

Coronavirus Disease 2019 (COVID-19) Environmental Cleaning and Disinfection Recommendations

Interim Recommendations for US Community Facilities with Suspected/Confirmed Coronavirus Disease 2019

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Welcome to the Virtual Meeting!

- Please mute your device to eliminate feedback and improve sound quality
 - If you are joining via computer, press the microphone button to mute.
 - If you are joining by phone, press *6
- We will leave time for Q&A and discussion before we conclude.
- If you have questions during the presentation, you can enter them in the chat window at the top right of your screen at any time, or hold them until the Q&A.
- An electronic copy of the presentation, which includes links to various resources will be available

Resources

- CDC Guidance for Cleaning and Disinfection for Community Facilities
 - <https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html>
- Michigan Department of Health and Human Services – Coronavirus Information Page
 - <https://www.michigan.gov/coronavirus>
- Oakland County Health Department Covid 19 Response – Business Toolkit
 - <https://www.oakgov.com/covid/resources/Pages/businesses.aspx>
- Oakland County Health Department Covid 19 Response – Residential Housing Toolkit
 - <https://www.oakgov.com/covid/resources/Pages/residential-housing.aspx>

Learning Objectives

- Understand the background of the developing novel coronavirus pandemic, including resources for relevant and current information.
- Review the symptoms of COVID-19, how to ensure that you are healthy enough to come to work, and what to do if you are not.
- Review and understand important concepts to keep others from getting sick including:
 - Social Distancing, Use of cloth face coverings covering coughs and sneezes and avoiding the sharing of personal items
- Review of Executive Orders in place and how they impact Oakland University
- Review and understand the Centers for Disease Control Guidelines for Community Facilities with Suspected or Confirmed Coronavirus Disease 2019 including:
 - Timing and location of cleaning and disinfection of surfaces
 - Recommended methods for cleaning and disinfection of hard surfaces, soft/porous surfaces, electronics, linens and other items that can be laundered
- Review and understand recommended chemicals for disinfection including EPA List “N” and List “N” chemicals in use at Oakland University
- Review and understand personal protective equipment (PPE) requirements including safe conservation strategies, when PPE is needed, what PPE is needed and how to don and doff.
- Review of other best practices including
 - Hand Hygiene, wash hands often, for 20 seconds with soap and running water
 - Use of Hand Sanitizers when soap and running water is unavailable

Background (updated 8/25/20)

The novel coronavirus (COVID-19) is a respiratory disease that can result in serious illness or death. It is caused by a new strain of coronavirus not previously identified in humans and easily spread from person to person. There is currently no approved vaccine or antiviral treatment for this disease.”

- Governor Gretchen Whitmer has issued temporary requirement to suspend activities that are not necessary to sustain or protect life (Executive Order 2020-21 (rescinded); Current: Safe Start Order 2020-160.
- On April 1, 2020, Governor Whitmer declared both a state of emergency and a state of disaster in Michigan to address the COVID-19 pandemic and issued EO 2020-33 (rescinded); Current: Declaration of state of emergency and state of disaster related to the COVID-19 pandemic 2020-165
- This is a rapidly evolving situation with updates provided through a variety of federal, state and county resources on an as needed basis.
- Community mitigation strategies include:
 - Remote work when possible
 - Workplace safety as outlined in Safeguards to protect Michigan's workers from COVID-19 (EO 2020-161)
 - Individual Responsibility:
 - Social Distancing – maintain a 6' space; cloth face coverings in public
 - Wearing of cloth face coverings over nose and mouth as described in EO 2020-153 and Oakland University recommendations
 - Increased Hand Hygiene; Avoid touching face, nose, eyes, mouth
 - Daily Health Screening; stay home when sick; isolation; quarantine; health check/monitoring of symptoms in certain situations

Background

What is currently known:

- Person-to-person spread: **The virus is thought to spread mainly from person-to-person.**
 - Between people who are in close contact with one another (within about 6 feet).
 - Through respiratory droplets produced when an infected person coughs, sneezes, or talks.
 - These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.
- The virus spreads easily between people: **The virus that causes COVID-19 is spreading very easily and sustainably between people.**
 - Information from the ongoing COVID-19 pandemic suggests that this virus is spreading more efficiently than influenza, but not as efficiently as measles, which is highly contagious.
 - In general, **the more closely a person interacts with others and the longer that interaction, the higher the risk of COVID-19 spread.**
- The virus may be spread in other ways
 - It may be possible that a person can get COVID-19 by **touching a surface or object that has the virus on it** and then touching their own mouth, nose, or possibly their eyes.
 - This is not thought to be the main way the virus spreads, but we are still learning more about how this virus spreads.
- COVID-19 may be spread by people who are not showing symptoms.
- Coronavirus on surfaces and objects naturally die within hours to days. Warmer temperatures and exposure to sunlight will reduce the time the virus survives on surfaces and objects.

Best Practice

CLEANING OF VISIBLY DIRTY SURFACES FOLLOWED BY DISINFECTION IS A BEST PRACTICE MEASURE FOR PREVENTION OF COVID-19 AND OTHER VIRAL RESPIRATORY ILLNESSES IN COMMUNITY SETTINGS

Ensure staff feel educated and empowered

- Uncertainty creates fear
- Information changes rapidly
- When and if new information becomes available we need to be able to disseminate the information and act on it very quickly
- We rely on the experience and professionalism of our staff

#OAKLAND *Together*
COVID-19 Response
We'll get through this together

I'm literally worried about this. How long do you anticipate this is going to last? ^

It depends on a lot of things. We hope to flatten the curve by social distancing. I don't imagine we're going to stop social distancing for at least a few months. We have really good tools here. Social distancing got them through a pandemic 100 years ago. It works. Handwashing works. I don't want you to live in fear every day.

Recognize the symptoms of COVID-19

- Fever – A temperature of 100.4 °F or greater
- Cough
- Shortness of breath

Circumstances that may indicate exposure:

- Close Contact – Within 6' for 15 minutes or more
 - Close Contact with a person with CONFIRMED COVID-19
- Travel:
 - International – Travel outside the U.S.
 - Domestic – Travel within the U.S.

Symptoms of Coronavirus (COVID-19)

Know the symptoms of COVID-19, which can include the following:



Symptoms can range from mild to severe illness, and appear 2-14 days after you are exposed to the virus that causes COVID-19.

Seek medical care immediately if someone has emergency warning signs of COVID-19.

- Trouble breathing
- Persistent pain or pressure in the chest
- New confusion
- Inability to wake or stay awake
- Bluish lips or face

This list is not all possible symptoms. Please call your healthcare provider for any other symptoms that are severe or concerning to you.



cdc.gov/coronavirus

596475-A 07/21/2020

Recognize the Symptoms of COVID-19

Daily Health Assessment

- Daily Health Assessment
 - Any “yes” answers to health screening questions will be reported to GHC
 - Enter a valid phone number on the assessment to ensure contact can be made
- Daily Honor Pledge
 - I will wear my face-covering as per OU guidelines.
 - I will practice good hygiene as per OU guidelines.
 - I will practice safe physical distancing.



Report to Work



1. Do NOT report to work
2. Notify your supervisor
3. Expect and answer the call from GHC

Health Screening

OU Health Screening

Anyone intending on visiting campus is required to fill out this health screening form beforehand. Please be aware that GHC will be notified of your response.

Are you coming to campus or a clinical site today?

Yes No

CLOSE NEXT

Your feedback is important to us!

Health Screening Options

OU Health Screening

Thank you for doing your part to keep the campus healthy!

This is a certificate for _____ to be on campus for the duration of

Mon, Aug 24 2020

Email _____ a copy of this certificate

SEND EMAIL

What to do if YOU develop symptoms

- Take care of yourself and help prevent others from getting sick.
- DO NOT COME TO WORK!
- Report your symptoms by filling out the Daily Health Assessment – a “yes answer to any health screening questions will be reported to GHC.
- Notify your supervisor in accordance with routine attendance policy.
- Graham Health Center may advise you to contact your healthcare provider and/or notify the local health department. GHC, your HCP and/or the health department may provide guidance on what actions need to be taken.
- Get rest and stay hydrated.
- Monitor your symptoms and, if they get worse:
- Consult with your healthcare provider
 - Many Oakland University insurance plans include options for tele-health visits.
 - Graham Health Center is available for tele-health visits and telephone consultation (248) 370-2381

Stop the Spread of Germs

Help prevent the spread of respiratory diseases like COVID-19.



Keep others from getting sick

To keep others from getting sick, while you are separating yourself, make sure to:

Avoid common areas or areas where many people gather.

Stay at least 6 feet away (about two arm lengths) from other people.

If you usually sleep close to someone else, make a space for yourself (or ask for help to make a space) by using dividers like sheets, curtains, or other barriers.

If you can, use a different bathroom from other people.

If you must be around other people, wear a mask or cloth face covering if you have one. Or, if you are requested to wear a mask, please do.

STAY HOME! STAY SAFE!

Cover your coughs and sneezes.

Wash your hands often and thoroughly with soap and water for at least 20 seconds.

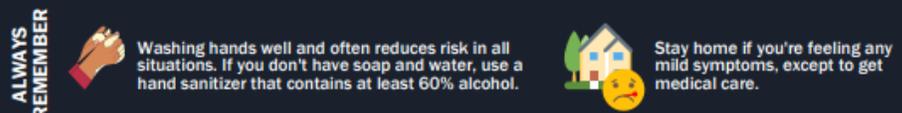
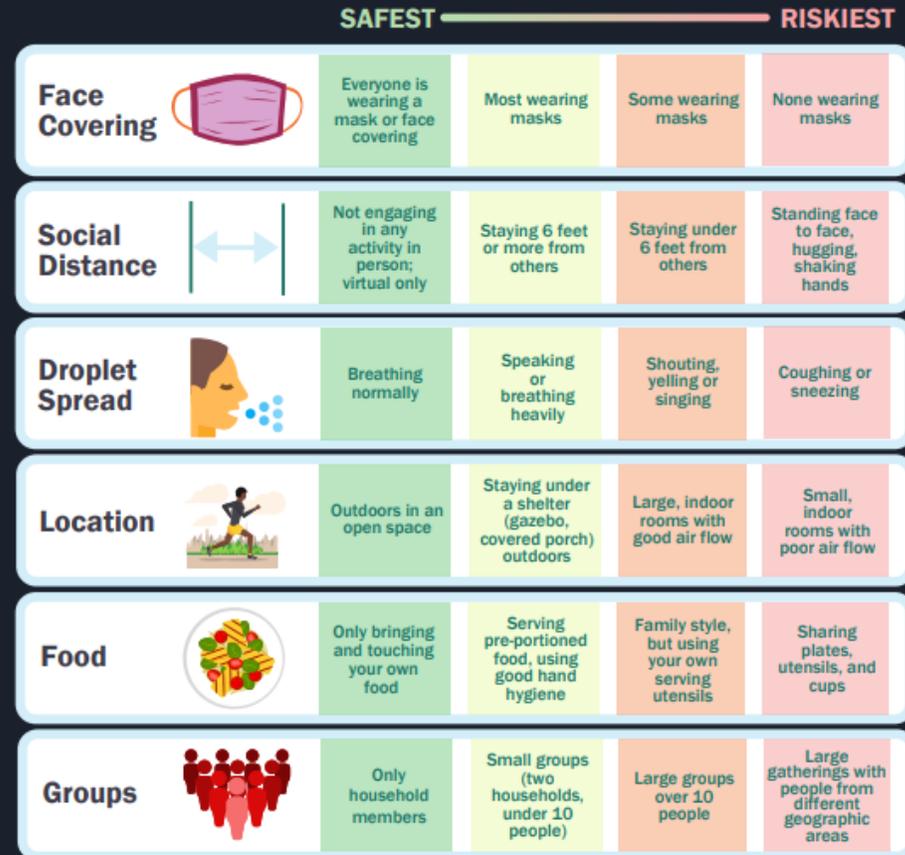
Avoid sharing personal items (like clothes, dishes, or cigarettes) with other people.

Use of Cloth Face Coverings

- Cloth Face Coverings are not PPE, like a disposable procedure mask or a respirator.
- Cloth Face Coverings are an important “every day” protective measure that can reduce your risk of getting or spreading COVID-19

COVID-19: REDUCE YOUR RISK

The more low-risk choices you make, the more protection you have from getting or spreading COVID-19.



How a mask works

- COVID-19 spreads mainly among people who are in close contact.
- All of us have droplets in coughs and sneezes that can carry COVID-19 to others.
- Coughs spray droplets at least 6 feet. Sneezes travel as far as 27 feet. Droplets also may spread when we talk or raise our voice.
- These droplets can land on your face or in your mouth, eyes and nose.
- When you wear a mask, it keeps more of your droplets with you.
- A mask also adds an extra layer of protection between you and other people's droplets.

Chance of Transmission	Asymptomatic COVID-19 Carrier	Uninfected Person
HIGHEST		
HIGH		
MEDIUM		
LOW		
LOWEST		
PRACTICALLY NONE		

6 ft

Wear your Mask Correctly. Wear your Mask to Protect Others.

- Wash your hands before putting on your mask
- Put it over your nose and mouth and secure it under your chin
- Try to fit it snugly against the sides of your face
- Make sure you can breathe easily
- CDC does not recommend use of masks or cloth masks for source control if they have an exhalation valve or vent
- Wear a mask that covers your nose and mouth to help protect others in case you're infected with COVID-19 but don't have symptoms
- Wear a mask in public settings when around people who don't live in your household, especially when it may be difficult for you to stay six feet apart
- Wear a mask correctly for maximum protection
- **Don't** put the mask around your neck or up on your forehead
- **Don't** touch the mask, and, if you do, wash your hands or use hand sanitizer to disinfect



Wear a Mask to Protect You and Your Friends

PUT ON



WASH YOUR HANDS



PLACE OVER NOSE AND MOUTH

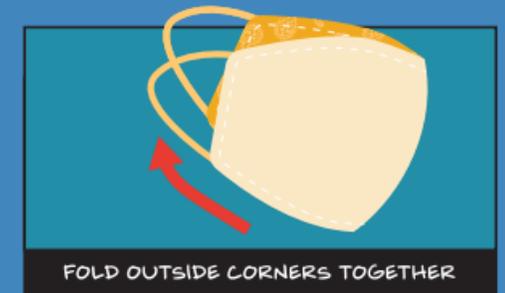


MAKE SURE YOU CAN
BREATHE EASILY

TAKE OFF



TAKE OFF YOUR MASK



FOLD OUTSIDE CORNERS TOGETHER



PUT ASIDE FOR WASHING



WASH YOUR HANDS

WASH YOUR HANDS OFTEN, WEAR A MASK, AND
STAY 6 FEET FROM OTHERS.



CS 118704A 8/10/2020

[cdc.gov/coronavirus](https://www.cdc.gov/coronavirus)

Employee Resources

- Oakland University – Return to Campus Web Section (<https://www.oakland.edu/return-to-campus/>)
- Oakland University – Environmental Health and Safety Web Section (<https://www.oakland.edu/ehs/>)
- Oakland University COVID-19 Preparedness and Response Plan (https://www.oakland.edu/Assets/Oakland/ehs/files-and-documents/COVID-Response/OU_COVID_Preparedness_Response_Re_Opening-FINAL_Rev%207-27-20.pdf)
 - [Returning to Work](#)
 - [Return to Work following Illness or Exclusion \(due to COVID-19\)](#)
 - [Return to Work Training Module](#)
- [Oakland University Human Resources](#)
- [Graham Health Center](#)

Purpose

- Guidance provides recommendations on the cleaning and disinfection of rooms or areas:
 - During the COVID-19 Pandemic Response and;
 - Areas visited by those with suspected or with confirmed COVID-19
- **FOCUS:** Limiting the survival of novel coronavirus in key environments
- **AUDIENCE:** Community, non-healthcare facilities that DO and DO NOT house persons overnight.

Definitions

- *Community facilities* such as schools, daycare centers, and businesses comprise most non-healthcare settings that are visited by the general public outside of a household.
 - This includes facilities at Oakland University
- *Cleaning* refers to the removal of dirt and impurities, including germs, from surfaces.
 - Cleaning alone does not kill germs.
 - But by removing the germs, it decreases their number and therefore any risk of spreading infection.
- *Disinfecting* works by using chemicals, for example EPA-registered disinfectants, to kill germs on surfaces.
 - This process does not necessarily clean dirty surfaces or remove germs.
 - But killing germs remaining on a surface after cleaning **further reduces any risk of spreading infection.**

Timing and location of cleaning and disinfection of surfaces: facility that DOES NOT house people overnight

- **ADDED 4/1/2020**
- At a school, daycare center, office, or other facility that **does not house people overnight**.
 - examples at Oakland University include Administrative and Classroom Buildings, Offices, Laboratories and Classrooms
- Close off areas visited by the ill persons.
- Open outside doors and windows and use ventilating fans to increase air circulation in the area.
- If feasible, wait 24 hours or as long as practical before beginning cleaning and disinfection.
- **Cleaning staff should clean and disinfect all areas such as offices, bathrooms, common areas, shared electronic equipment like tablets, touch screens, keyboards, remote controls, and ATM machines used by the ill persons**, focusing especially on frequently touched surfaces.

Timing and location of cleaning and disinfection of surfaces: facility that DOES house people overnight

- ADDED 4/1/2020
- At a facility that **does** house people overnight. Examples include Residence Halls, Ann V. Nicholson Student Apartments and Matthews Court Apartments.
 - Follow Interim Guidance for US Institutions of Higher Education on working with state and local health officials to isolate ill persons and provide temporary housing as needed.
 - Consultation with Graham Health Center and/or County Health Department on any on-campus cases.
 - Close off areas visited by the ill persons. Open outside doors and windows and use ventilating fans to increase air circulation in the area. **Wait 24 hours or as long as practical before beginning cleaning and disinfection.**
 - In areas where ill persons are being housed in isolation, follow Interim Guidance for Environmental Cleaning and Disinfection for U.S. Households with Suspected or Confirmed Coronavirus Disease 2019. This includes **focusing on cleaning and disinfecting common areas, following protocols to eliminate the need for cleaning services staff to interact with ill persons and reducing cleaning and disinfection of bedrooms used by ill persons to as-needed, and providing teams and rotating schedules to limit the amount of time for cleaning services to address restrooms (ref. COVID-19 Cleaning Protocol for University COVID-19 Isolation Facilities).**
 - In areas where ill persons have visited or used, continue routine cleaning and disinfection as in this guidance.
 - Please note: University Housing Staff will not provide cleaning services within occupied rooms during the time of COVID-19 isolation/quarantine, nor will they provide cleaning services in rooms assigned to occupants.
 - Occupants may request appropriate cleaning supplies for personal use from University Housing in the event that they are unable to provide their own
- If it has been more than 7 days since the person with suspected/confirmed COVID-19 visited or used the facility, additional cleaning and disinfection is not necessary.

How to Clean and Disinfect Hard (Non-porous) Surfaces (Updated 3/26/20)

- If surfaces are dirty, they should be cleaned using a detergent or soap and water prior to disinfection.
- For disinfection, most common EPA-registered household disinfectants should be effective.
 - A list of products that are EPA-approved for use against the virus that causes COVID-19 (List 'N') is available at: **(Updated 3/26/20)**
 - https://www.epa.gov/sites/production/files/2020-03/documents/sars-cov-2-list_03-03-2020.pdf
 - A list of Oakland University Products that are included on List 'N' is available at:
 - (<https://www.oakland.edu/ehs>)
- Follow the manufacturer's instructions for all cleaning and disinfection products for concentration, application method and contact time, etc.
 - Reference our discussions regarding dwell time as discussed during Bloodborne Pathogens Training.
 - Dwell or contact time may differ between disinfectants.
 - Common label claims include "human coronavirus" or "emerging viral pathogens or enveloped viral pathogens".
 - If you are unsure, consult EPA List 'N', the Oakland University Cross Reference to List 'N' or contact Environmental Health and Safety.

Disinfectants In Use at OU

SUBSTANCE	Formulation	COMPANY	EPA Registered Antimicrobial Products for Use Against Novel Coronavirus SARS-CoV-2	EPA #	American Chemistry Council products pre-approved by EPA for use against emerging enveloped viral pathogens	AFFECTIVE AGAINST	DWELL TIME
Chlorinated disinfecting tablets for Electrostatic Sprayer	DILUTABLE	Green Kleen	Y	71847-6-91038	Y	Enveloped Virus/Emerging	4306 PPM + 1 MIN
Clorox Disinfecting Spray	RTU (aerosol)	Clorox	Y	67619-21	Y	Human Coronavirus	30 SEC
Clorox Fuzion Spray	RTU	Clorox	Y	67619-30	Y	Influenza + Coronavirus	1 MIN
Purell Pro Surface Spray Disinfectant		Purell	Y	84368-1-84150	Y	Influenza + Coronavirus	30 SEC
Simple Green "Clean Finish Disinfectant Cleaner"	RTU	Sunshine Makers,	Y	1839-220-56782	Y	Influenza + Coronavirus	2 MIN
TB-Cide Quat Disinfectant		Spartan	Y	1839-83-5741	Y	Influenza + Coronavirus	2 MIN
Virex 11	DILUTABLE	Diversey	Y	70627-24	Y	Influenza + Coronavirus	10 MIN
Consume		Spartan	N		N		
Consume Eco-Lyzer		Spartan	N	5741-24	N	Influenza	5 MIN
DMQ Damp Mop Natural Disinfectant Cleaner		Spartan	N	5741-20	N	Influenza	10 MIN
Envirocide (Cavicide)	RTU/DILUTABLE	Metrex	Y	46781-6	N	Human Coronavirus	2 MIN
Foamy Q&A		Spartan	N	5741-23	N	Influenza	5 MIN
Green Solutions All Purpose Cleaner		Spartan	Y	1839-169-5741	N	Human Coronavirus/Rotavirus	10 MIN
J-512 for Lowry	DILUTABLE	Diversey	Y	70627-63	N	Human Coronavirus	10 MIN
Lysol Disinfecting Wipes	WIPE	Reckitt Benckiser	Y	777-114	Y	Influenza A + Coronavirus	10 MIN
NABC Non-Acid Disinfectant Cleaner		Spartan	N	5741-18	N	Influenza	10 MIN
Per Diem		Diversey	N		N		
Spic & Span Disinfecting All Purpose Spray & Glass Cleaner		P&G	Y	3573-96	N	Feline calicivirus; norovirus	10 MIN
Steriphene II Brand Disinfectant Deoderant		Spartan	Y	5741-22	N	Mycobacterium Bovis	10 MIN
TNT Foaming Disinfectant Cleaner		Spartan	N	5741-14	N	Influenza	10 MIN
As reported on EPA List 'N' through 8/20/2020							

How to Clean and Disinfect Soft (Porous) Surfaces (updated 3/26/2020)

- For soft (porous) surfaces such as carpeted floor, rugs, and drapes, remove visible contamination if present and clean with appropriate cleaners indicated for use on these surfaces. After cleaning:
 - If the items can be laundered, launder items in accordance with the manufacturer's instructions using the warmest appropriate water setting for the items and then dry items completely.
 - Otherwise, use products that are EPA-approved for use against the virus that causes COVID-19 and that are suitable for porous surfaces

Electronics (Added 3/26/20)

- For electronics such as tablets, touch screens, keyboards, remote controls, and ATM machines, remove visible contamination if present.
 - Follow the manufacturer's instructions for all cleaning and disinfection products.
 - Consider use of wipeable covers for electronics.
 - If no manufacturer guidance is available, consider the use of alcohol-based wipes or sprays containing at least 70% alcohol to disinfect touch screens. Dry surfaces thoroughly to avoid pooling of liquids.
 - Proceed with caution when addressing University-Owned Equipment. Seek counsel from University Technology Services prior to application of any chemicals.
 - Personal equipment (not University owned) should be wiped down and bagged and/or cleaning materials provided to the owner.

Linens, Clothing and Other Items that Go in the Laundry

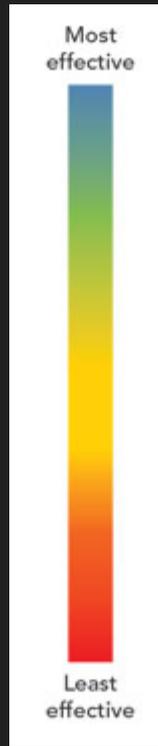
- In order to minimize the possibility of dispersing virus through the air, do not shake dirty laundry.
 - This includes YOUR personal laundry.
- Wash items as appropriate in accordance with the manufacturer's instructions.
- If possible, launder items **using the warmest appropriate water setting for the items and dry items completely**.
- Dirty laundry that has been in contact with an ill person CAN be washed with other people's items, however unless this scenario includes your own family, it is recommended that you wash the items separately.
- Clean and disinfect hampers or other carts for transporting laundry according to guidance for hard or soft surfaces.

OSHA Hierarchy of Controls



Maximize

- Hazard Reduction
- Effectiveness of PPE



HAZARDS

Elimination

- Physically remove the hazard.

Substitution

- Replace the hazard.

Engineering Controls

- Isolate people from the hazard.

Administrative Controls

- Change the way people work

Personal Protective Equipment (PPE)

- Protect the worker with PPE.

Personal Protective Equipment (PPE)

- During expected or known shortages of personal protective equipment as during the current COVID-19 response the Centers for Disease Control and Prevention (CDC) provides guidelines for conservation of personal protective equipment including respirators and procedure masks.
 - We want to ensure that staff have the PPE they need.
 - If you have concerns, contact EHS to review available options
 - HANDS ON! Supervisors should emphasize and staff should practice hand hygiene and avoiding touching face, nose, eyes, mouth with hands.
 - Supervisors should provide and encourage adequate time for hand hygiene
 - Plan staff and work activities with emphasis on maintaining social distancing

Personal Protective Equipment (PPE)

- When to use PPE:
 - Anytime you are cleaning or disinfecting any areas on campus.
- What PPE is necessary
 - Gloves
 - Coveralls, aprons or uniforms should be worn whenever you are cleaning or disinfecting any areas on campus.
 - Goggles (if splash hazards exist)
 - Face Shields (to provide physical barrier and/or reduce surface contamination of disposable masks or respirators)
 - Other PPE as indicated (e.g. if required on product label)

Donning: Sequence for Putting On Personal Protective Equipment (PPE)

1. Perform Hand Hygiene
2. Put on coveralls, gowns or aprons (if using) and secure.
3. Put on disposable mask, respirator or cloth face covering (if using).
4. Put on goggles or face shields (if using).
5. Put on gloves.

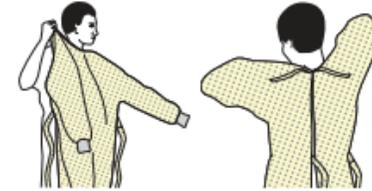
Source: <https://www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf>

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



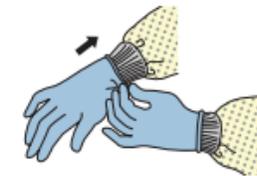
3. GOGGLES OR FACE SHIELD

- 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



Doffing: Sequence for Safely Removing Personal Protective Equipment (PPE), Example 1

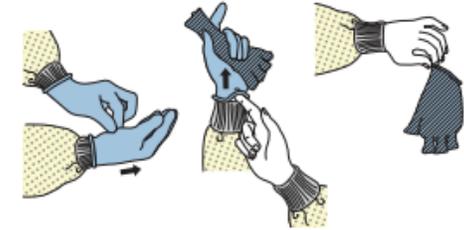
1. Remove gloves – ensure glove removal does not cause additional contamination of hands.
2. Perform Hand Hygiene
3. Remove faceshield or goggles (if in use)– grab the strap and pull upwards, away from the head. Do not touch the front of face shield or goggles. Place items in plastic (trash or similar) bag until they can be cleaned and sanitized.
4. Remove disposable mask or respirator (if in use) without touching the front of the mask. Place non-disposable items in plastic (trash or similar) bag until they can be cleaned and sanitized.
5. Dispose of used and disposable PPE in the trash
6. 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

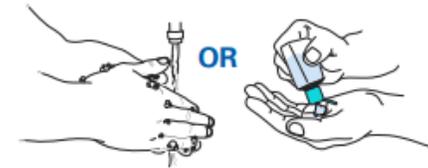


4. MASK OR RESPIRATOR

- 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**



Doffing: Sequence for Safely Removing Personal Protective Equipment (PPE), Example 2

1. Remove gown and gloves
2. Perform Hand Hygiene
3. Remove faceshield or goggles (if in use)– grab the strap and pull upwards, away from the head. Do not touch the front of face shield or goggles. Place items in plastic (trash or similar) bag until they can be cleaned and sanitized.
4. Remove disposable mask or respirator (if in use) without touching the front of the mask. Place non-disposable items in plastic (trash or similar) bag until they can be cleaned and sanitized.
5. Dispose of used and disposable PPE in the trash
6. Perform Hand Hygiene

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

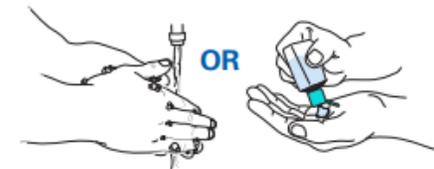


3. MASK OR RESPIRATOR

- 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**



Personal Protective Equipment (PPE)

- Doffing - How to properly doff (take off) PPE.
 1. Remove gloves – ensure glove removal does not cause additional contamination of hands.
 2. Perform Hand Hygiene
 3. Remove faceshield or goggles (if in use)– grab the strap and pull upwards, away from the head. Do not touch the front of face shield or goggles. Place items in plastic (trash or similar) bag until they can be cleaned and sanitized.
 4. Remove facemask (if in use) without touching the front of the mask.
- Dispose of used and disposable PPE in the trash
 5. Perform Hand Hygiene
- Process reusable equipment per department guidelines

COVID-19 FACEMASKS VS. RESPIRATORS



Cloth or Paper Face Mask



Surgical Face Mask



Filtering Facepiece Respirator (i.e. N95)

Testing & Approval	Not tested or approved, but recommended by the Centers for Disease Control and Prevention (CDC)	Cleared by the U.S. Food and Drug Administration per 21 CFR 878.4040	Evaluated, tested and approved by National Institute of Occupational Safety & Health (NIOSH) per 42 CFR Part 84
Intended Use & Purpose	To prevent transmission of the virus between people in close proximity	A fluid resistant barrier designed to protect the wearer from large droplets, splashes or sprays of bodily or other hazardous fluids.	Protects the wearer from small particle aerosols and large droplets
Who Should Wear?	Everyone in public settings where social distancing is infeasible e.g. grocery store or pharmacy	Healthcare workers when N95 respirators are not available and patients who are suspected or confirmed to have COVID-19	Workers providing care or in prolonged proximity to suspected or confirmed COVID-19 cases
Face Seal Fit	Loose-Fitting	Loose-Fitting	Tight-Fitting
Fit Test Required?	No*	No*	Yes**
User Seal Check Required?	No	No	Yes, each time the respirator is put on
Filtration	Not classified as a filtering face-piece respirator to protect against inhaling smaller airborne particles	Not classified as a filtering face-piece respirator to protect against inhaling smaller airborne particles	Filters -95% of small airborne particles
Leakage	Leakage occurs around the edge of the mask when user inhales	Leakage occurs around the edge of the mask when user inhales	When properly fitted, minimal leakage occurs around edges of the respirator when user inhales
Use Limitations	Reusable. Launder routinely. Discard if mask becomes damaged.	Not designed for reuse. Discard after each patient encounter.	Ideally discarded after each prolonged encounter with a suspected or confirmed COVID-19 case; limited reuse acceptable under certain conditions.

*Fit tests are not required for loose-fitting facepieces. **If employee is required to wear an N95, testing is required. Additional information regarding fit testing during the COVID-19 outbreak can be found under the [March 14, 2020 memo](#) and the [April 8, 2020 memo](#).

Facemask Do's and Don'ts

For Healthcare Personnel

When putting on a facemask

Clean your hands and put on your facemask so it fully covers your mouth and nose.



DO secure the elastic bands around your ears.



DO secure the ties at the middle of your head and the base of your head.

When wearing a facemask, don't do the following:



DON'T wear your facemask under your nose or mouth.



DON'T allow a strap to hang down. DON'T cross the straps.



DON'T touch or adjust your facemask without cleaning your hands before and after.



DON'T wear your facemask on your head.



DON'T wear your facemask around your neck.



DON'T wear your facemask around your arm.

When removing a facemask

Clean your hands and remove your facemask touching only the straps or ties.



DO leave the patient care area, then clean your hands with alcohol-based hand sanitizer or soap and water.



DO remove your facemask touching ONLY the straps or ties, throw it away*, and clean your hands again.

*If implementing limited-reuse: Facemasks should be carefully folded so that the outer surface is held inward and against itself to reduce contact with the outer surface during storage. Folded facemasks can be stored between uses in a clean, sealable paper bag or breathable container.

Additional information is available about how to safely put on and remove personal protective equipment, including facemasks:

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/using-ppe.html>.



Personal Protective Equipment (PPE) and Hand Hygiene:

- **The risk of exposure to cleaning staff is inherently low. Oakland University Cleaning staff should wear disposable gloves and coveralls (Tyvek), aprons or work uniform/clothes for all tasks in the cleaning process, including handling trash.**
 - Gloves should be compatible with the disinfectant products being used.
 - Additional PPE might be required based on the cleaning/disinfectant products being used and whether there is a risk of splash. (goggles)
 - Gloves and other PPE should be removed carefully to avoid contamination of the wearer (do NOT shake dirty laundry) and the surrounding area.
 - Be sure to **wash hands** after removing gloves.
 - Coveralls, aprons or work uniforms can be worn during cleaning and disinfecting.
 - Reusable (washable) clothing should be laundered afterwards.
 - Clean hands after handling dirty laundry.
- Gloves should be removed after cleaning a room or area occupied by ill persons.
- Clean hands immediately after gloves are removed.
- Cleaning staff should immediately report breaches in PPE such as a tear in gloves or any other potential exposures to their supervisor.

Hand Hygiene

- **Cleaning staff and others should clean hands often**, including immediately after removing gloves and after contact with an ill person, by washing hands with soap and water for 20 seconds.
- If soap and water are not available and hands are not visibly dirty, **an alcohol-based hand sanitizer that contains at least 60% alcohol may be used**.
- However, if hands are visibly dirty, always wash hands with soap and water.
- Follow normal preventive actions while at work and home, including cleaning hands and avoiding touching eyes, nose, or mouth with unwashed hands.
 - Additional key times to clean hands include:
 - After blowing one's nose, coughing, or sneezing
 - After using the restroom
 - Before eating or preparing food
 - After contact with animals or pets
 - Before and after providing routine care for another person who needs assistance such as a child

When and How to Wash Your Hands

- Handwashing is one of the best ways to protect yourself and your family from getting sick. Learn when and how you should wash your hands to stay healthy.
- Wash Your Hands Often to Stay Healthy
- You can help yourself and your loved ones stay healthy by washing your hands often, especially during these key times when you are likely to get and spread germs:
- **Before, during, and after** preparing food
- **Before** eating food
- **Before** and **after** caring for someone at home who is sick with vomiting or diarrhea
- **Before** and **after** treating a cut or wound
- **After** using the toilet
- **After** changing diapers or cleaning up a child who has used the toilet
- **After** blowing your nose, coughing, or sneezing
- **After** touching an animal, animal feed, or animal waste
- **After** handling pet food or pet treats
- **After** touching garbage



Follow Five Steps to Wash Your Hands the Right Way

Washing your hands is easy, and it's one of the most effective ways to prevent the spread of germs. Clean hands can stop germs from spreading from one person to another and throughout an entire community—from your home and workplace to childcare facilities and hospitals.

○ Follow these five steps every time.

1. **Wet** your hands with clean, running water (warm or cold), turn off the tap, and apply soap.
2. **Lather** your hands by rubbing them together with the soap. Lather the backs of your hands, between your fingers, and under your nails.
3. **Scrub** your hands for at least 20 seconds. Need a timer? Hum the “Happy Birthday” song from beginning to end twice.
4. **Rinse** your hands well under clean, running water.
5. **Dry** your hands using a clean towel or air dry them.



Additional Resources



Wet your hands with clean, running water (warm or cold), turn off the tap, and apply soap.

- **Why?** Because hands could become re-contaminated if placed in a basin of standing water that has been contaminated through previous use, clean running water should be used . However, washing with non-potable water when necessary may still improve health . The temperature of the water does not appear to affect microbe removal; however, warmer water may cause more skin irritation and is more environmentally costly .
- Turning off the faucet after wetting hands saves water, and there are few data to prove whether significant numbers of germs are transferred between hands and the faucet.
- Using soap to wash hands is more effective than using water alone because the surfactants in soap lift soil and microbes from skin, and people tend to scrub hands more thoroughly when using soap, which further removes germs .
- To date, studies have shown that there is no added health benefit for consumers (this does not include professionals in the healthcare setting) using soaps containing antibacterial ingredients compared with using plain soap. As a result, FDA issued a final rule in September 2016 that 19 ingredients in common “antibacterial” soaps, including triclosan, were no more effective than non-antibacterial soap and water and thus these products are no longer able to be marketed to the general public. This rule does not affect hand sanitizers, wipes, or antibacterial products used in healthcare settings.



Lather your hands by rubbing them together with the soap. Be sure to lather the backs of your hands, between your fingers, and under your nails.

- **Why?** Lathering and scrubbing hands creates friction, which helps lift dirt, grease, and microbes from skin.
- Microbes are present on all surfaces of the hand, often in particularly high concentration under the nails, so the entire hand should be scrubbed





Scrub your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end. Twice.

- **Why?** Determining the optimal length of time for handwashing is difficult because few studies about the health impacts of altering handwashing times have been done. Of those that exist, nearly all have measured reductions in overall numbers of microbes, only a small proportion of which can cause illness, and have not measured impacts on health. Solely reducing numbers of microbes on hands is not necessarily linked to better health.
- The optimal length of time for handwashing is also likely to depend on many factors, including the type and amount of soil on the hands and the setting of the person washing hands. For example, surgeons are likely to come into contact with disease-causing germs and risk spreading serious infections to vulnerable patients, so they may need to wash hands longer than a woman before she prepares her own lunch at home.
- Nonetheless, **evidence suggests that washing hands for about 15-30 seconds removes more germs from hands than washing for shorter periods**



Use Hand Sanitizer When You Can't Use Soap and Water

Washing hands with soap and water is the best way to get rid of germs in most situations. If soap and water are not readily available, you can use an alcohol-based hand sanitizer that contains at least 60% alcohol. You can tell if the sanitizer contains at least 60% alcohol by looking at the product label.

- **Sanitizers can quickly reduce the number of germs on hands in many situations. However,**
- Sanitizers do **not** get rid of all types of germs.
- Hand sanitizers may **not** be as effective when hands are visibly dirty or greasy.
- Hand sanitizers might not remove harmful chemicals from hands like pesticides and heavy metals.

How to Apply Hand Sanitizer

- Apply the gel product to the palm of one hand (read the label to learn the correct amount).
- Rub your hands together.
- Rub the gel over all the surfaces of your hands and fingers until your hands are dry. This should take around 20 seconds.

When using alcohol-based hand sanitizer:



Questions

- Thank you for your participation!
- Please contact me (chanson@oakland.edu) with any questions, needs or concerns.

Keep Calm and Wash Your Hands
Be Well!