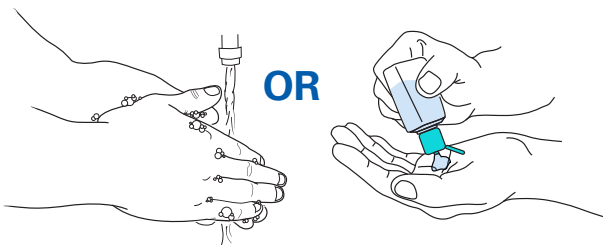
- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band and without touching the front of the goggles or face shield
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container

3. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



4. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE

Section 4: Cleaning and Disinfection

NJHealth New Jersey Department of Health
Communicable Disease Service

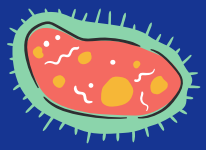
CDC

Cleaning and Disinfection in Healthcare Settings

Cleaning: removal of visible soil from objects and surfaces

Disinfection: using cleaning techniques and disinfectants that destroy or prevent the growth of germs

Why Does It Matter?



Germs are more likely to cause problems in sick patients, because their immune defenses may not be the same as someone who is healthy and at home.

Examples of High Touch Surfaces that Require Cleaning and Disinfection

- Bed rails
- Keyboards
- Light switches

Contact Time for Disinfection

Amount of time a disinfectant needs to sit on a surface, without being wiped away or disturbed to effectively kill germs

Do's and Don'ts of Cleaning and Disinfection

Do's

- **Always clean before disinfecting.** Dirt and grime can make disinfectants not work as well.
- **Follow the listed contact time.** This ensures items are disinfected to keep germs from spreading.

Don'ts

- **Don't rush** the process. Wait until contact time is complete before using objects or surfaces or before a new patient comes into a room.
- **Don't wipe** the surface to dry it faster.
- **Don't blow** on the surface to dry it faster.

CLEANING AND DISINFECTING

Best Practices During the COVID-19 Pandemic

Good Idea

Follow CDC, State, and Local Public Health Guidelines

According to the Centers for Disease Control and Prevention (CDC), COVID-19 is mainly spread through the air. The risk of getting the virus by touching a contaminated surface is thought to be low.

Clean Surfaces with Soap and Water

Normal routine cleaning with soap and water lowers the risk of spreading COVID-19 by removing germs and dirt from surfaces. In most situations, cleaning is enough to reduce risk.

Use EPA-Registered Disinfectants According to Label Directions

Disinfectants further lower the risk of spreading COVID-19 by using chemicals to kill germs. Use disinfectants on high-touch surfaces when you know or suspect someone around you is sick with COVID-19.

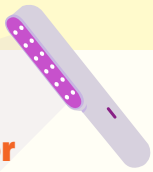
Be Careful

Be Careful Using Disinfectants Around People with Asthma

Disinfectants can trigger an asthma attack. If you have asthma, you may need to take extra precautions like avoiding areas where people are cleaning and disinfecting or making sure the space is well ventilated.

Be Careful with Fogging, Fumigating, and Wide-Area or Electrostatic Spraying

Make sure your product's label includes directions for the application method. Follow all directions, including precautions. If a product isn't labeled for these application methods, using it that way might be risky or ineffective.



Be Careful With UV Lights or Ozone Generators

UV lights or ozone generators may be risky or ineffective. EPA cannot verify if or when it is appropriate to use these devices. Check out the guidance at: go.usa.gov/xHckJ

Don't Do It

Don't Ask Children or Students to Apply Disinfectants

Disinfectants are powerful tools for controlling the spread of disease, and they can harm kid's health if used or stored incorrectly. Children and students should not apply disinfectants, and they should be kept out of children's reach.

Don't Ignore the Label Directions

If you don't follow the label directions, disinfectant products may be ineffective or unsafe. Do not apply disinfectants to skin, pets or food. Do not dilute disinfectants or mix them with other chemicals unless the label tells you to. Don't think that twice the amount will do twice the job.

Don't Use Unregistered Disinfectants

If a product says that it kills SARS-CoV-2 (COVID-19), but it doesn't have an EPA registration number, it may not be safe or effective. Federal law requires disinfectants to be registered with EPA.

EPA

For CDC public health guidelines, visit: go.usa.gov/xHc8q
For information on disinfectants, visit: epa.gov/coronavirus

April 2021

6 Steps for Safe & Effective Disinfectant Use

Step 1: Check that your product is EPA-approved

Find the EPA registration number on the product. Then, check to see if it is on EPA's list of approved disinfectants at: ***epa.gov/listn***

Step 2: Read the directions

Follow the product's directions. Check "use sites" and "surface types" to see where you can use the product. Read the "precautionary statements."

Step 3: Pre-clean the surface

Make sure to wash the surface with soap and water if the directions mention pre-cleaning or if the surface is visibly dirty.

Step 4: Follow the contact time

You can find the contact time in the directions. The surface should remain wet the whole time to ensure the product is effective.

Step 5: Wear gloves and wash your hands

For disposable gloves, discard them after each cleaning. For reusable gloves, dedicate a pair to disinfecting COVID-19. Wash your hands after removing the gloves.

Step 6: Lock it up

Keep lids tightly closed and store out of reach of children.

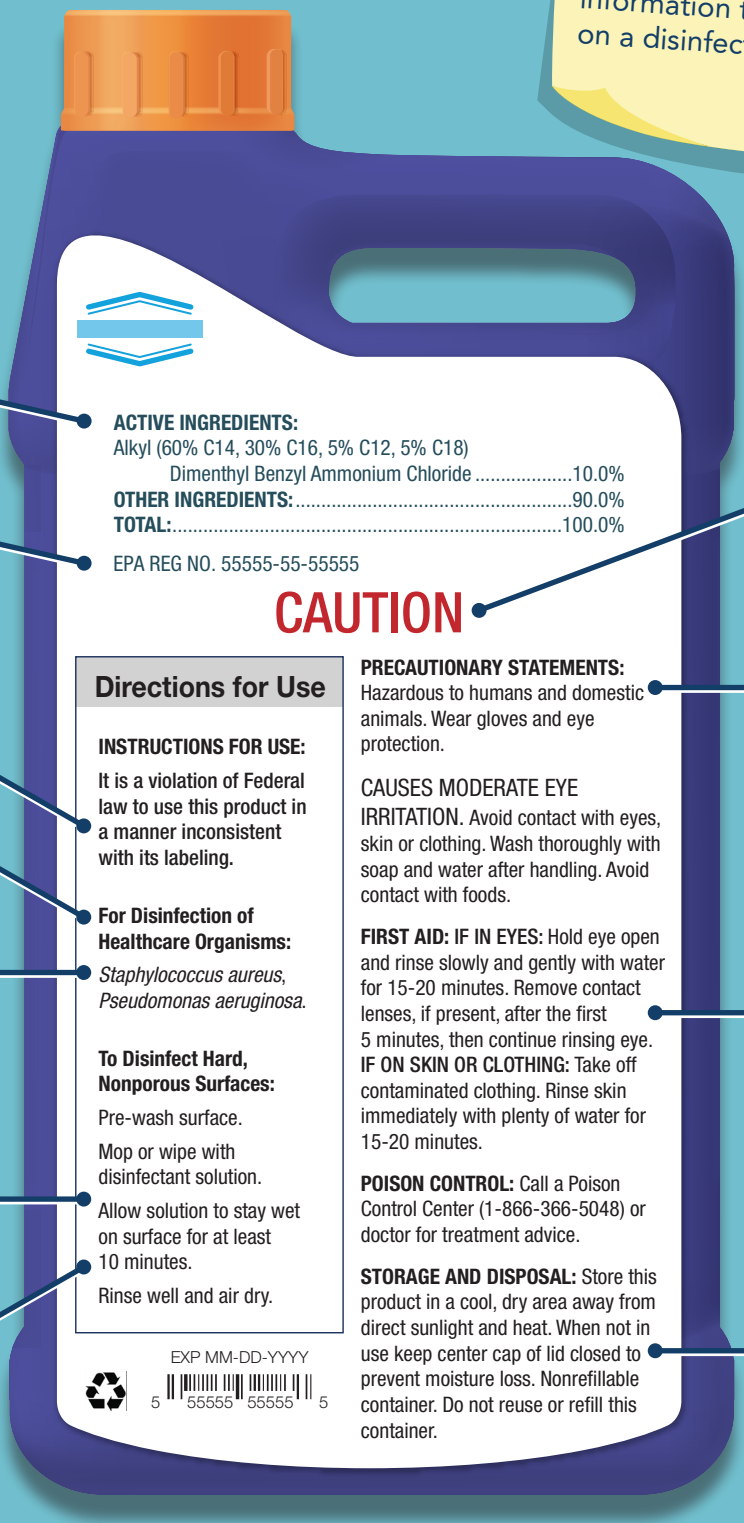
coronavirus.gov

How to Read a Disinfectant Label

Read the entire label.

The label is the law!

Note: Below is an **example** of information that can be found on a disinfectant label



Active Ingredients:
What are the main disinfecting chemicals?

EPA Registration Number:
U.S. laws require that all disinfectants be registered with EPA.

Directions for Use (Instructions for Use):
Where should the disinfectant be used?

What germs does the disinfectant kill?

What types of surfaces can the disinfectant be used on?

How do I properly use the disinfectant?

Contact Time:
How long does the surface have to stay wet with the disinfectant to kill germs?

Signal Words (Caution, Warning, Danger):
How risky is this disinfectant if it is swallowed, inhaled, or absorbed through the skin?

Precautionary Statements:
How do I use this disinfectant safely? Do I need PPE?

First Aid:
What should I do if I get the disinfectant in my eyes or mouth, on my skin, or if I breathe it in?

Storage & Disposal:
How should the disinfectant be stored? How should I dispose of expired disinfectant? What should I do with the container?

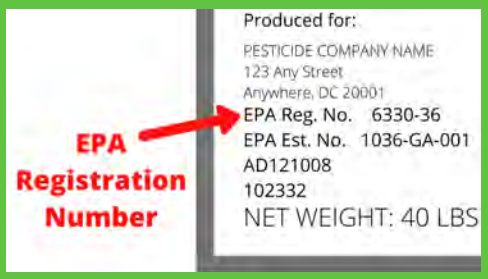
U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
PROJECT FIRSTLINE
EPA United States Environmental Protection Agency
WWW.CDC.GOV/PROJECTFIRSTLINE

WHICH DISINFECTANTS KILL COVID-19?

FIND OUT AT EPA.GOV/LISTNTOOL

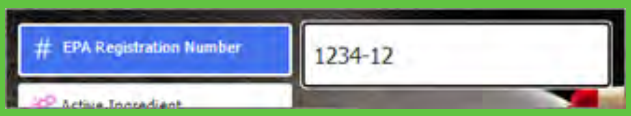
EPA expects all products on List N to kill SARS-CoV-2, the specific coronavirus that causes COVID-19

I already have a product. Does it kill SARS-CoV-2?



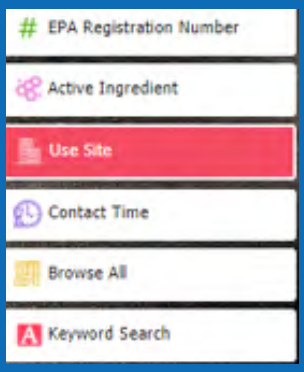
Find the EPA Registration Number on the label

Enter only the first two parts of the Registration Number



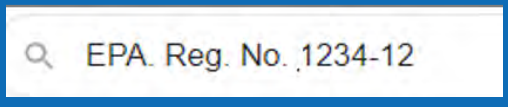
If that number is on List N, EPA expects the product to kill SARS-CoV-2 ✓

I need to find a product to kill SARS-CoV-2.



Use List N's Search Tool to browse products

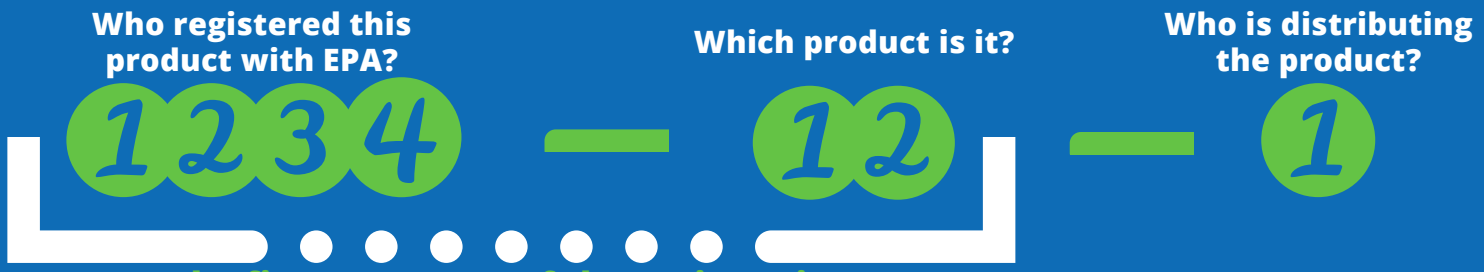
Use the first two parts of the EPA registration number when searching for products to purchase



If you need a more advanced search, choose "Export to CSV." Use Excel, Sheets, or Numbers to filter ✓

WHY FOCUS ON THE FIRST TWO PARTS OF THE EPA REG. NO.?

EPA registration numbers have two or three parts:



The first two parts of the registration number identify the product

WHAT IF THE COMPANY AND PRODUCT NAMES DON'T MATCH?

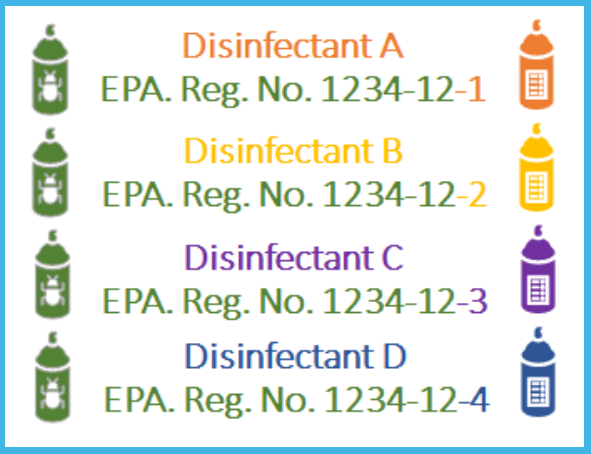
Disinfectants can be marketed and sold under different product and brand names.

When using List N, use the first two parts of the EPA registration number - not the product name - to identify products

If the first two parts of the EPA Reg. No. match, the products have the same chemical composition and efficacy

INSIDE
Same formulation and efficiency

OUTSIDE
Different brand and product names



WHY ARE THERE OTHER PATHOGENS ON LIST N?

I ONLY NEED TO KILL THE CORONAVIRUS SARS-COV-2 (COVID-19).

To kill SARS-CoV-2 (COVID-19), follow disinfection directions for the following virus(es)
Poliovirus
Norovirus
Canine parvovirus;

If a product is on List N, you can use it against SARS-CoV-2...

Regardless of whether this column lists poliovirus, norovirus, or some other pathogen.

Disinfectants may have different directions for different pathogens

To kill SARS-CoV-2, follow the directions on the product's label for killing the pathogen specified on List N

CLEANING AND DISINFECTION FOR CANDIDA AURIS

What is *Candida auris*?

- *Candida auris* (*C. auris*) is healthcare-associated, pathogenic organism that can cause significant morbidity and mortality among infected individuals and is often multidrug resistant.
- Patients with *C. auris* may be colonized without symptoms or infected and present with severe symptoms. Both colonized and infected patients can spread *C. auris* directly (from direct contact) and indirectly (from contaminated objects and the environment).
- Patients at high-risk for acquiring *C. auris* include those with invasive mechanical ventilation; indwelling lines, tubes, or devices; immunocompromising conditions; history of broad-spectrum antibiotic or anti-fungal use; prior admissions to healthcare facilities located in areas with relatively high *C. auris* case counts; and recent or prolonged admissions to long-term care and ventilator-capable skilled nursing facilities.

C. auris in Healthcare Settings

C. auris can persist on surfaces in the healthcare environment for weeks. *C. auris* has been cultured from multiple environment of care locations, including high-touch surfaces, such as bedside tables and bedrails, and general environmental surfaces farther away from the patient, such as windowsills. *C. auris* has also been identified on mobile equipment that is shared between patients, such as glucometers, temperature probes, blood pressure cuffs, ultrasound machines, nursing carts, and crash carts.

Environmental Disinfection

Perform thorough daily and terminal cleaning of the patient care environment, in addition to supplies, shared equipment, and common spaces used by patients with *C. auris* using an EPA-registered List P product.

NJHealth
New Jersey Department of Health
Communicable Disease Service

Updated: 07.2024

LIST P: ANTIMICROBIAL PRODUCTS REGISTERED WITH EPA FOR CLAIMS AGAINST CANDIDA AURIS

List P was developed by the Environmental Protection Agency (EPA). This list provides registered and approved products that can kill *C. auris*.

Scan the code above or visit
tinyurl.com/u5xyatu3 to access List P.

Always adhere to proper disinfectant dilution and contact time. Check equipment manufacturer guidelines to determine which List P product may be most suitable. List P products are compatible with medical surfaces, and for products with manufacturer guidelines, test the product before large-scale use by applying to a small, discrete area to determine compatibility.

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LIST P: PRODUCTS FOR DISINFECTION FOR C. AURIS

Registration Number	Product Name	Contact Time (minutes)	Formulation Type
70627-72	Avert Sporicidal Disinfectant Cleaner	1 minute	Ready to use
1677-262	Disinfectant 1 Spray	1 minute	Ready to use
70627-77	Oxivir 1 Wipes	1 minute	Ready to use
70627-74	Oxivir 1	1 minute	Ready to use
8383-13	PERIDOX RTU	1 minute	Ready to use
9480-14	PROJECT FLASH SPRAY	1 minute	Ready to use
9480-16	PROJECT FLASH WIPES	1 minute	Ready to use/wipe
9480-12	Wonder Woman Formula B Germicidal Wipes	1 minute	Ready to use/wipe
9480-10	Wonder Woman Formula B Spray	1 minute	Ready to use
1677-263	Disinfectant 1 Wipe	1.25 minutes	Ready to use/wipe
46781-17	CWN-07-W	2 minutes	Ready to use
71847-6	KLORSEPT	2 minutes	Dilution

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LIST P: PRODUCTS FOR DISINFECTION FOR C. AURIS

Registration Number	Product Name	Contact Time (minutes)	Formulation Type
10324-214	MAGUARD 5626	2 minutes	Dilution
37549-1	Micro-Kill Bleach Germicidal Bleach Wipes	2 minutes	Ready to use/wipe
67619-24	Blondie	3 minutes	Ready to use
46781-15	CaviCide Bleach	3 minutes	Ready to use
46781-14	CaviWipes Bleach	3 minutes	Ready to use/wipe
67619-12	CPPC TSUNAMI	3 minutes	Ready to use/wipe
56392-7	Dispatch Hospital Cleaner Disinfectant With Bleach (CloroxPro)	3 minutes	Ready to use
1677-237	Oxycide Daily Disinfectant Cleaner	3 minutes	Dilution
1677-226	Virasept	4 minutes	Ready to use
67619-25	Dagwood	5 minutes	Ready to use
70627-60	Oxivir Wipes	5 minutes	Ready to use/wipe

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ROUTINELY CLEAN AND DISINFECT...

Bedside tables and bedrails

Windowsills

Glucometers and blood pressure cuffs

Temperature probes

Ultrasound machines

Nursing carts/crash carts

Computers/Laptops

Mobile devices/equpment

Gurneys

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ROUTINELY CLEAN AND DISINFECT...

Call buttons

Pulse oximeters

Faucets

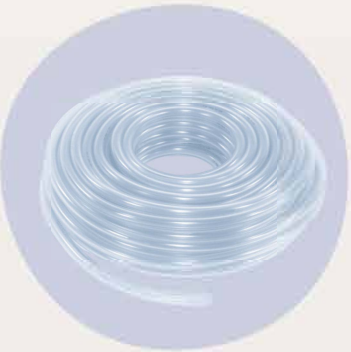
Stethoscopes

IV stands/poles

Phones

X-Ray equipment

Stools



PVC tubing

RESOURCES

CDC's Hand Hygiene in Healthcare Settings:
https://www.cdc.gov/handhygiene/index.html

Project Firstline on CDC:
https://www.cdc.gov/infection control/projectfirstline/index.html

CDC's Healthcare Associated-Infections (HAIs):
https://www.cdc.gov/healthcare-associated-infections/

CDC's Clean Hands Count Campaign:
https://www.cdc.gov/clean-hands/hcp/clean-hands-count/

New Jersey Department of Health (Project Firstline):
https://www.nj.gov/health/cd/edu_training/pfl/

NJDOH Project Firstline GoToStage Channel:
https://www.gotostage.com/channel/pflnj

Environmental Protection Agency's (EPA) List N Tool:
https://cfpub.epa.gov/wizards/disinfectants/

New Jersey Department of Health (Antibiotic Resistance):
https://www.nj.gov/health/cd/topics/ar.shtml

For more information, email CDS.IC.PFL@doh.nj.gov

NJ Health
New Jersey Department of Health
Communicable Disease Service

CDC